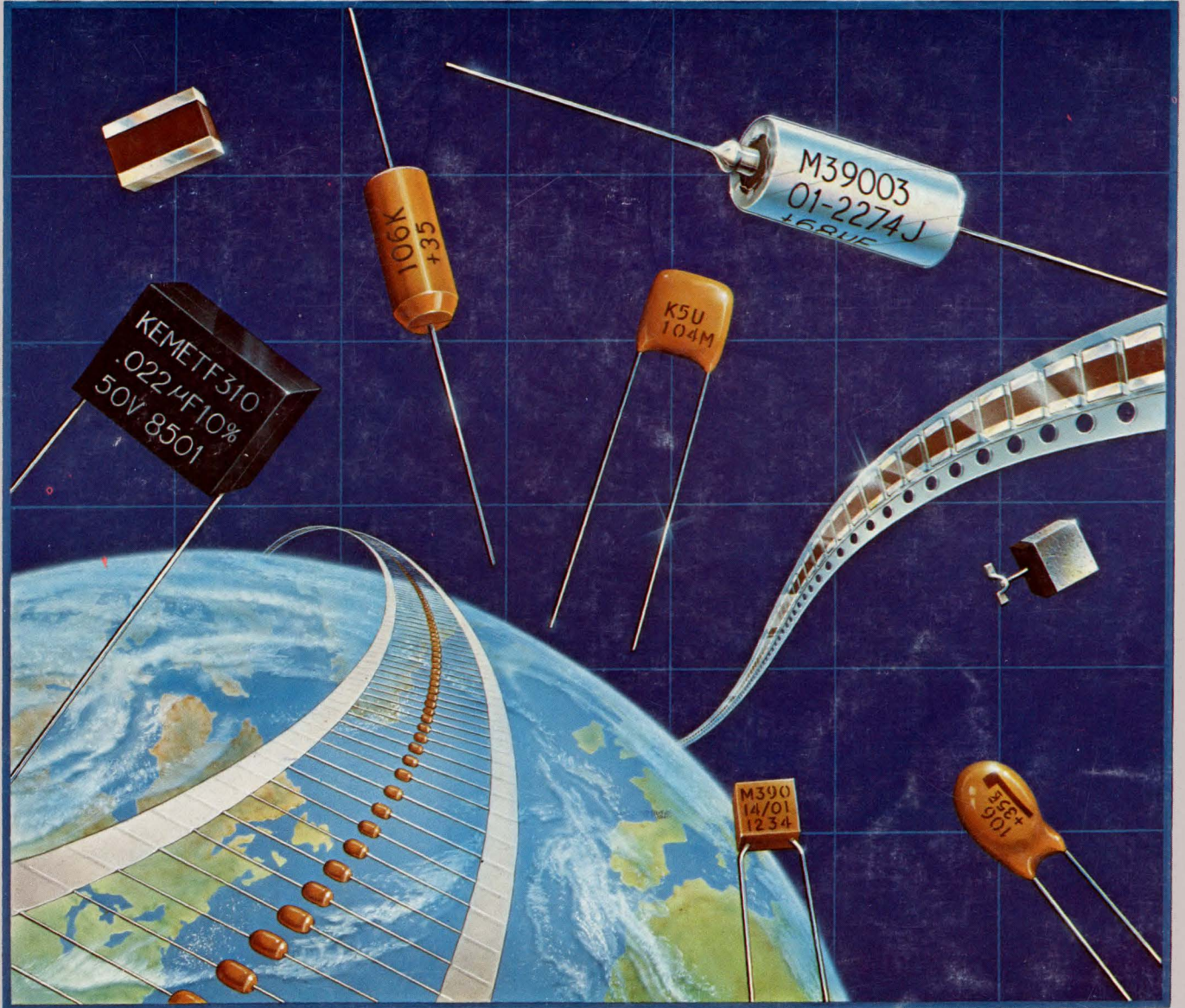


K E M E T



# GENERAL CATALOG

**TANTALUM • CERAMIC • FILM  
CAPACITORS**



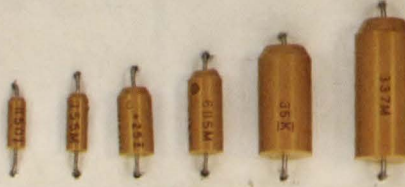
**KEMET**<sup>®</sup> UNION CARBIDE – ELECTRONICS DIVISION  
TANTALUM, CERAMIC & FILM CAPACITORS



T110, T212(CSR13), T210, T140  
T242(CSR23), T252(CSR33)  
T262(CSR21) &  
T240 Series  
.0047–1200 $\mu$ F



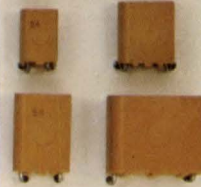
T322 & T323 (CX01 & CX05) Series  
.1 – 220 $\mu$ F



T330 Series  
.1 – 220 $\mu$ F



T340 Series  
.1 – 330 $\mu$ F



T120, T222 (CSR09) & T220 Series



.0047–22 $\mu$ F

T361, T362, T363(CX02), T368 & T369(CX12) Series .1 – 330 $\mu$ F



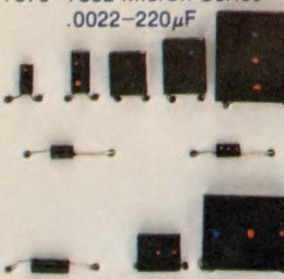
T362

T368

T350, T351, T352, T353, T354 & T355 UltraDip Series  
.1 – 680 $\mu$ F



T370–T382 Micron Series  
.0022–220 $\mu$ F



other sizes available

Tantalum Chip Capacitors



T411, T412(CWR01) .1–68 $\mu$ F

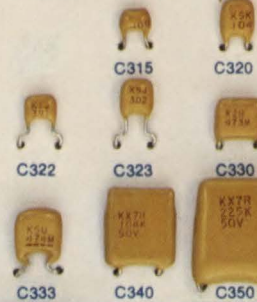
T421, T422(CWR02) .1–100 $\mu$ F

Ceramic Chip Capacitors 1pF–1.2 $\mu$ F  
\*EIA Standard Styles



\*1206 \*1210 \*0805 1005 1805 1808 \*1812 \*1825 2225  
(CDR01) (CDR02) (CDR03) (CDR04) (CDR05) (CDR06)

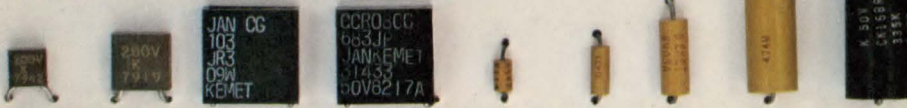
Golden Max 1pF–3.3 $\mu$ F



C315 C320  
C322 C323 C330  
C333 C340 C350

Molded Ceramic 1.0 pF–3.3 $\mu$ F

(Also Available to MIL-C-20 Specification)



C052 (CK05) (CKR05) C062 (CK06) (CKR06) C512 C522 C114 (CK12) (CKR11) C124 (CK13) (CKR12) C192 (CK14) (CKR14) C202 (CK15) (CKR15) C222 (CK16) (CKR16)

"AXIMAX" Conformal Axial 10pF–1 $\mu$ F



C410 C420

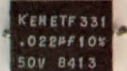
Flat Kap .001–1.0 $\mu$ F



F110, F120, F130  
F310 (CFR04R), F311  
8 Case Sizes Available (CFR04A), F320,  
F321, F330 & F331



4 Case Sizes Available



8 Case Sizes Available

Metallized Polycarbonate Film .001–22 $\mu$ F

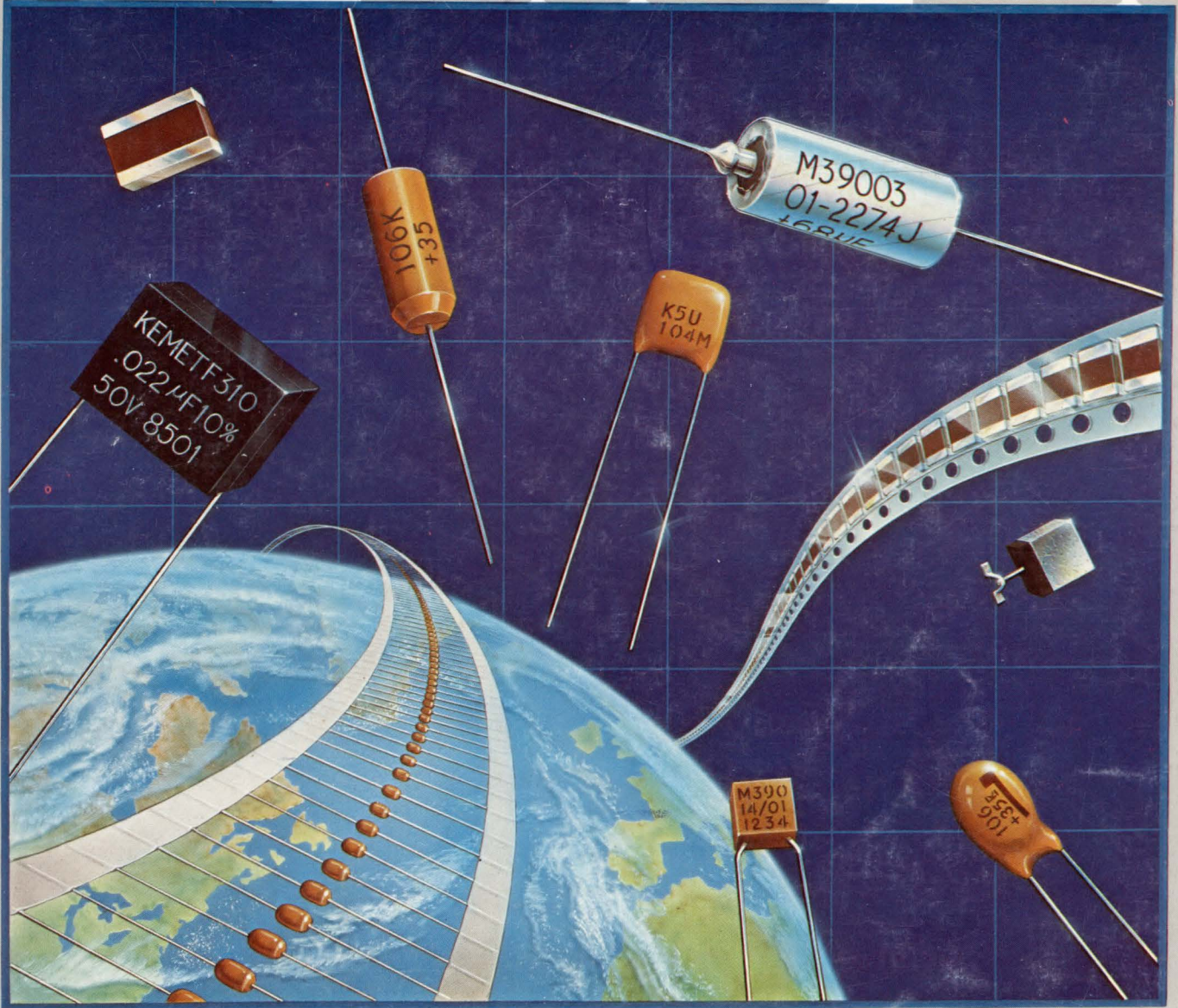
F141  
F241(CRH01-5)  
F242(CRH06-0)  
F245(CHR01A,D,G,K & N)  
F246(CHR01B,E,H,L & P)  
F247(CHR01C,F,J,M & R)  
F248CHR10)



**NOTICE**

Any capacitor misapplied may fail and thereby damage other circuit components. Please refer to specific KEMET Application Notes, available free of charge from the address below, for a more complete description of capacitor characteristics.

K E M M Z E T



# GENERAL CATALOG

**TANTALUM • CERAMIC • FILM  
CAPACITORS**



T.T.I. INC.  
780 TRIMBLE RD., SUITE 301  
SAN JOSE, CA 95131  
(408) 943-9155

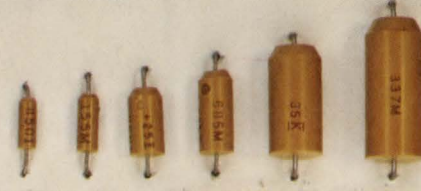
**KEMET**® UNION CARBIDE – ELECTRONICS DIVISION  
TANTALUM, CERAMIC & FILM CAPACITORS



T110, T212 (CSR13), T210, T140  
T242 (CSR23), T252 (CSR33)  
T262 (CSR21) &  
T240 Series  
.0047–1200 $\mu$ F



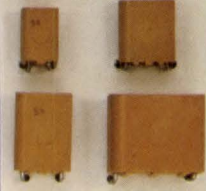
T322 & T323 (CX01 & CX05) Series  
.1 – 220 $\mu$ F



T330 Series  
.1 – 220 $\mu$ F



T340 Series  
.1 – 330 $\mu$ F



T120, T222  
(CSR09) &  
T220 Series  
.0047–22 $\mu$ F



T361, T362, T363 (CX02), T368 &  
T369 (CX12) Series .1 – 330 $\mu$ F



T350, T351, T352, T353, T354 & T355 UltraDip Series  
.1 – 680 $\mu$ F

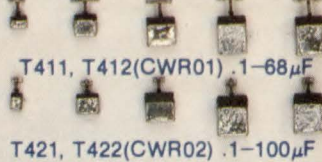


T370–T382 Micron Series  
.0022–220 $\mu$ F



other sizes available

Tantalum Chip Capacitors



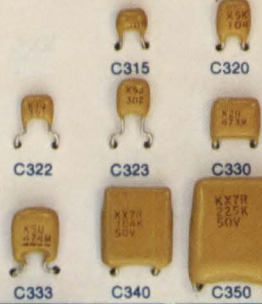
T411, T412 (CWR01) .1–68 $\mu$ F

T421, T422 (CWR02) .1–100 $\mu$ F

Ceramic Chip Capacitors 1pF–1.2 $\mu$ F  
\*EIA Standard Styles

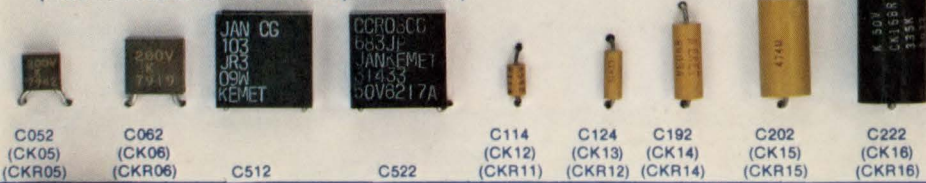


Golden Max 1pF–3.3 $\mu$ F



Molded Ceramic 1.0 pF–3.3 $\mu$ F

(Also Available to MIL-C-20 Specification)



"AXIMAX"  
Conformal Axial  
10pF–1 $\mu$ F



Flat Kap .001–1.0 $\mu$ F



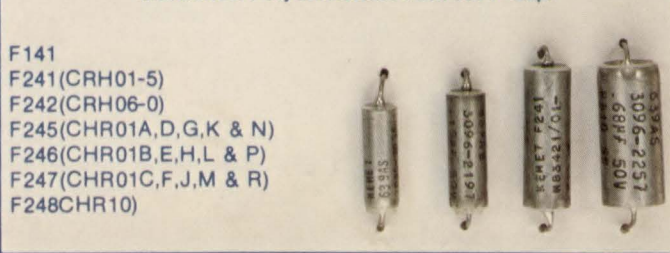
8 Case Sizes Available

4 Case Sizes Available

F110, F120, F130  
F310 (CFR04R), F311  
(CFR04A), F320,  
F321, F330 & F331

8 Case Sizes Available

Metallized Polycarbonate Film .001–22 $\mu$ F



F141  
F241 (CRH01-5)  
F242 (CRH06-0)  
F245 (CHR01A, D, G, K & N)  
F246 (CHR01B, E, H, L & P)  
F247 (CHR01C, F, J, M & R)  
F248 (CHR10)

NOTICE

Any capacitor misapplied may fail and thereby damage other circuit components. Please refer to specific KEMET Application Notes, available free of charge from the address below, for a more complete description of capacitor characteristics.

**SOLID TANTALUM CAPACITORS**

KEMET STYLE		KEMET STANDARD SERIES				MILITARY STYLE	
	Page		Page		Page		Page
MIL-C-39003 Ordering Information, Failure Rate Levels & Marking	2 & 3	T110	4-19	T354	53-56	CSR09	25-31
Lead Tape and Reel Packaging	3	T111	32-36	T355	53-56	CSR13	4-19
Hermetic seal, standard & military	4-22	T120	25-31	T361	57-62	CSR21	23 & 24
Hermetic seal, military, low ESR	23 & 24	T140	4-19	T362	57-62	CSR23	4-19
Hermetic seal, miniature	25-31	T210	37	T363	57-62	CSR33	20-22
Hermetic seal, non-polar	32-36	T212	4-19	T368	57-62	CSR91	32-36
Hermetic seal, extended range, standard & military	4-22	T213	32-36	T369	57-62	CWR01	68-72
Hermetic seal, GR500 High Reliability	37	T220	37	T370	63-67	CWR02	68-72
Molded, miniature axial lead	38-44	T222	25-31	T371	63-67	CX01	38-44
Molded, radial lead	45-52	T240	37	T372	63-67	CX02	57-62
Dipped, radial lead	53-62	T242	4-19	T373	63-67	CX05	38-44
Plastic encapsulated subminiature, Micron	63-67	T252	20-22	T374	63-67	CX12	57-62
Chips	68-72	T262	23 & 24	T376	63-67		
Reeling for Auto-Insert (ARIS)	73 & 74	T322	38-44	T330	63-67		
		T323	38-44	T382	63-67		
		T330	45-47	T384	63-67		
		T340	48-52	T386	63-67		
		T350	53-56	T411	68-72		
		T351	53-56	T412	68-72		
		T352	53-56	T421	68-72		
		T353	53-56	T422	68-72		

MILITARY SPECIFICATION	
MIL-C-39003 Ordering Information, Failure Rate Levels & Marking	2 & 3
MIL-C-39003/1	4-19
MIL-C-39003/2	25-31
MIL-C-39003/3	4-19
MIL-C-39003/4	32-36
MIL-C-39003/6	20-22
MIL-C-39003/9	23 & 24
MIL-C-49137/2	57-62
MIL-C-49137/1 & 5	38-44
MIL-C-55365/1	68-72

**MULTILAYER CERAMIC CAPACITORS**

KEMET STYLE		KEMET STANDARD SERIES (Contd.)				MILITARY STYLE (Contd.)	
	Page		Page		Page		Page
Introduction to Multilayer Ceramic Capacitors	75	C430	96-98	C1210	99 & 100	CK14	90
Reeling for Auto-Insert (ARIS)	73 & 74	C440	96-98	C1805	99 & 100	CK15	90
Molded, radial lead	76-83	C512	76 & 77	C1808	99 & 100	CK16	90
Molded, axial lead	84-91	C522	76 & 77	C1812	99 & 100	CKR05	81
Dipped, Golden Max	92-95	C0805	99 & 100	C1825	99 & 100	CKR06	82
Conformal, AXIMAX	96-98	C1005	99 & 100	C2225	99 & 100		
Chips, Solderguard, Commercial	99 & 100	C1206	99 & 100				
Chips, CDR, Military	100 & 101						
Chips, GR900 Hi-Rel	110-116						
Molded, GR900 Hi-Rel	102-109						
Component Placement System (CoPS)	117 & 118						

KEMET STANDARD SERIES		MILITARY STYLE	
	Page		Page
C052	76 & 77	CC05	78 & 79
C062	76 & 77	CC06	79
C114	84 & 91	CC07	80
C124	84 & 91	CC08	80
C192	84 & 91	CC75	85 & 86
C202	85	CC76	86 & 87
C222	85	CC77	87
C315	92-95	CC78	87
		CC79	88
		CCR05	78 & 79
		CCR06	79
		CCR07	80
		CCR08	80
		CCR75	85 & 86
		CCR76	86 & 87
		CCR77	87
		CCR78	87
		CCR79	88
		CDR01	100 & 101
		CDR02	100 & 101
		CDR03	100 & 101
		CDR04	100 & 101
		CDR05	100 & 101
		CDR06	100 & 101
		CK05	81
		CK06	82
		CK12	89
		CK13	89 & 90

MILITARY SPECIFICATION	
MIL-C-20/27	85 & 86
MIL-C-20/28	86 & 87
MIL-C-20/29	87
MIL-C-20/30	87
MIL-C-20/31	88
MIL-C-20/35	78 & 79
MIL-C-20/36	79
MIL-C-20/37	80
MIL-C-20/38	80
MIL-C-11015/18	81
MIL-C-11015/19	82
MIL-C-11015/20	89
MIL-C-39014/01	81
MIL-C-39014/02	82
MIL-C-39014/05	89
MIL-C-55681/1, /2, /3	100 & 101

**FILM CAPACITORS**

KEMET STYLE		KEMET STANDARD SERIES				MILITARY STYLE (Contd.)	
	Page		Page		Page		Page
Parylene Film Flat Kap, molded	119 & 120	F110	121 & 122	F247	123, 128-131	CHR01J	130
Parylene Film Flat Kap, hermetic seal	121 & 122	F120	121 & 122	F248	123, 132 & 133	CHR01K	130 & 131
Metallized Polycarbonate	123	F130	121 & 122	F310	119 & 120	CHR01L	130 & 131
Metallized Polycarbonate, military	123-133	F141	134-136	F311	119 & 120	CHR01M	130 & 131
Metallized Polycarbonate, instrument	134-136	F241	123-128	F320	119 & 120	CHR01N	131
		F242	123-128	F321	119 & 120	CHR01P	131
		F245	123, 128-131	F330	119 & 120	CHR01R	131
		F246	123, 128-131	F331	119 & 120	CHR10	132 & 133
						CRH01	124

MILITARY SPECIFICATION	
MIL-C-39022/09	123, 128-131
MIL-C-39022/10	123, 132 & 133
MIL-C-55514/03	119 & 120
MIL-C-83421/01	123-128

**MIL-C-39003\***  
**ORDERING INFORMATION**  
**FOR CSR09 (T222), CSR13 (T212), CSR21 (T262), CSR23 (T242),**  
**CSR33 (T252), & CSR91 (T213) CAPACITORS**

**TYPE** \_\_\_\_\_  
 Capacitors, Fixed, Solid Electrolyte, Tantalum  
 Established Reliability

**STYLE** \_\_\_\_\_  
 Tubular Case — Always Sleeved

09 — Miniature — T222  
 13 — Standard — T212  
 21 — Standard, low ESR — T262  
 23 — Extended Range — T242  
 33 — Extended Range Low Leakage — T252  
 91 — Non-Polar — T213

**VOLTAGE** \_\_\_\_\_

Symbol	VDC Working		VDC Surge	
	85°C	125°C	85°C	125°C
B	6	4	8	5
C	10	7	13	9
D	15	10	20	12
E	20	13	26	16
F	35	23	46	28
G	50	33	65	40
H	75	50	98	64
J	100	67	130	86

**CSR XX B 565 K M**

**FAILURE RATE LEVEL IN % PER 1000 HOURS**

**GRADED**  
 A — Not Applicable  
 B — 0.1%/k hrs.  
 C — 0.01%/k hrs.  
 D — 0.001%/k hrs.

**EXPONENTIAL**  
 M — 1%/k hrs.  
 P — 0.1%/k hrs.  
 R — 0.01%/k hrs.  
 S — 0.001%/k hrs.

**CAPACITANCE TOLERANCE**  
 J — ±5%  
 K — ±10%  
 M — ±20%

**CAPACITANCE**  
 Expressed in picofarads (1 microfarad = 1,000,000 picofarads). First two digits represent significant figures. Last digit specifies the number of zeros to follow.

**Examples**  
 565 — 5,600,000 = 5.60 μF  
 564 — 560,000 = .56 μF  
 563 — 56,000 = .056 μF

\*This Military Part Numbering System is obsolete in accordance with the current specifications. The correct current designation for a CSR part number is the MIL Specification Number, followed by the Specification (slash) Sheet Number and Dash Number (i.e. — MIL-C-39003/01-2270). However, the part number breakdown shown above is still widely used and is shown for reference.

**MILITARY CAPACITOR APPROVED FAILURE RATE LEVELS AND MARKINGS PER MIL-C-39003 FOR CSR09 (T222 A & B CASE SIZES ONLY), CSR13 (T212), CSR21 (T262), CSR23 (T242) & CSR33 (T252) CAPACITORS**

**KEMET APPROVED FAILURE RATE LEVELS—MIL-C-39003/E (EXPONENTIAL)**

STYLE	DESCRIPTION	KEMET SERIES	APPROVED FAILURE RATE LEVEL
CSR09	Polar-Subminiature	T222	S (0.001%/k hrs.)
CSR13	Polar-Standard MIL Case	T212	S (0.001%/k hrs.)
CSR21	Polar-Standard Low ESR Mil Case	T262	S (0.001%/k hrs.)
CSR23	Polar-Extended Range	T242	S (0.001%/k hrs.)

STYLE	DESCRIPTION	KEMET SERIES	APPROVED FAILURE RATE LEVEL
CSR33	Polar-Extended Range Low Leakage	T252	S (0.001%/k hrs.)
CSR91	Non-Polar	T213	S (0.001%/k hrs.)

**EXPONENTIAL MARKING**

**A CASE\***

39003 — Military specification number  
 01 - K — Specification sheet number and trademark  
 2961J — Nonsignificant dash number and "J" for JAN  
 +533A — Polarity, date code (1st digit indicates year and the next two digits indicate the week), and lot symbol  
 NA — Misc. batch I.D. code

\*This marking is also printed on T222 B case size. T222 capacitors are only available in A & B case sizes.

**B CASE**

M39003 — Military specification number  
 01 - — Specification sheet number  
 2244J — Nonsignificant dash number and "J" for JAN  
 31433 — Source code  
 +532A — Polarity, date code (1st digit indicates year and the next two digits indicate the week), and lot symbol  
 NA K — Misc. batch I.D. code, and trademark

**C & D CASES**

M39003 — Military specification number  
 01 - 3093J — Specification sheet number, nonsignificant dash number, and "J" for JAN  
 +6.8 μF — Positive terminal identifier and capacitance value  
 10% 35V — Capacitance tolerance and voltage rating  
 31433 — Source code  
 8533A NA K — Date code, lot code, and trademark

**CSR91 (T213) CAPACITORS A, B, C & D CASES**

M39003 — Military specification number  
 04 - 0980J — Specification sheet number, nonsignificant dash number, and "J" for JAN  
 1μF — Capacitance value  
 10% 35VNP — Capacitance tolerance and voltage rating  
 8533 MA 31433 — Date code, lot code, and source code

**KEMET APPROVED FAILURE RATE LEVELS—MIL-C-39003/F (GRADED)**

STYLE	DESCRIPTION	KEMET SERIES	APPROVED FAILURE RATE LEVEL*
CSR09	Polar-Subminiature	T222	D (0.001%/k hrs.)
CSR13	Polar-Standard MIL Case	T212	D (0.001%/k hrs.)
CSR21	Polar-Standard Low ESR Mil Case	T262	D (0.001%/k hrs.)
CSR23	Polar-Extended Range	T242	D (0.001%/k hrs.)

STYLE	DESCRIPTION	KEMET SERIES	APPROVED FAILURE RATE LEVEL*
CSR33	Polar-Extended Range Low Leakage	T252	D (0.001%/k hrs.)
CSR91	Non-Polar	T213	D (0.001%/k hrs.)

\*Not approved to 'D' Failure Rate Level on all voltages and capacitance values.

**GRADED MARKING**

**A CASE\***

39003	— Military specification number
01 - K	— Specification sheet number and trademark
9002J	— Nonsignificant dash number and "J" for JAN
+533	— Polarity, date code (1st digit indicates year and the next two digits indicate the week)
XY	— Lot symbol

\*This marking is also printed on T222 B case size. T222 capacitors are only available in A & B case sizes.

**B CASE**

M39003	— Military specification number
01 -	— Specification sheet number
8006J	— Nonsignificant dash number and "J" for JAN
31433	— Source code
+533 NA	— Polarity, date code (1st digit indicates year and the next two digits indicate the week), lot symbol

**C & D CASES**

M39003	— Military specification number
01 - 8222J	— Specification sheet number, nonsignificant dash number, and "J" for JAN
+6.8 μF	— Positive terminal identifier and capacitance value
10% 35V	— Capacitance tolerance and voltage rating
31433	— Source code
8533 NA K	— Date code, lot code, and trade mark

**CSR91 (T213) CAPACITORS  
A, B, C & D CASES**

M39003	— Military specification number
01 - 0980J	— Specification sheet number, nonsignificant dash number, and "J" for JAN
1 μF	— capacitance value
10% 35VNP	— Capacitance tolerance and voltage rating
8533 NA 31433	— Date code, lot code, and source code

**LEAD TAPE and REEL PACKAGING**

**for T110, T212 (CSR13), T262 (CSR21), T242 (CSR23) & T252 (CSR33) SERIES**

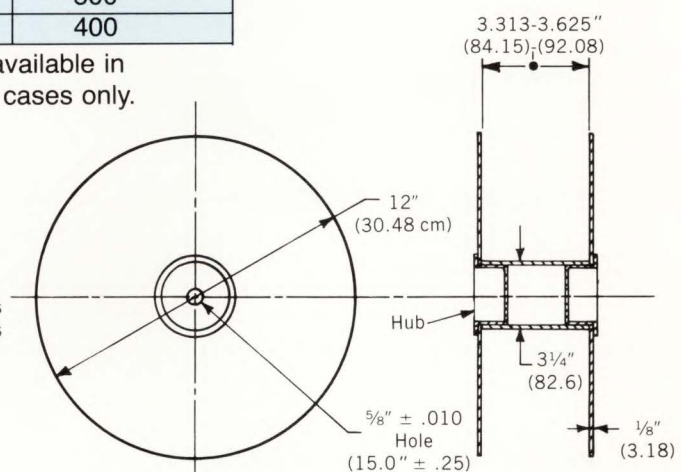
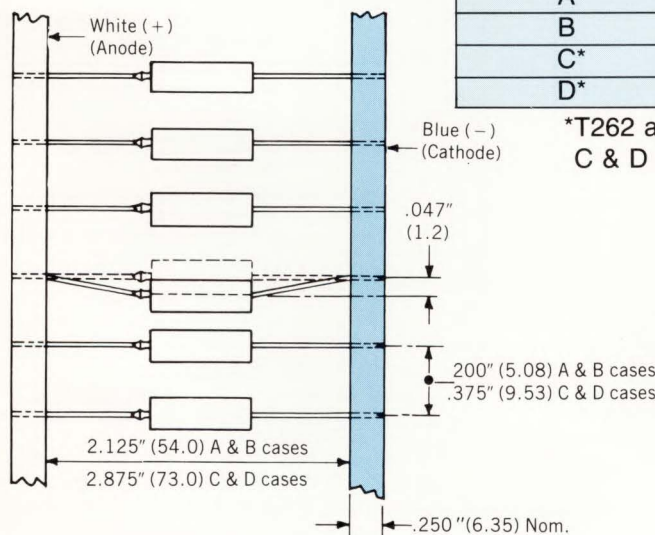
KEMET offers standard reeling of T110, T212 (CSR13), T262 (CSR21), T242 (CSR23) & T252 (CSR33) Series Molded Solid Tantalum Capacitors for automatic insertion or lead forming machines per EIA Specification RS-296. Capacitors are reeled so that positive leads are oriented as shown below. Kraft paper (50 lb. test minimum) is inserted between the layers of capacitors wound on reels for A & B sizes, and corrugated paper (70 lb. test min., single faced) is inserted for C & D sizes. Capacitor lead length may ex-

tend only a maximum of .0625" (1.59 mm) beyond the tapes' edges. Capacitors are centered in a row between the two tapes and will deviate only ±.031" (0.79 mm) from the row center. Figures below show the KEMET standard chipboard tape reel. The distance between flanges of the reel is .218" ±.093" (5.54 ±2.3 mm) greater than the overall capacitor length. A minimum of 36" (91.5 cm) leader tape is provided at each end of the reeled capacitor. Universal splicing clips are used to connect the tape.

**Standard Reeling Quantities**

Case Size	Quantity
A	2300
B	1500
C*	500
D*	400

\*T262 available in C & D cases only.



**T110 & T140 SERIES—POLAR TYPE & T212 (CSR13) & T242 (CSR23)**

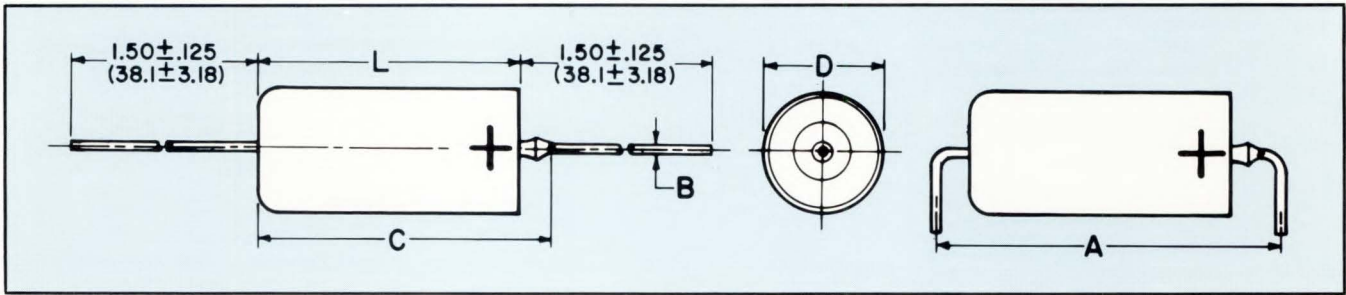
KEMET standard MIL case hermetic sealed T110 Series are the leading solid tantalum capacitors in use today. They are compact, ruggedly built, designed for miniaturized circuitry, and are especially suited for coupling, bypass, filtering and R-C timing circuits. They exhibit excellent stability, extremely low DC leakage current, dissipation factor, and impedance over a wide temperature and frequency range.

Available in standard EIA capacitance values from .0047-330  $\mu$ F in  $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  tolerances and working voltages from 6-125 VDC.

Higher CV values in comparable case sizes are available in KEMET T140 Series in areas **NOT** shaded in CV listings.

Included in the following Series table is a complete listing of CSR13 and 23 qualified MIL-C-39003 capacitors. Also included on pages 23 and 24 is KEMET's new T262 Series, similar to T212 Series, but offering higher ripple current handling capability and low ESR. KEMET is approved to manufacture to the S (0.001%/k hrs.) Exponential & D (0.001%/k hrs.) Graded failure rate levels. For additional information refer to KEMET Catalog F-1851.

**CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	UNINSULATED		INSULATED		A NOM.	B $\pm 0.001$ (.03)	C MAX.	MAX. WT. GRAMS
	D $\pm 0.005$ (.13)	L $\pm 0.031$ (.79)	D $\pm 0.010$ (.25)	L $\pm 0.031$ (.79)				
A	0.125 (3.18)	0.250 (6.35)	0.135 (3.43)	0.286 (7.26)	0.5 (12.7)	0.020 (.51)	0.422 (10.72)	.57
B	0.175 (4.45)	0.438 (11.13)	0.185 (4.70)	0.474 (12.04)	0.7 (17.78)	0.020 (.51)	0.610 (15.49)	1.41
C	0.279 (7.09)	0.650 (16.51)	0.289 (7.34)	0.686 (17.42)	1.0 (25.4)	0.025 (.64)	0.822 (20.88)	5.0
D	0.341 (8.66)	0.750 (19.05)	0.351 (8.92)	0.786 (19.96)	1.1 (27.94)	0.025 (.64)	0.922 (23.42)	8.5

**TXXX ORDERING INFORMATION\***

**T** TANTALUM

**XXX** SERIES  
T110, T212 (CSR13), T262 (CSR21)  
T140, T242 (CSR23)

**A** CASE SIZE  
A / B / C / D

**105** PICOFARAD CODE  
First two digits represent significant figures.  
Third digit specifies number of zeros to follow.

**K** CAPACITANCE TOLERANCE  
M —  $\pm 20\%$   
K —  $\pm 10\%$   
J —  $\pm 5\%$

**050** VOLTAGE  
At 85°C

**A** SPECIFICATION (when necessary)  
C100 — Uninsulated Capacitors  
C7000 — Reeling Per EIA Specification RS-296  
Other—As Applicable  
**All capacitors are sleeved unless specified as above.**

**S** LEAD MATERIAL  
S — Standard  
**Available on special order at additional cost:**  
(Contact your sales representative.)  
F — Bare Nickel  
G — Gold Plated Nickel  
I — Alloy 180 (Bare)

**C** FAILURE RATE\*\*  
**GRADED**  
A — Not Applicable  
B — 0.1%/k hrs.  
C — 0.01%/k hrs.  
D — 0.001%/k hrs.  
**EXPONENTIAL**  
M — 1%/k hrs.  
P — 0.1%/k hrs.  
R — 0.01%/k hrs.  
S — 0.001%/k hrs.

\* For Military Ordering Information, see page 2.

\*\*M, P, R & S Failure Rates available for T212, T213, T222, T242, T252 & T262 capacitors only.

For further details consult T110 Series Catalog F-1851







## T110 & T140 SERIES

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS									KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS
			KEMET PART NUMBER	D.C. LEAKAGE μA@25°C MAX.	MAX. DISSI- PATION FACTOR %@25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)									
						MIL-C-39003/1F & /3C EXPONENTIAL				MIL-C-39003/1F & /3C GRADED					
M	P	R	S	B	C	D									
(1.0)	(0.1)	(0.01)	(0.001)	(0.1)	(0.01)	(0.001)									
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C (Cont'd)</b>															
100.0	C	20	<b>T110C107M010AS</b>	5.0	6	2262	2502	2742	2982	6037	7037	8037	<b>T212C107M010</b>	S	
120.0	C	5	T110C127J 010AS	6.0	6	5016	5216	5416	5616	6038	7038	8038	T212C127J 010	S	
120.0	C	10	T110C127K 010AS	6.0	6	2263	2503	2743	2983	6039	7039	8039	T212C127K 010	S	
120.0	C	20	T110C127M010AS	6.0	6										
150.0	C	10,20	T140C157J 010AS	8.0	8										
180.0	C	10,20	T140C187J 010AS	8.0	8										
220.0	C	10	<b>T140C227K 010AS</b>	12.0	8	0125	0225	0325	0425	2025	3025	4025	<b>T242C227K 010</b>	S	
220.0	C	20	<b>T140C227M010AS</b>	12.0	8	0126	0226	0326	0426	2026	3026	4026	<b>T242C227M010</b>	S	
270.0	C	10	T140C277K 010AS	13.0	8	0127	0227	0327	0427	2027	3027	4027	T242C277K 010	S	
270.0	C	20	T140C277M010AS	13.0	8										
150.0	D	5,10,20	T110D157J 010AS	9.0	6					6040	7040	8040	T212D157J 010	S	
180.0	D	5	T110D187J 010AS	9.0	6	5017	5217	5417	5617	6041	7041	8041	T212D187J 010	S	
180.0	D	10	T110D187K 010AS	9.0	6	2264	2504	2744	2984						
180.0	D	20	T110D187M010AS	9.0	6										
220.0	D	5	<b>T110D227J 010AS</b>	10.0	8	5018	5218	5418	5618	6042	7042	8042	<b>T212D227J 010</b>	S	
220.0	D	10	<b>T110D227K 010AS</b>	10.0	8	2265	2505	2745	2985	6043	7043	8043	<b>T212D227K 010</b>	S	
220.0	D	20	<b>T110D227M010AS</b>	10.0	8	2266	2506	2746	2986	6044	7044	8044	<b>T212D227M010</b>	S	
330.0	D	10,20	T140D337J 010AS	16.0	8										
390.0	D	10	T140D397K 010AS	16.0	10	0128	0228	0328	0428	2028	3028	4028	T242D397K 010	S	
390.0	D	20	T140D397M010AS	16.0	10										
470.0	D	10	T140D477K 010AS	16.0	10	0129	0229	0329	0429	2029	3029	4029	T242D477K 010	S	
470.0	D	20	T140D477M010AS	16.0	10	0130	0230	0330	0430	2030	3030	4030	T242D477M010	S	
560.0	D	10	<b>T140D567K 010AS</b>	20.0	10	0131	0231	0331	0431	2031	3031	4031	<b>T242D567K 010</b>	S	
560.0	D	20	<b>T140D567M010AS</b>	20.0	10										
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>															
0.33	A	5,10,20	T110A334J 015AS	0.3	3										
0.39	A	5,10,20	T110A394J 015AS	0.3	3										
0.47	A	5,10,20	T110A474J 015AS	0.3	3										
0.56	A	5,10,20	T110A564J 015AS	0.3	3										
0.68	A	5,10,20	T110A684J 015AS	0.3	3										
0.82	A	5,10,20	T110A824J 015AS	0.3	3										
1.0	A	5,10,20	T110A105J 015AS	0.3	3										
1.2	A	5,10,20	T110A125J 015AS	0.3	4										
1.5	A	5,10,20	T110A155J 015AS	0.3	4										
1.8	A	5,10,20	T110A185J 015AS	0.3	4										
2.2	A	5,10,20	T110A225J 015AS	0.3	4										
2.7	A	5	T110A275J 015AS	0.3	4	5019	5219	5419	5619	6045	7045	8045	T212A275J 015	S	
2.7	A	10	T110A275K 015AS	0.3	4	2267	2507	2747	2987	6046	7046	8046	T212A275K 015	S	
2.7	A	20	T110A275M 015AS	0.3	4										
3.3	A	5	<b>T110A335J 015AS</b>	0.4	4	5020	5220	5420	5620	6047	7047	8047	<b>T212A335J 015</b>	S	
3.3	A	10	<b>T110A335K 015AS</b>	0.4	4	2268	2508	2748	2988	6048	7048	8048	<b>T212A335K 015</b>	S	
3.3	A	20	<b>T110A335M 015AS</b>	0.4	4	2269	2509	2749	2989	6049	7049	8049	<b>T212A335M 015</b>	S	
3.9	A	10,20	T140A395J 015AS	1.0	4										
4.7	A	10	T140A475K 015AS	1.0	4	0132	0232	0332	0432	2032	3032	4032	T242A475K 015	S	
4.7	A	20	T140A475M 015AS	1.0	4	0133	0233	0333	0433	2033	3033	4033	T242A475M 015	S	
5.6	A	10	T140A565K 015AS	1.3	4	0134	0234	0334	0434	2034	3034	4034	T242A565K 015	S	
5.6	A	20	T140A565M 015AS	1.3	4										
3.9	B	5,10,20	T110B395J 015AS	0.4	4										
4.7	B	5,10,20	<b>T110B475J 015AS</b>	0.7	4										
5.6	B	5,10,20	T110B565J 015AS	0.7	4										
6.8	B	5,10,20	T110B685J 015AS	0.7	6										
8.2	B	5,10,20	T110B825J 015AS	0.7	6										
10.0	B	5,10,20	T110B1J6J 015AS	1.0	6										
12.0	B	5,10,20	T110B126J 015AS	1.0	6										
15.0	B	5,10,20	T110B156J 015AS	2.0	6										
18.0	B	5	T110B186J 015AS	2.0	6	5021	5221	5421	5621	6050	7050	8050	T212B186J 015	S	
18.0	B	10	T110B186K 015AS	2.0	6	2270	2510	2750	2990	6051	7051	8051	T212B186K 015	S	
18.0	B	20	T110B186M 015AS	2.0	6										
22.0	B	5	<b>T110B226J 015AS</b>	2.0	6	5022	5222	5422	5622	6052	7052	8052	<b>T212B226J 015</b>	S	
22.0	B	10	<b>T110B226K 015AS</b>	2.0	6	2271	2511	2751	2991	6053	7053	8053	<b>T212B226K 015</b>	S	
22.0	B	20	<b>T110B226M 015AS</b>	2.0	6	2272	2512	2752	2992	6054	7054	8054	<b>T212B226M 015</b>	S	

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4.  
(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.  
Bold Face lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20.  
For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.

= T110 & T212 (CSR13) capacitors per MIL-C-39003/1E & /1F.  = T140 & T242 (CSR23) capacitors per MIL-C-39003/3B & /3C.





**T110 & T140 SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS								KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								
						MIL-C-39003/1F & /3C EXPONENTIAL				MIL-C-39003/1F & /3C GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C (Cont'd)</b>														
56.0	D	5	T110D566J 020AS	5.5	6	5039	5239	5439	5639	6095	7095	8095	T212D566J 020(2)S	
56.0	D	10	T110D566K 020AS	5.5	6	2297	2537	2777	3017	6096	7096	8096	T212D566K 020(2)S	
56.0	D	20	T110D566M 020AS	5.5	6									
68.0	D	5	T110D686J 020AS	6.0	6	5040	5240	5440	5640	6097	7097	8097	T212D686J 020(2)S	
68.0	D	10	T110D686K 020AS	6.0	6	2298	2538	2778	3018	6098	7098	8098	T212D686K 020(2)S	
68.0	D	20	T110D686M 020AS	6.0	6	2299	2539	2779	3019	6099	7099	8099	T212D686M 020(2)S	
82.0	D	5	T110D826J 020AS	6.0	6	5041	5241	5441	5641	6100	7100	8100	T212D826J 020(2)S	
82.0	D	10	T110D826K 020AS	6.0	6	2300	2540	2780	3020	6101	7101	8101	T212D826K 020(2)S	
82.0	D	20	T110D826M 020AS	6.0	6									
100.0	D	5	T110D107J 020AS	10.0	6	5042	5242	5442	5642	6102	7102	8102	T212D107J 020(2)S	
100.0	D	10	T110D107K 020AS	10.0	6	2301	2541	2781	3021	6103	7103	8103	T212D107K 020(2)S	
100.0	D	20	T110D107M 020AS	10.0	6	2302	2542	2782	3022	6104	7104	8104	T212D107M 020(2)S	
150.0	D	10	T140D157K 020AS	15.0	8	0161	0261	0361	0461	2061	3061	4061	T242D157K 020(2)S	
150.0	D	20	T140D157M 020AS	15.0	8	0162	0262	0362	0462	2062	3062	4062	T242D157M 020(2)S	
180.0	D	10	T140D187K 020AS	15.0	8	0163	0263	0363	0463	2063	3063	4063	T242D187K 020(2)S	
180.0	D	20	T140D187M 020AS	15.0	8									
<b>30 VOLT RATING AT 85°C — 20 VOLT RATING AT 125°C</b>														
1.2	A	10,20	T140A125(1)030AS	1.0	4									
1.5	A	10,20	T140A155(1)030AS	1.0	4									
1.8	A	10,20	T140A185(1)030AS	1.0	4									
2.2	A	10,20	T140A225(1)030AS	1.0	4									
2.7	A	10,20	T140A275(1)030AS	1.0	4									
12.0	B	10,20	T140B126(1)030AS	3.0	4									
15.0	B	10,20	T140B156(1)030AS	3.0	4									
18.0	B	10,20	T140B186(1)030AS	3.0	4									
33.0	C	10,20	T140C336(1)030AS	6.0	6									
39.0	C	10,20	T140C396(1)030AS	6.0	6									
47.0	C	10,20	T140C476(1)030AS	7.0	6									
56.0	C	10,20	T140C566(1)030AS	7.0	6									
68.0	C	10,20	T140C686(1)030AS	7.0	6									
82.0	D	10,20	T140D826(1)030AS	10.0	6									
100.0	D	10,20	T140D107(1)030AS	10.0	8									
<b>35 VOLT RATING AT 85° — 23 VOLT RATING AT 125°C</b>														
0.0047	A	5,10,20	T110A472(1)035AS	0.1	3									
0.0056	A	5,10,20	T110A562(1)035AS	0.1	3									
0.0068	A	5,10,20	T110A682(1)035AS	0.1	3									
0.0082	A	5,10,20	T110A822(1)035AS	0.1	3									
0.01	A	5,10,20	T110A103(1)035AS	0.1	3									
0.012	A	5,10,20	T110A123(1)035AS	0.1	3									
0.015	A	5,10,20	T110A153(1)035AS	0.1	3									
0.018	A	5,10,20	T110A183(1)035AS	0.1	3									
0.022	A	5,10,20	T110A223(1)035AS	0.1	3									
0.027	A	5,10,20	T110A273(1)035AS	0.1	3									
0.033	A	5,10,20	T110A333(1)035AS	0.1	3									
0.039	A	5,10,20	T110A393(1)035AS	0.1	3									
0.047	A	5,10,20	T110A473(1)035AS	0.1	3									
0.056	A	5,10,20	T110A563(1)035AS	0.1	3									
0.068	A	5,10,20	T110A683(1)035AS	0.1	3									
0.082	A	5,10,20	T110A823(1)035AS	0.1	3									
0.1	A	5,10,20	T110A104(1)035AS	0.5	3									
0.12	A	5,10,20	T110A124(1)035AS	0.5	3									
0.15	A	5,10,20	T110A154(1)035AS	0.5	3									
0.18	A	5,10,20	T110A184(1)035AS	0.5	3									
0.22	A	5,10,20	T110A224(1)035AS	0.5	3									
0.27	A	5,10,20	T110A274(1)035AS	0.5	3									
0.33	A	5,10,20	T110A334(1)035AS	0.5	3									
0.39	A	5,10,20	T110A394(1)035AS	0.5	3									
0.47	A	5,10,20	T110A474(1)035AS	0.5	3									

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4.

(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20. For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.

□ = T110 & T212 (CSR13) capacitors per MIL-C-39003/1E & /1F.

□ = T140 & T242 (CSR23) capacitors per MIL-C-39003/3B & /3C.







**T110 & T140 SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS							KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)							
						MIL-C-39003/1F & /3C EXPONENTIAL				MIL-C-39003/1F & /3C GRADED			
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)	
<b>50 VOLT RATING AT 85° — 33 VOLT RATING AT 125°C (Cont'd)</b>													
0.22	A	20	T110A224M050AS	0.3	2	2345	2585	2825	3065	6175	7175	8175	T212A224M050(2)S
0.27	A	5	T110A274J 050AS	0.3	2	5071	5271	5471	5671	6176	7176	8176	T212A274J 050(2)S
0.27	A	10	T110A274K 050AS	0.3	2	2346	2586	2826	3066	6177	7177	8177	T212A274K 050(2)S
0.27	A	20	T110A274M050AS	0.3	2								
0.33	A	5	T110A334J 050AS	0.3	2	5072	5272	5472	5672	6178	7178	8178	T212A334J 050(2)S
0.33	A	10	T110A334K 050AS	0.3	2	2347	2587	2827	3067	6179	7179	8179	T212A334K 050(2)S
0.33	A	20	T110A334M050AS	0.3	2	2348	2588	2828	3068	6180	7180	8180	T212A334M050(2)S
0.39	A	5	T110A394J 050AS	0.3	2	5073	5273	5473	5673	6181	7181	8181	T212A394J 050(2)S
0.39	A	10	T110A394K 050AS	0.3	2	2349	2589	2829	3069	6182	7182	8182	T212A394K 050(2)S
0.39	A	20	T110A394M050AS	0.3	2								
0.47	A	5	T110A474J 050AS	0.3	2	5074	5274	5474	5674	6183	7183	8183	T212A474J 050(2)S
0.47	A	10	T110A474K 050AS	0.3	2	2350	2590	2830	3070	6184	7184	8184	T212A474K 050(2)S
0.47	A	20	T110A474M050AS	0.3	2	2351	2591	2831	3071	6185	7185	8185	T212A474M050(2)S
0.56	A	5	T110A564J 050AS	0.3	2	5075	5275	5475	5675	6186	7186	8186	T212A564J 050(2)S
0.56	A	10	T110A564K 050AS	0.3	2	2352	2592	2832	3072	6187	7187	8187	T212A564K 050(2)S
0.56	A	20	T110A564M050AS	0.3	2								
0.68	A	5	T110A684J 050AS	0.3	2	5076	5276	5476	5676	6188	7188	8188	T212A684J 050(2)S
0.68	A	10	T110A684K 050AS	0.3	2	2353	2593	2833	3073	6189	7189	8189	T212A684K 050(2)S
0.68	A	20	T110A684M050AS	0.3	2	2354	2594	2834	3074	6190	7190	8190	T212A684M050(2)S
0.82	A	5	T110A824J 050AS	0.3	2	5077	5277	5477	5677	6191	7191	8191	T212A824J 050(2)S
0.82	A	10	T110A824K 050AS	0.3	2	2355	2595	2835	3075	6192	7192	8192	T212A824K 050(2)S
0.82	A	20	T110A824M050AS	0.3	2								
1.0	A	5	T110A105J 050AS	0.4	2	5078	5278	5478	5678	6193	7193	8193	T212A105J 050(2)S
1.0	A	10	T110A105K 050AS	0.4	2	2356	2596	2836	3076	6194	7194	8194	T212A105K 050(2)S
1.0	A	20	T110A105M050AS	0.4	2	2357	2597	2837	3077	6195	7195	8195	T212A105M050(2)S
1.2	A	10	T140A125K 050AS	0.6	4	0176	0276	0376	0476	2076	3076	4076	T242A125K 050(2)S
1.2	A	20	T140A125M050AS	0.6	4								
1.5	A	10	T140A155K 050AS	0.8	4	0177	0277	0377	0477	2077	3077	4077	T242A155K 050(2)S
1.5	A	20	T140A155M050AS	0.8	4	0178	0278	0378	0478	2078	3078	4078	T242A155M050(2)S
1.2	B	5	T110B125J 050AS	0.4	4	5079	5279	5479	5679	6196	7196	8196	T212B125J 050(2)S
1.2	B	10	T110B125K 050AS	0.4	4	2358	2598	2838	3078	6197	7197	8197	T212B125K 050(2)S
1.2	B	20	T110B125M050AS	0.4	4								
1.5	B	5	T110B155J 050AS	0.5	4	5080	5280	5480	5680	6198	7198	8198	T212B155J 050(2)S
1.5	B	10	T110B155K 050AS	0.5	4	2359	2599	2839	3079	6199	7199	8199	T212B155K 050(2)S
1.5	B	20	T110B155M050AS	0.5	4	2360	2600	2840	3080	6200	7200	8200	T212B155M050(2)S
1.8	B	5	T110B185J 050AS	0.5	4	5081	5281	5481	5681	6201	7201	8201	T212B185J 050(2)S
1.8	B	10	T110B185K 050AS	0.5	4	2361	2601	2841	3081	6202	7202	8202	T212B185K 050(2)S
1.8	B	20	T110B185M050AS	0.5	4								
2.2	B	5	T110B225J 050AS	0.8	4	5082	5282	5482	5682	6203	7203	8203	T212B225J 050(2)S
2.2	B	10	T110B225K 050AS	0.8	4	2362	2602	2842	3082	6204	7204	8204	T212B225K 050(2)S
2.2	B	20	T110B225M050AS	0.8	4	2363	2603	2843	3083	6205	7205	8205	T212B225M050(2)S
2.7	B	5	T110B275J 050AS	0.8	4	5083	5283	5483	5683	6206	7206	8206	T212B275J 050(2)S
2.7	B	10	T110B275K 050AS	0.8	4	2364	2604	2844	3084	6207	7207	8207	T212B275K 050(2)S
2.7	B	20	T110B275M050AS	0.8	4								
3.3	B	5	T110B335J 050AS	1.2	4	5084	5284	5484	5684	6208	7208	8208	T212B335J 050(2)S
3.3	B	10	T110B335K 050AS	1.2	4	2365	2605	2845	3085	6209	7209	8209	T212B335K 050(2)S
3.3	B	20	T110B335M050AS	1.2	4	2366	2606	2846	3086	6210	7210	8210	T212B335M050(2)S
3.9	B	5	T110B395J 050AS	1.5	4	5085	5285	5485	5685	6211	7211	8211	T212B395J 050(2)S
3.9	B	10	T110B395K 050AS	1.5	4	2367	2607	2847	3087	6212	7212	8212	T212B395K 050(2)S
3.9	B	20	T110B395M050AS	1.5	4								
4.7	B	5	T110B475J 050AS	1.7	4	5086	5286	5486	5686	6213	7213	8213	T212B475J 050(2)S
4.7	B	10	T110B475K 050AS	1.7	4	2368	2608	2848	3088	6214	7214	8214	T212B475K 050(2)S
4.7	B	20	T110B475M050AS	1.7	4	2369	2609	2849	3089	6215	7215	8215	T212B475M050(2)S
5.6	B	10	T140B565K 050AS	2.5	4	0179	0279	0379	0479	2079	3079	4079	T242B565K 050(2)S
5.6	B	20	T140B565M050AS	2.5	4								
6.8	B	10	T140B685K 050AS	2.5	4	0180	0280	0380	0480	2080	3080	4080	T242B685K 050(2)S
6.8	B	20	T140B685M050AS	2.5	4	0181	0281	0381	0481	2081	3081	4081	T242B685M050(2)S
5.6	C	5	T110C565J 050AS	2.2	4	5087	5287	5487	5687	6216	7216	8216	T212C565J 050(2)S
5.6	C	10	T110C565K 050AS	2.2	4	2370	2610	2850	3090	6217	7217	8217	T212C565K 050(2)S
5.6	C	20	T110C565M050AS	2.2	4								
6.8	C	5	T110C685J 050AS	2.2	4	5088	5288	5488	5688	6218	7218	8218	T212C685J 050(2)S

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4.

(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20. For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.

☐ = T110 & T212 (CSR13) capacitors per MIL-C-39003/1E & /1F. ☐ = T140 & T242 (CSR23) capacitors per MIL-C-39003/3B & /3C.

**T110 & T140 SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS							
			KEMET PART NUMBER	D.C. LEAKAGE μA@25°C MAX.	MAX. DISSI- PATION FACTOR %@25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)				KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS			
						MIL-C-39003/1F & /3C EXPONENTIAL							
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)	
<b>50 VOLT RATING AT 85° — 33 VOLT RATING AT 125°C (Cont'd)</b>													
6.8	C	10	T110C685K 050AS	2.2	4	2371	2611	2851	3091	6219	7219	8219	T212C685K 050(2)S
6.8	C	20	T110C685M 050AS	2.2	4	2372	2612	2852	3092	6220	7220	8220	T212C685M 050(2)S
8.2	C	5	T110C825J 050AS	2.5	4	5089	5289	5489	5689	6221	7221	8221	T212C825J 050(2)S
8.2	C	10	T110C825K 050AS	2.5	4	2373	2613	2853	3093	6222	7222	8222	T212C825K 050(2)S
8.2	C	20	T110C825M 050AS	2.5	4								
10.0	C	5	T110C106J 050AS	2.5	4	5090	5290	5490	5690	6223	7223	8223	T212C106J 050(2)S
10.0	C	10	T110C106K 050AS	2.5	4	2374	2614	2854	3094	6224	7224	8224	T212C106K 050(2)S
10.0	C	20	T110C106M 050AS	2.5	4	2375	2615	2855	3095	6225	7225	8225	T212C106M 050(2)S
12.0	C	5	T110C126J 050AS	3.0	4	5091	5291	5491	5691	6226	7226	8226	T212C126J 050(2)S
12.0	C	10	T110C126K 050AS	3.0	4	2376	2616	2856	3096	6227	7227	8227	T212C126K 050(2)S
12.0	C	20	T110C126M 050AS	3.0	4								
15.0	C	5	T110C156J 050AS	4.0	4	5092	5292	5492	5692	6228	7228	8228	T212C156J 050(2)S
15.0	C	10	T110C156K 050AS	4.0	4	2377	2617	2857	3097	6229	7229	8229	T212C156K 050(2)S
15.0	C	20	T110C156M 050AS	4.0	4	2378	2618	2858	3098	6230	7230	8230	T212C156M 050(2)S
18.0	C	5	T110C186J 050AS	4.5	4	5093	5293	5493	5693	6231	7231	8231	T212C186J 050(2)S
18.0	C	10	T110C186K 050AS	4.5	4	2379	2619	2859	3099	6232	7232	8232	T212C186K 050(2)S
18.0	C	20	T110C186M 050AS	4.5	4								
22.0	C	10	T140C226K 050AS	7.0	6	0182	0282	0382	0482	2082	3082	4082	T242C226K 050(2)S
22.0	C	20	T140C226M 050AS	7.0	6	0183	0283	0383	0483	2083	3083	4083	T242C226M 050(2)S
27.0	C	10	T140C276K 050AS	8.0	6	0184	0284	0384	0484	2084	3084	4084	T242C276K 050(2)S
27.0	C	20	T140C276M 050AS	8.0	6								
22.0	D	5	T110D226J 050AS	5.5	4	5094	5294	5494	5694	6233	7233	8233	T212D226J 050(2)S
22.0	D	10	T110D226K 050AS	5.5	4	2380	2620	2860	3100	6234	7234	8234	T212D226K 050(2)S
22.0	D	20	T110D226M 050AS	5.5	4	2381	2621	2861	3101	6235	7235	8235	T212D226M 050(2)S
33.0	D	10	T140D336K 050AS	10.0	6	0185	0285	0385	0485	2085	3085	4085	T242D336K 050(2)S
33.0	D	20	T140D336M 050AS	10.0	6	0186	0286	0386	0486	2086	3086	4086	T242D336M 050(2)S
39.0	D	10	T140D396K 050AS	10.0	6	0187	0287	0387	0487	2087	3087	4087	T242D396K 050(2)S
39.0	D	20	T140D396M 050AS	10.0	6								
47.0	D	20	T140D476M 050AS	10.0	6								
<b>60 VOLT RATING AT 85°C — 40 VOLT RATING AT 125°C</b>													
0.0047	A	5,10,20	T110A472(□)060AS	0.3	3								
0.0056	A	5,10,20	T110A562(□)060AS	0.3	3								
0.0068	A	5,10,20	T110A682(□)060AS	0.3	3								
0.0082	A	5,10,20	T110A822(□)060AS	0.3	3								
0.01	A	5,10,20	T110A103(□)060AS	0.3	3								
0.012	A	5,10,20	T110A123(□)060AS	0.3	3								
0.015	A	5,10,20	T110A153(□)060AS	0.3	3								
0.018	A	5,10,20	T110A183(□)060AS	0.3	3								
0.022	A	5,10,20	T110A223(□)060AS	0.3	3								
0.027	A	5,10,20	T110A273(□)060AS	0.3	3								
0.033	A	5,10,20	T110A333(□)060AS	0.3	3								
0.039	A	5,10,20	T110A393(□)060AS	0.3	3								
0.047	A	5,10,20	T110A473(□)060AS	0.3	3								
0.056	A	5,10,20	T110A563(□)060AS	0.3	3								
0.068	A	5,10,20	T110A683(□)060AS	0.3	3								
0.082	A	5,10,20	T110A823(□)060AS	0.3	3								
0.1	A	5,10,20	T110A104(□)060AS	0.5	3								
0.12	A	5,10,20	T110A124(□)060AS	0.5	3								
0.15	A	5,10,20	T110A154(□)060AS	0.5	3								
0.18	A	5,10,20	T110A184(□)060AS	0.5	3								
0.22	A	5,10,20	T110A224(□)060AS	0.5	3								
0.27	A	5,10,20	T110A274(□)060AS	0.5	3								
0.33	A	5,10,20	T110A334(□)060AS	0.5	3								
0.39	A	5,10,20	T110A394(□)060AS	0.5	3								
0.47	A	5,10,20	T110A474(□)060AS	0.5	3								
0.56	A	5,10,20	T110A564(□)060AS	0.5	3								
0.68	A	5,10,20	T110A684(□)060AS	0.5	3								
0.82	A	10,20	T140A824(□)060AS	0.5	4								
1.0	A	10,20	T140A105(□)060AS	0.5	4								

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4.

(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20. For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.

□ = T110 & T212 (CSR13) capacitors per MIL-C-39003/1E & /1F.

□ = T140 & T242 (CSR23) capacitors per MIL-C-39003/3B & /3C.

T110 & T140 SERIES

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS							
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)							
						MIL-C-39003/1F & /3C EXPONENTIAL				MIL-C-39003/1F & /3C GRADED			
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)	KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS
<b>60 VOLT RATING AT 85°C — 40 VOLT RATING AT 125°C (Cont'd)</b>													
0.82	B	5,10,20	T110B824□060AS	0.5	3								
1.0	B	5,10,20	T110B105□060AS	0.5	3								
1.2	B	5,10,20	T110B125□060AS	0.5	4								
1.5	B	5,10,20	T110B155□060AS	0.5	4								
1.8	B	5,10,20	T110B185□060AS	0.5	4								
2.2	B	5,10,20	T110B225□060AS	1.0	4								
2.7	B	5,10,20	T110B275□060AS	1.0	4								
3.3	B	5,10,20	T110B335□060AS	1.5	4								
3.9	B	5,10,20	T110B395□060AS	1.5	4								
4.7	B	10,20	T140B475□060AS	3.0	4								
5.6	B	10,20	T140B565□060AS	3.0	4								
4.7	C	5,10,20	T110C475□060AS	2.0	4								
5.6	C	5,10,20	T110C565□060AS	2.0	4								
6.8	C	5,10,20	T110C685□060AS	3.0	4								
8.2	C	5,10,20	T110C825□060AS	4.0	4								
10.0	C	5,10,20	T110C106□060AS	5.0	4								
12.0	C	5,10,20	T110C126□060AS	5.0	4								
15.0	C	10,20	T140C156□060AS	5.0	6								
18.0	C	10,20	T140C186□060AS	6.0	6								
<b>22.0</b>	<b>C</b>	<b>10,20</b>	<b>T140C226□060AS</b>	<b>7.0</b>	<b>6</b>								
15.0	D	5,10,20	T110D156□060AS	4.0	4								
18.0	D	5,10,20	T110D186□060AS	5.0	4								
22.0	D	5,10,20	T110D226□060AS	6.0	4								
27.0	D	10,20	T140D276□060AS	10.0	6								
<b>33.0</b>	<b>D</b>	<b>10, 20</b>	<b>T140D336□060AS</b>	<b>10.0</b>	<b>6</b>								
<b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C</b>													
0.0047	A	5,10,20	T110A472□075AS	0.3	2								
0.0056	A	5,10,20	T110A562□075AS	0.3	2								
0.0068	A	5,10,20	T110A682□075AS	0.3	2								
0.0082	A	5,10,20	T110A822□075AS	0.3	2								
0.01	A	5,10,20	T110A103□075AS	0.3	2								
0.012	A	5,10,20	T110A123□075AS	0.3	2								
0.015	A	5,10,20	T110A153□075AS	0.3	2								
0.018	A	5,10,20	T110A183□075AS	0.3	2								
0.022	A	5,10,20	T110A223□075AS	0.3	2								
0.027	A	5,10,20	T110A273□075AS	0.3	2								
0.033	A	5,10,20	T110A333□075AS	0.3	2								
0.039	A	5,10,20	T110A393□075AS	0.3	2								
0.047	A	5,10,20	T110A473□075AS	0.3	2								
0.056	A	5,10,20	T110A563□075AS	0.3	2								
0.068	A	5,10,20	T110A683□075AS	0.3	2								
0.082	A	5,10,20	T110A823□075AS	0.3	2								
0.1	A	5	T110A104J 075AS	0.3	2	5095	5295	5495	5695	6236	7236	8236	T212A104J 075□S
0.1	A	10	T110A104K 075AS	0.3	2	2382	2622	2862	3102	6237	7237	8237	T212A104K 075□S
0.1	A	20	T110A104M 075AS	0.3	2	2383	2623	2863	3103	6238	7238	8238	T212A104M 075□S
0.12	A	5	T110A124J 075AS	0.3	2	5096	5296	5496	5696	6239	7239	8239	T212A124J 075□S
0.12	A	10	T110A124K 075AS	0.3	2	2384	2624	2864	3104	6240	7240	8240	T212A124K 075□S
0.12	A	20	T110A124M 075AS	0.3	2								
0.15	A	5	T110A154J 075AS	0.3	2	5097	5297	5497	5697	6241	7241	8241	T212A154J 075□S
0.15	A	10	T110A154K 075AS	0.3	2	2385	2625	2865	3105	6242	7242	8242	T212A154K 075□S
0.15	A	20	T110A154M 075AS	0.3	2	2386	2626	2866	3106	6243	7243	8243	T212A154M 075□S
0.18	A	5	T110A184J 075AS	0.3	2	5098	5298	5498	5698	6244	7244	8244	T212A184J 075□S
0.18	A	10	T110A184K 075AS	0.3	2	2387	2627	2867	3107	6245	7245	8245	T212A184K 075□S
0.18	A	20	T110A184M 075AS	0.3	2								
0.22	A	5	T110A224J 075AS	0.3	2	5099	5299	5499	5699	6246	7246	8246	T212A224J 075□S
0.22	A	10	T110A224K 075AS	0.3	2	2388	2628	2868	3108	6247	7247	8247	T212A224K 075□S
0.22	A	20	T110A224M 075AS	0.3	2	2389	2629	2869	3109	6248	7248	8248	T212A224M 075□S
0.27	A	5	T110A274J 075AS	0.3	2	5100	5300	5500	5700	6249	7249	8249	T212A274J 075□S
0.27	A	10	T110A274K 075AS	0.3	2	2390	2630	2870	3110	6250	7250	8250	T212A274K 075□S

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4.

(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20. For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.



= T110 & T212 (CSR13) capacitors per MIL-C-39003/1E & /1F.



= T140 & T242 (CSR23) capacitors per MIL-C-39003/3B & /3C.

**T110 & T140 SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS								
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSIP- ATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS
						MIL-C-39003/1F & /3C EXPONENTIAL				MIL-C-39003/1F & /3C GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C (Cont'd)</b>														
0.27	A	20	T110A274M075AS	0.3	2									
0.33	A	5	T110A334J 075AS	0.3	2	5101	5301	5501	5701	6251	7251	8251	T212A334J 075(2)S	
0.33	A	10	T110A334K 075AS	0.3	2	2391	2631	2871	3111	6252	7252	8252	T212A334K 075(2)S	
0.33	A	20	T110A334M075AS	0.3	2	2392	2632	2872	3112	6253	7253	8253	T212A334M075(2)S	
0.39	A	5	T110A394J 075AS	0.3	2	5102	5302	5502	5702	6254	7254	8254	T212A394J 075(2)S	
0.39	A	10	T110A394K 075AS	0.3	2	2393	2633	2873	3113	6255	7255	8255	T212A394K 075(2)S	
0.39	A	20	T110A394M075AS	0.3	2									
0.47	A	5	T110A474J 075AS	0.3	2	5103	5303	5503	5703	6256	7256	8256	T212A474J 075(2)S	
0.47	A	10	T110A474K 075AS	0.3	2	2394	2634	2874	3114	6257	7257	8257	T212A474K 075(2)S	
0.47	A	20	T110A474M075AS	0.3	2	2395	2635	2875	3115	6258	7258	8258	T212A474M075(2)S	
0.56	A	5	T110A564J 075AS	0.3	2	5104	5304	5504	5704	6259	7259	8259	T212A564J 075(2)S	
0.56	A	10	T110A564K 075AS	0.3	2	2396	2636	2876	3116	6260	7260	8260	T212A564K 075(2)S	
0.56	A	20	T110A564M075AS	0.3	2									
0.68	A	5	T110A684J 075AS	0.3	2	5105	5305	5505	5705	6261	7261	8261	T212A684J 075(2)S	
0.68	A	10	T110A684K 075AS	0.3	2	2397	2637	2877	3117	6262	7262	8262	T212A684K 075(2)S	
0.68	A	20	T110A684M075AS	0.3	2	2398	2638	2878	3118	6263	7263	8263	T212A684M075(2)S	
0.82	B	5	T110B824J 075AS	0.3	2	5106	5306	5506	5706	6264	7264	8264	T212B824J 075(2)S	
0.82	B	10	T110B824K 075AS	0.3	2	2399	2639	2879	3119	6265	7265	8265	T212B824K 075(2)S	
0.82	B	20	T110B824M075AS	0.3	2									
1.0	B	5	T110B105J 075AS	0.3	2	5107	5307	5507	5707	6266	7266	8266	T212B105J 075(2)S	
1.0	B	10	T110B105K 075AS	0.3	2	2400	2640	2880	3120	6267	7267	8267	T212B105K 075(2)S	
1.0	B	20	T110B105M075AS	0.3	2	2401	2641	2881	3121	6268	7268	8268	T212B105M075(2)S	
1.2	B	5	T110B125J 075AS	0.3	4	5108	5308	5508	5708	6269	7269	8269	T212B125J 075(2)S	
1.2	B	10	T110B125K 075AS	0.3	4	2402	2642	2882	3122	6270	7270	8270	T212B125K 075(2)S	
1.2	B	20	T110B125M075AS	0.3	4									
1.5	B	5	T110B155J 075AS	0.6	4	5109	5309	5509	5709	6271	7271	8271	T212B155J 075(2)S	
1.5	B	10	T110B155K 075AS	0.6	4	2403	2643	2883	3123	6272	7272	8272	T212B155K 075(2)S	
1.5	B	20	T110B155M075AS	0.6	4	2404	2644	2884	3124	6273	7273	8273	T212B155M075(2)S	
1.8	B	5	T110B185J 075AS	0.7	4	5110	5310	5510	5710	6274	7274	8274	T212B185J 075(2)S	
1.8	B	10	T110B185K 075AS	0.7	4	2405	2645	2885	3125	6275	7275	8275	T212B185K 075(2)S	
1.8	B	20	T110B185M075AS	0.7	4									
2.2	B	5	T110B225J 075AS	0.8	4	5111	5311	5511	5711	6276	7276	8276	T212B225J 075(2)S	
2.2	B	10	T110B225K 075AS	0.8	4	2406	2646	2886	3126	6277	7277	8277	T212B225K 075(2)S	
2.2	B	20	T110B225M075AS	0.8	4	2407	2647	2887	3127	6278	7278	8278	T212B225M075(2)S	
2.7	B	5	T110B275J 075AS	1.0	4	5112	5312	5512	5712	6279	7279	8279	T212B275J 075(2)S	
2.7	B	10	T110B275K 075AS	1.0	4	2408	2648	2888	3128	6280	7280	8280	T212B275K 075(2)S	
2.7	B	20	T110B275M075AS	1.2	4									
3.3	B	5	T110B335J 075AS	1.2	4	5113	5313	5513	5713	6281	7281	8281	T212B335J 075(2)S	
3.3	B	10	T110B335K 075AS	1.2	4	2409	2649	2889	3129	6282	7282	8282	T212B335K 075(2)S	
3.3	B	20	T110B335M075AS	1.2	4	2410	2650	2890	3130	6283	7283	8283	T212B335M075(2)S	
3.9	B	5	T110B395J 075AS	1.5	4	5114	5314	5514	5714	6284	7284	8284	T212B395J 075(2)S	
3.9	B	10	T110B395K 075AS	1.5	4	2411	2651	2891	3131	6285	7285	8285	T212B395K 075(2)S	
3.9	B	20	T110B395M075AS	1.5	4									
4.7	C	5	T110C475J 075AS	3.0	4	5115	5315	5515	5715	6286	7286	8286	T212C475J 075(2)S	
4.7	C	10	T110C475K 075AS	3.0	4	2412	2652	2892	3132	6287	7287	8287	T212C475K 075(2)S	
4.7	C	20	T110C475M075AS	3.0	4	2413	2653	2893	3133	6288	7288	8288	T212C475M075(2)S	
5.6	C	5	T110C565J 075AS	3.0	4	5116	5316	5516	5716	6289	7289	8289	T212C565J 075(2)S	
5.6	C	10	T110C565K 075AS	3.0	4	2414	2654	2894	3134	6290	7290	8290	T212C565K 075(2)S	
5.6	C	20	T110C565M075AS	3.0	4									
6.8	C	5	T110C685J 075AS	5.0	4	5117	5317	5517	5717	6291	7291	8291	T212C685J 075(2)S	
6.8	C	10	T110C685K 075AS	5.0	4	2415	2655	2895	3135	6292	7292	8292	T212C685K 075(2)S	
6.8	C	20	T110C685M075AS	5.0	4	2416	2656	2896	3136	6293	7293	8293	T212C685M075(2)S	
8.2	C	5	T110C825J 075AS	5.0	4	5118	5318	5518	5718	6294	7294	8294	T212C825J 075(2)S	
8.2	C	10	T110C825K 075AS	5.0	4	2417	2657	2897	3137	6295	7295	8295	T212C825K 075(2)S	
8.2	C	20	T110C825M075AS	5.0	4									
10.0	C	5	T110C106J 075AS	5.0	4	5119	5319	5519	5719	6296	7296	8296	T212C106J 075(2)S	
10.0	C	10	T110C106K 075AS	5.0	4	2418	2658	2898	3138	6297	7297	8297	T212C106K 075(2)S	
10.0	C	20	T110C106M075AS	5.0	4	2419	2659	2899	3139	6298	7298	8298	T212C106M075(2)S	
12.0	D	5	T110D126J 075AS	5.0	4	5120	5320	5520	5720	6299	7299	8299	T212D126J 075(2)S	
12.0	D	10	T110D126K 075AS	5.0	4	2420	2660	2900	3140	6300	7300	8300	T212D126K 075(2)S	
12.0	D	20	T110D126M075AS	5.0	4									

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4.

(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20. For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.



= T110 & T212 (CSR13) capacitors per MIL-C-39003/1E & /1F.



= T140 & T242 (CSR23) capacitors per MIL-C-39003/3B & /3C.

**T110 & T140 SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS								
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS
						MIL-C-39003/1F & /3C EXPONENTIAL				MIL-C-39003/1F & /3C GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C (Cont'd)</b>														
15.0	D	5	T110D156J 075AS	7.0	4	5121	5321	5521	5721	6301	7301	8301	T212D156J 075②S	
15.0	D	10	T110D156K 075AS	7.0	4	2421	2661	2901	3141	6302	7302	8302	T212D156K 075②S	
15.0	D	20	T110D156M075AS	7.0	4	2422	2662	2902	3142	6303	7303	8303	T212D156M075②S	
<b>100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C</b>														
0.0047	A	5	T110A472J 100AS	0.3	2	5122	5322	5522	5722	6304	7304	8304	T212A472J 100②S	
0.0047	A	10	T110A472K 100AS	0.3	2	2423	2663	2903	3143	6305	7305	8305	T212A472K 100②S	
0.0047	A	20	T110A472M100AS	0.3	2	2424	2664	2904	3144	6306	7306	8306	T212A472M100②S	
0.0056	A	5	T110A562J 100AS	0.3	2	5123	5323	5523	5723	6307	7307	8307	T212A562J 100②S	
0.0056	A	10	T110A562K 100AS	0.3	2	2425	2665	2905	3145	6308	7308	8308	T212A562K 100②S	
0.0056	A	20	T110A562M100AS	0.3	2									
0.0068	A	5	T110A682J 100AS	0.3	2	5124	5324	5524	5724	6309	7309	8309	T212A682J 100②S	
0.0068	A	10	T110A682K 100AS	0.3	2	2426	2666	2906	3146	6310	7310	8310	T212A682K 100②S	
0.0068	A	20	T110A682M100AS	0.3	2	2427	2667	2907	3147	6311	7311	8311	T212A682M100②S	
0.0082	A	5	T110A822J 100AS	0.3	2	5125	5325	5525	5725	6312	7312	8312	T212A822J 100②S	
0.0082	A	10	T110A822K 100AS	0.3	2	2428	2668	2908	3148	6313	7313	8313	T212A822K 100②S	
0.0082	A	20	T110A822M100AS	0.3	2									
0.01	A	5	T110A103J 100AS	0.3	2	5126	5326	5526	5726	6314	7314	8314	T212A103J 100②S	
0.01	A	10	T110A103K 100AS	0.3	2	2429	2669	2909	3149	6315	7315	8315	T212A103K 100②S	
0.01	A	20	T110A103M100AS	0.3	2	2430	2670	2910	3150	6316	7316	8316	T212A103M100②S	
0.012	A	5	T110A123J 100AS	0.3	2	5127	5327	5527	5727	6317	7317	8317	T212A123J 100②S	
0.012	A	10	T110A123K 100AS	0.3	2	2431	2671	2911	3151	6318	7318	8318	T212A123K 100②S	
0.012	A	20	T110A123M100AS	0.3	2									
0.015	A	5	T110A153J 100AS	0.3	2	5128	5328	5528	5728	6319	7319	8319	T212A153J 100②S	
0.015	A	10	T110A153K 100AS	0.3	2	2432	2672	2912	3152	6320	7320	8320	T212A153K 100②S	
0.015	A	20	T110A153M100AS	0.3	2	2433	2673	2913	3153	6321	7321	8321	T212A153M100②S	
0.018	A	5	T110A183J 100AS	0.3	2	5129	5329	5529	5729	6322	7322	8322	T212A183J 100②S	
0.018	A	10	T110A183K 100AS	0.3	2	2434	2674	2914	3154	6323	7323	8323	T212A183K 100②S	
0.018	A	20	T110A183M100AS	0.3	2									
0.022	A	5	T110A223J 100AS	0.3	2	5130	5330	5530	5730	6324	7324	8324	T212A223J 100②S	
0.022	A	10	T110A223K 100AS	0.3	2	2435	2675	2915	3155	6325	7325	8325	T212A223K 100②S	
0.022	A	20	T110A223M100AS	0.3	2	2436	2676	2916	3156	6326	7326	8326	T212A223M100②S	
0.027	A	5	T110A273J 100AS	0.3	2	5131	5331	5531	5731	6327	7327	8327	T212A273J 100②S	
0.027	A	10	T110A273K 100AS	0.3	2	2437	2677	2917	3157	6328	7328	8328	T212A273K 100②S	
0.027	A	20	T110A273M100AS	0.3	2									
0.033	A	5	T110A333J 100AS	0.3	2	5132	5332	5532	5732	6329	7329	8329	T212A333J 100②S	
0.033	A	10	T110A333K 100AS	0.3	2	2438	2678	2918	3158	6330	7330	8330	T212A333K 100②S	
0.033	A	20	T110A333M100AS	0.3	2	2439	2679	2919	3159	6331	7331	8331	T212A333M100②S	
0.039	A	5	T110A393J 100AS	0.3	2	5133	5333	5533	5733	6332	7332	8332	T212A393J 100②S	
0.039	A	10	T110A393K 100AS	0.3	2	2440	2680	2920	3160	6333	7333	8333	T212A393K 100②S	
0.039	A	20	T110A393M100AS	0.3	2									
0.047	A	5	T110A473J 100AS	0.3	2	5134	5334	5534	5734	6334	7334	8334	T212A473J 100②S	
0.047	A	10	T110A473K 100AS	0.3	2	2441	2681	2921	3161	6335	7335	8335	T212A473K 100②S	
0.047	A	20	T110A473M100AS	0.3	2	2442	2682	2922	3162	6336	7336	8336	T212A473M100②S	
0.056	A	5	T110A563J 100AS	0.3	2	5135	5335	5535	5735	6337	7337	8337	T212A563J 100②S	
0.056	A	10	T110A563K 100AS	0.3	2	2443	2683	2923	3163	6338	7338	8338	T212A563K 100②S	
0.056	A	20	T110A563M100AS	0.3	2									
0.068	A	5	T110A683J 100AS	0.3	2	5136	5336	5536	5736	6339	7339	8339	T212A683J 100②S	
0.068	A	10	T110A683K 100AS	0.3	2	2444	2684	2924	3164	6340	7340	8340	T212A683K 100②S	
0.068	A	20	T110A683M100AS	0.3	2	2445	2685	2925	3165	6341	7341	8341	T212A683M100②S	
0.082	A	5	T110A823J 100AS	0.3	2	5137	5337	5537	5737	6342	7342	8342	T212A823J 100②S	
0.082	A	10	T110A823K 100AS	0.3	2	2446	2686	2926	3166	6343	7343	8343	T212A823K 100②S	
0.082	A	20	T110A823M100AS	0.3	2									
0.1	A	5	T110A104J 100AS	0.3	2	5138	5338	5538	5738	6344	7344	8344	T212A104J 100②S	
0.1	A	10	T110A104K 100AS	0.3	2	2447	2687	2927	3167	6345	7345	8345	T212A104K 100②S	
0.1	A	20	T110A104M100AS	0.3	2	2448	2688	2928	3168	6346	7346	8346	T212A104M100②S	
0.12	A	5	T110A124J 100AS	0.3	2	5139	5339	5539	5739	6347	7347	8347	T212A124J 100②S	
0.12	A	10	T110A124K 100AS	0.3	2	2449	2689	2929	3169	6348	7348	8348	T212A124K 100②S	
0.12	A	20	T110A124M100AS	0.3	2									
0.15	A	5	T110A154J 100AS	0.3	2	5140	5340	5540	5740	6349	7349	8349	T212A154J 100②S	
0.15	A	10	T110A154K 100AS	0.3	2	2450	2690	2930	3170	6350	7350	8350	T212A154K 100②S	

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4.

(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20. For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.

= T110 & T212 (CSR13) capacitors per MIL-C-39003/1E & /1F.

= T140 & T242 (CSR23) capacitors per MIL-C-39003/3B & /3C.

**T110 & T140 SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS								
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS
						MIL-C-39003/1F & /3C EXPONENTIAL				MIL-C-39003/1F & /3C GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C (Cont'd)</b>														
0.15	A	20	T110A154M100AS	0.3	2	2451	2691	2931	3171	6351	7351	8351	T212A154M100②S	
0.18	A	5	T110A184J 100AS	0.3	2	5141	5341	5541	5741	6352	7352	8352	T212A184J 100②S	
0.18	A	10	T110A184K 100AS	0.3	2	2452	2692	2932	3172	6353	7353	8353	T212A184K 100②S	
0.18	A	20	T110A184M100AS	0.3	2									
0.22	A	5	T110A224J 100AS	0.3	2	5142	5342	5542	5742	6354	7354	8354	T212A224J 100②S	
0.22	A	10	T110A224K 100AS	0.3	2	2453	2693	2933	3173	6355	7355	8355	T212A224K 100②S	
0.22	A	20	T110A224M100AS	0.3	2	2454	2694	2934	3174	6356	7356	8356	T212A224M100②S	
0.27	A	5	T110A274J 100AS	0.3	2	5143	5343	5543	5743	6357	7357	8357	T212A274J 100②S	
0.27	A	10	T110A274K 100AS	0.3	2	2455	2695	2935	3175	6358	7358	8358	T212A274K 100②S	
0.27	A	20	T110A274M100AS	0.3	2									
0.33	A	5	T110A334J 100AS	0.3	2	5144	5344	5544	5744	6359	7359	8359	T212A334J 100②S	
0.33	A	10	T110A334K 100AS	0.3	2	2456	2696	2936	3176	6360	7360	8360	T212A334K 100②S	
0.33	A	20	T110A334M100AS	0.3	2	2457	2697	2937	3177	6361	7361	8361	T212A334M100②S	
0.39	A	5	T110A394J 100AS	0.3	2	5145	5345	5545	5745	6362	7362	8362	T212A394J 100②S	
0.39	A	10	T110A394K 100AS	0.3	2	2458	2698	2938	3178	6363	7363	8363	T212A394K 100②S	
0.39	A	20	T110A394M100AS	0.3	2									
0.47	A	5	T110A474J 100AS	0.3	2	5146	5346	5546	5746	6364	7364	8364	T212A474J 100②S	
0.47	A	10	T110A474K 100AS	0.3	2	2459	2699	2939	3179	6365	7365	8365	T212A474K 100②S	
0.47	A	20	T110A474M100AS	0.3	2	2460	2700	2940	3180	6366	7366	8366	T212A474M100②S	
0.56	A	5	T110A564J 100AS	0.3	2	5147	5347	5547	5747	6367	7367	8367	T212A564J 100②S	
0.56	A	10	T110A564K 100AS	0.3	2	2461	2701	2941	3181	6368	7368	8368	T212A564K 100②S	
0.56	A	20	T110A564M100AS	0.3	2									
0.68	B	5	T110B684J 100AS	0.3	2	5148	5348	5548	5748	6369	7369	8369	T212B684J 100②S	
0.68	B	10	T110B684K 100AS	0.3	2	2462	2702	2942	3182	6370	7370	8370	T212B684K 100②S	
0.68	B	20	T110B684M100AS	0.3	2	2463	2703	2943	3183	6371	7371	8371	T212B684M100②S	
0.82	B	5	T110B824J 100AS	0.4	2	5149	5349	5549	5749	6372	7372	8372	T212B824J 100②S	
0.82	B	10	T110B824K 100AS	0.4	2	2464	2704	2944	3184	6373	7373	8373	T212B824K 100②S	
0.82	B	20	T110B824M100AS	0.4	2									
1.0	B	5	T110B105J 100AS	0.5	2	5150	5350	5550	5750	6374	7374	8374	T212B105J 100②S	
1.0	B	10	T110B105K 100AS	0.5	2	2465	2705	2945	3185	6375	7375	8375	T212B105K 100②S	
1.0	B	20	T110B105M100AS	0.5	2	2466	2706	2946	3186	6376	7376	8376	T212B105M100②S	
1.2	B	5	T110B125J 100AS	0.5	3	5151	5351	5551	5751	6377	7377	8377	T212B125J 100②S	
1.2	B	10	T110B125K 100AS	0.5	3	2467	2707	2947	3187	6378	7378	8378	T212B125K 100②S	
1.2	B	20	T110B125M100AS	0.5	3									
1.5	B	5	T110B155J 100AS	0.7	3	5152	5352	5552	5752	6379	7379	8379	T212B155J 100②S	
1.5	B	10	T110B155K 100AS	0.7	3	2468	2708	2948	3188	6380	7380	8380	T212B155K 100②S	
1.5	B	20	T110B155M100AS	0.7	3	2469	2709	2949	3189	6381	7381	8381	T212B155M100②S	
1.8	B	5	T110B185J 100AS	0.7	3	5153	5353	5553	5753	6382	7382	8382	T212B185J 100②S	
1.8	B	10	T110B185K 100AS	0.7	3	2470	2710	2950	3190	6383	7383	8383	T212B185K 100②S	
1.8	B	20	T110B185M100AS	0.7	3									
2.2	B	5	T110B225J 100AS	0.9	3	5154	5354	5554	5754	6384	7384	8384	T212B225J 100②S	
2.2	B	10	T110B225K 100AS	0.9	3	2471	2711	2951	3191	6385	7385	8385	T212B225K 100②S	
2.2	B	20	T110B225M100AS	0.9	3	2472	2712	2952	3192	6386	7386	8386	T212B225M100②S	
2.7	B	5	T110B275J 100AS	1.1	3	5155	5355	5555	5755	6387	7387	8387	T212B275J 100②S	
2.7	B	10	T110B275K 100AS	1.1	3	2473	2713	2953	3193	6388	7388	8388	T212B275K 100②S	
2.7	B	20	T110B275M100AS	1.1	3									
3.3	C	5	T110C335J 100AS	1.5	3	5156	5356	5556	5756	6389	7389	8389	T212C335J 100②S	
3.3	C	10	T110C335K 100AS	1.5	3	5157	5357	5557	5757	6390	7390	8390	T212C335K 100②S	
3.3	C	20	T110C335M100AS	1.5	3	5158	5358	5558	5758	6391	7391	8391	T212C335M100②S	
3.9	C	5	T110C395J 100AS	1.5	3	5159	5359	5559	5759	6392	7392	8392	T212C395J 100②S	
3.9	C	10	T110C395K 100AS	1.5	3	5160	5360	5560	5760	6393	7393	8393	T212C395K 100②S	
4.7	C	5	T110C475J 100AS	2.5	3	5161	5361	5561	5761	6394	7394	8394	T212C475J 100②S	
4.7	C	10	T110C475K 100AS	2.5	3	5162	5362	5562	5762	6395	7395	8395	T212C475K 100②S	
4.7	C	20	T110C475M100AS	2.5	3	5163	5363	5563	5763	6396	7396	8396	T212C475M100②S	
5.6	C	5	T110C565J 100AS	2.5	3	5164	5364	5564	5764	6397	7397	8397	T212C565J 100②S	
5.6	C	10	T110C565K 100AS	2.5	3	5165	5365	5565	5765	6398	7398	8398	T212C565K 100②S	
6.8	C	5	T110C685J 100AS	2.5	3	5166	5366	5566	5766	6399	7399	8399	T212C685J 100②S	
6.8	C	10	T110C685K 100AS	2.5	3	5167	5367	5567	5767	6400	7400	8400	T212C685K 100②S	
6.8	C	20	T110C685M100AS	2.5	3	5168	5368	5568	5768	6401	7401	8401	T212C685M100②S	
8.2	D	5,10,20	T110D825①100AS	5.0	3									
10.0	D	5,10,20	T110D106①100AS	5.0	3									

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4.

(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20. For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.

□ = T110 & T212 (CSR13) capacitors per MIL-C-39003/1E & /1F. □ = T140 & T242 (CSR23) capacitors per MIL-C-39003/3B & /3C.

**T110 & T140 SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T110 & T140 SERIES			MIL-C-39003 (CSR13 & CSR23) CAPACITORS							
			KEMET PART NUMBER	D.C. LEAKAGE μA@25°C MAX.	MAX. DISSI- PATION FACTOR %@25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)						KEMET EQUIVALENT PART NUMBER TO CSR13 & CSR23 CAPACITORS	
						MIL-C-39003/1F & /3C EXPONENTIAL			MIL-C-39003/1F & /3C GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)		D (0.001)
<b>125 VOLT RATING AT 85°C — 82 VOLT RATING AT 125°C</b>													
0.0047	A	5,10,20	T110A472Ⓛ125AS	0.5	3								
0.0056	A	5,10,20	T110A562Ⓛ125AS	0.5	3								
0.0068	A	5,10,20	T110A682Ⓛ125AS	0.5	3								
0.0082	A	5,10,20	T110A822Ⓛ125AS	0.5	3								
0.01	A	5,10,20	T110A103Ⓛ125AS	0.5	3								
0.012	A	5,10,20	T110A123Ⓛ125AS	0.5	3								
0.015	A	5,10,20	T110A153Ⓛ125AS	0.5	3								
0.018	A	5,10,20	T110A183Ⓛ125AS	0.5	3								
0.022	A	5,10,20	T110A223Ⓛ125AS	0.5	3								
0.027	A	5,10,20	T110A273Ⓛ125AS	0.5	3								
0.033	A	5,10,20	T110A333Ⓛ125AS	0.5	3								
0.039	A	5,10,20	T110A393Ⓛ125AS	1.5	3								
0.047	A	5,10,20	T110A473Ⓛ125AS	1.5	3								
0.056	A	5,10,20	T110A563Ⓛ125AS	1.5	3								
0.068	A	5,10,20	T110A683Ⓛ125AS	1.5	3								
0.082	A	5,10,20	T110A823Ⓛ125AS	1.5	3								
0.1	A	5,10,20	T110A104Ⓛ125AS	1.5	3								
0.12	A	5,10,20	T110A124Ⓛ125AS	1.5	3								
0.15	A	5,10,20	T110A154Ⓛ125AS	1.5	3								
0.18	A	5,10,20	T110A184Ⓛ125AS	1.5	3								
0.22	A	5,10,20	T110A224Ⓛ125AS	1.5	3								
0.27	A	5,10,20	T110A274Ⓛ125AS	1.5	3								
0.33	A	5,10,20	T110A334Ⓛ125AS	1.5	3								
0.39	B	5,10,20	T110B294Ⓛ125AS	1.5	3								
0.47	B	5,10,20	T110B474Ⓛ125AS	1.5	3								
0.56	B	5,10,20	T110B564Ⓛ125AS	1.5	3								
0.68	B	5,10,20	T110B684Ⓛ125AS	1.5	3								
0.82	B	5,10,20	T110B824Ⓛ125AS	1.5	3								
1.0	B	5,10,20	T110B105Ⓛ125AS	1.5	3								
1.2	B	5,10,20	T110B125Ⓛ125AS	1.5	3								
1.5	B	5,10,20	T110B155Ⓛ125AS	1.5	3								
1.8	B	5,10,20	T110B185Ⓛ125AS	1.5	3								
2.2	B	5,10,20	T110B225Ⓛ125AS	1.5	3								
2.7	C	5,10,20	T110C275Ⓛ125AS	2.0	3								
3.3	C	5,10,20	T110C335Ⓛ125AS	2.0	3								
3.9	C	5,10,20	T110C395Ⓛ125AS	2.0	3								
4.7	C	5,10,20	T110C475Ⓛ125AS	3.0	3								
5.6	C	5,10,20	T110C565Ⓛ125AS	3.0	3								
6.8	C	5,10,20	T110C685Ⓛ125AS	3.0	3								
8.2	D	5,10,20	T110D825Ⓛ125AS	6.0	3								
10.0	D	5,10,20	T110D106Ⓛ125AS	6.0	3								

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on page 4

(2) To complete the T212 & T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For T252 (CSR33) capacitors per MIL-C-39003/6, see page 20. For T262 (CSR21) capacitors per MIL-C-39003/9, see page 23.

**CAPACITOR MARKINGS\*  
KEMET T110 & T140**

Marking: Unless otherwise specified by special order, standard marking of T110 Series capacitors consists of the following:

**A CASE**

- + T110 — Polarity and Series (T110 or T140)
- K 10% — Manufacturer's Identification and Capacitance Tol.
- R56 μF — Nominal Capacitance — (μF) ("R" indicates decimal)
- 100V — Voltage
- 512RX — Date Code (e.g.: 8512R or 512RX)

**B, C & D CASES**

- + T110 — Polarity and Series (T110 or T140)
- KEMET — Manufacturer's Identification
- 8R2 μF — Nominal Capacitance — (μF) ("R" indicates decimal)
- 100V 10% — Voltage and Capacitance Tolerance
- 8512RX — Date Code (e.g.: 8512R or 512RX)

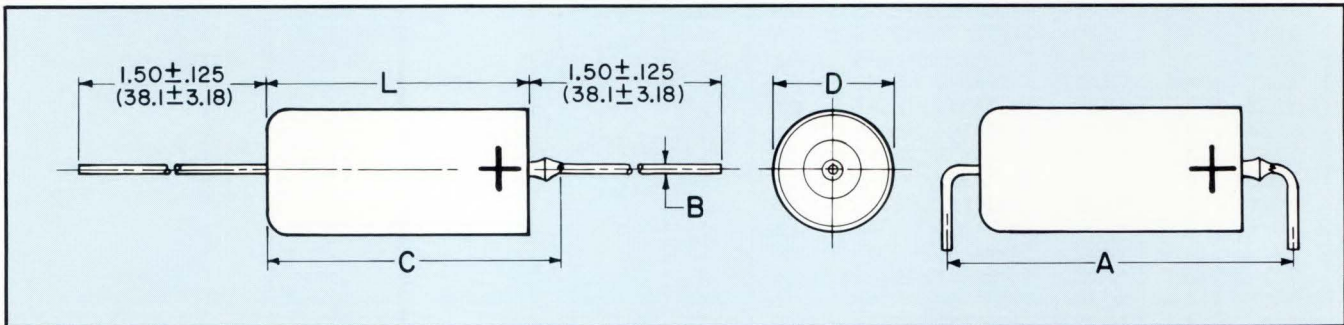
\*For Military Marking Information, see page 2.

**T252 (CSR33) SERIES**

Available from 1.2  $\mu$ F to 1000  $\mu$ F, 6 VDC to 50 VDC, these high capacitance-to-volume ratio, hermetically sealed solid tantalum capacitors are offered in standard MIL style A,B,C, and D cases. They meet or exceed the environmental and mechanical requirements of MIL-C-39003. Designed to operate from -55°C to +125°C, they exhibit exceptionally low DC leakage, dissipation factor and

impedance characteristics. They are ideal for coupling, bypass, filtering and timing circuits, and are excellent substitutes for wet tantalums in low voltage applications. They are available in style CSR33 (T252 Series) per MIL-C-39003, and in a high reliability version per specification GR500/A (T240 Series).

**CAPACITOR OUTLINE DRAWING**



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	UNINSULATED		INSULATED		A NOM.	B ±0.002 (±.05)	C MAX.
	D ±0.005 (±.13)	L ±0.031 (±.79)	D ±0.010 (±.25)	L ±0.031 (±.79)			
A	0.125 (3.18)	0.250 (6.35)	0.135 (3.43)	0.286 (7.26)	0.5 (12.70)	0.020 (.51)	0.422 (10.72)
B	0.175 (4.45)	0.438 (11.13)	0.185 (4.70)	0.474 (12.04)	0.7 (17.78)	0.020 (.51)	0.610 (15.49)
C	0.279 (7.09)	0.650 (16.51)	0.289 (7.34)	0.686 (17.42)	1.0 (25.40)	0.025 (.64)	0.822 (20.88)
D	0.341 (8.66)	0.750 (19.05)	0.351 (8.92)	0.786 (19.96)	1.1 (27.94)	0.025 (.64)	0.922 (23.42)

**ORDERING INFORMATION\***

**TANTALUM** — T

**SERIES** — 252 — MIL-C-39003/6-CSR33

**CASE SIZE** — A/B/C/D

**PICOFARAD CODE** — 125  
 First Two Digits represent significant figures.  
 3rd digit specifies no. of zeros to follow.

**LEAD MATERIAL**  
 S — Standard (Solder-coated nickel)  
 Available on special order at additional cost:  
 (Contact your sales representative.)  
 F — Bare Nickel  
 G — Gold Plated Nickel

**FAILURE RATE**  
**GRADED**  
 B — 0.1%/k hrs.  
 C — 0.01%/k hrs.  
 D — 0.001%/k hrs.  
**EXPONENTIAL**  
 M — 1%/k hrs.  
 P — 0.1%/k hrs.  
 R — 0.01%/k hrs.  
 S — 0.001%/k hrs.

**VOLTAGE RATING**  
 At 85°C

**CAP. TOLERANCE**  
 M — ±20%  
 K — ±10%  
 J — ±5%

For Military Ordering & Marking Information, see page 2.



**T252 (CSR33) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T252 SERIES			MIL-C-39003 (CSR33) CAPACITORS								
			KEMET EQUIVALENT PART NUMBER TO CSR33 CAPACITORS	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								
						MIL-C-39003/6 EXPONENTIAL				MIL-C-39003/6A GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>6 VOLT RATING AT 85°C</b>														
10.0	A	10	T252A106K 006(1)S	0.5	6	0001	0101	0201	0301	2001	3001	4001		
10.0	A	20	T252A106M006(1)S	0.5	6	0002	0102	0202	0302	2002	3002	4002		
12.0	A	10	T252A126K 006(1)S	0.5	6	0003	0103	0203	0303	2003	3003	4003		
100.0	B	10	T252B107K 006(1)S	1.0	8	0004	0104	0204	0304	2004	3004	4004		
100.0	B	20	T252B107M006(1)S	1.0	8	0005	0105	0205	0305	2005	3005	4005		
330.0	C	10	T252C337K 006(1)S	2.0	8	0006	0106	0206	0306	2006	3006	4006		
330.0	C	20	T252C337M006(1)S	2.0	8	0007	0107	0207	0307	2007	3007	4007		
390.0	C	10	T252C397K 006(1)S	2.0	10	0008	0108	0208	0308	2008	3008	4008		
470.0	C	10	T252C477K 006(1)S	2.0	10	0009	0109	0209	0309	2009	3009	4009		
470.0	C	20	T252C477M006(1)S	2.0	10	0010	0110	0210	0310	2010	3010	4010		
680.0	D	10	T252D687K 006(1)S	5.0	10	0011	0111	0211	0311	2011	3011	4011		
680.0	D	20	T252D687M006(1)S	5.0	10	0012	0112	0212	0312	2012	3012	4012		
820.0	D	10	T252D827K 006(1)S	5.0	10	0013	0113	0213	0313	2013	3013	4013		
1000.0	D	10	T252D108K 006(1)S	5.0	10	0014	0114	0214	0314	2014	3014	4014		
1000.0	D	20	T252D108M006(1)S	5.0	10	0015	0115	0215	0315	2015	3015	4015		
<b>10 VOLT RATING AT 85°C</b>														
6.8	A	10	T252A685K 010(1)S	.5	6	0016	0116	0216	0316	2016	3016	4016		
6.8	A	20	T252A685M010(1)S	.5	6	0017	0117	0217	0317	2017	3017	4017		
8.2	A	10	T252A825K 010(1)S	.5	6	0018	0118	0218	0318	2018	3018	4018		
47.0	B	10	T252B476K 010(1)S	1.0	6	0019	0119	0219	0319	2019	3019	4019		
47.0	B	20	T252B476M010(1)S	1.0	6	0020	0120	0220	0320	2020	3020	4020		
56.0	B	10	T252B566K 010(1)S	1.0	6	0021	0121	0221	0321	2021	3021	4021		
68.0	B	10	T252B686K 010(1)S	1.0	6	0022	0122	0222	0322	2022	3022	4022		
68.0	B	20	T252B686M010(1)S	1.0	6	0023	0123	0223	0323	2023	3023	4023		
82.0	B	10	T252B826K 010(1)S	1.0	6	0024	0124	0224	0324	2024	3024	4024		
220.0	C	10	T252C227K 010(1)S	1.0	8	0025	0125	0225	0325	2025	3025	4025		
220.0	C	20	T252C227M010(1)S	1.0	8	0026	0126	0226	0326	2026	3026	4026		
270.0	C	10	T252C277K 010(1)S	2.0	8	0027	0127	0227	0327	2027	3027	4027		
390.0	D	10	T252D397K 010(1)S	2.0	10	0028	0128	0228	0328	2028	3028	4028		
470.0	D	10	T252D477K 010(1)S	4.0	10	0029	0129	0229	0329	2029	3029	4029		
470.0	D	20	T252D477M010(1)S	4.0	10	0030	0130	0230	0330	2030	3030	4030		
560.0	D	10	T252D567K 010(1)S	4.0	10	0031	0131	0231	0331	2031	3031	4031		
<b>15 VOLT RATING AT 85°C</b>														
4.7	A	10	T252A475K 015(1)S	.5	4	0032	0132	0232	0332	2032	3032	4032		
4.7	A	20	T252A475M015(1)S	.5	4	0033	0133	0233	0333	2033	3033	4033		
5.6	A	10	T252A565K 015(1)S	.5	4	0034	0134	0234	0334	2034	3034	4034		
33.0	B	10	T252B336K 015(1)S	1.0	6	0035	0135	0235	0335	2035	3035	4035		
33.0	B	20	T252B336M015(1)S	1.0	6	0036	0136	0236	0336	2036	3036	4036		
39.0	B	10	T252B396K 015(1)S	1.0	6	0037	0137	0237	0337	2037	3037	4037		
150.0	C	10	T252C157K 015(1)S	1.0	8	0038	0138	0238	0338	2038	3038	4038		
150.0	C	20	T252C157M015(1)S	1.0	8	0039	0139	0239	0339	2039	3039	4039		
180.0	C	10	T252C187K 015(1)S	2.0	8	0040	0140	0240	0340	2040	3040	4040		
220.0	D	10	T252D227K 015(1)S	2.0	8	0041	0141	0241	0341	2041	3041	4041		
220.0	D	20	T252D227M015(1)S	2.0	8	0042	0142	0242	0342	2042	3042	4042		
270.0	D	10	T252D277K 015(1)S	2.0	8	0043	0143	0243	0343	2043	3043	4043		
330.0	D	10	T252D337K 015(1)S	2.0	8	0044	0144	0244	0344	2044	3044	4044		
330.0	D	20	T252D337M015(1)S	2.0	8	0045	0145	0245	0345	2045	3045	4045		

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character, as shown on page 20.

**T252 (CSR33) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ± %	KEMET T252 SERIES			MIL-C-39003 (CSR33) CAPACITORS								
			KEMET EQUIVALENT PART NUMBER TO CSR33 CAPACITORS	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								
						MIL-C-39003/6 EXPONENTIAL				MIL-C-39003/6A GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>20 VOLT RATING AT 85°C</b>														
2.7	A	10	T252A275K 020(1)S	.5	4	0046	0146	0246	0346	2046	3046	4046		
3.3	A	10	T252A335K 020(1)S	.5	4	0047	0147	0247	0347	2047	3047	4047		
3.3	A	20	T252A335M020(1)S	.5	4	0048	0148	0248	0348	2048	3048	4048		
3.9	A	10	T252A395K 020(1)S	.5	4	0049	0149	0249	0349	2049	3049	4049		
18.0	B	10	T252B186K 020(1)S	1.0	6	0050	0150	0250	0350	2050	3050	4050		
22.0	B	10	T252B226K 020(1)S	1.0	6	0051	0151	0251	0351	2051	3051	4051		
22.0	B	20	T252B226M020(1)S	1.0	6	0052	0152	0252	0352	2052	3052	4052		
27.0	B	10	T252B276K 020(1)S	1.0	6	0053	0153	0253	0353	2053	3053	4053		
56.0	C	10	T252C566K 020(1)S	1.0	6	0054	0154	0254	0354	2054	3054	4054		
68.0	C	10	T252C686K 020(1)S	1.0	6	0055	0155	0255	0355	2055	3055	4055		
68.0	C	20	T252C686M020(1)S	1.0	6	0056	0156	0256	0356	2056	3056	4056		
82.0	C	10	T252C826K 020(1)S	1.0	6	0057	0157	0257	0357	2057	3057	4057		
100.0	C	10	T252C107K 020(1)S	1.0	6	0058	0158	0258	0358	2058	3058	4058		
100.0	C	20	T252C107M020(1)S	1.0	6	0059	0159	0259	0359	2059	3059	4059		
120.0	C	10	T252C127K 020(1)S	1.0	6	0060	0160	0260	0360	2060	3060	4060		
150.0	D	10	T252D157K 020(1)S	2.0	8	0061	0161	0261	0361	2061	3061	4061		
150.0	D	20	T252D157M020(1)S	2.0	8	0062	0162	0262	0362	2062	3062	4062		
180.0	D	10	T252D187K 020(1)S	2.0	8	0063	0163	0263	0363	2063	3063	4063		
<b>35 VOLT RATING AT 85°C</b>														
1.8	A	10	T252A185K 035(1)S	.5	4	0064	0164	0264	0364	2064	3064	4064		
8.2	B	10	T252B825K 035(1)S	1.0	6	0065	0165	0265	0365	2065	3065	4065		
10.0	B	10	T252B106K 035(1)S	1.0	6	0066	0166	0266	0366	2066	3066	4066		
10.0	B	20	T252B106M035(1)S	1.0	6	0067	0167	0267	0367	2067	3067	4067		
33.0	C	10	T252C336K 035(1)S	1.0	6	0068	0168	0268	0368	2068	3068	4068		
33.0	C	20	T252C336M035(1)S	1.0	6	0069	0169	0269	0369	2069	3069	4069		
39.0	C	10	T252C396K 035(1)S	1.0	6	0070	0170	0270	0370	2070	3070	4070		
47.0	C	10	T252C476K 035(1)S	1.0	6	0071	0171	0271	0371	2071	3071	4071		
47.0	C	20	T252C476M035(1)S	1.0	6	0072	0172	0272	0372	2072	3072	4072		
56.0	D	10	T252D566K 035(1)S	2.0	6	0073	0173	0273	0373	2073	3073	4073		
68.0	D	10	T252D686K 035(1)S	2.0	6	0074	0174	0274	0374	2074	3074	4074		
68.0	D	20	T252D686M035(1)S	2.0	6	0075	0175	0275	0375	2075	3075	4075		
<b>50 VOLT RATING AT 85°C</b>														
1.2	A	10	T252A125K 050(1)S	.5	4	0076	0176	0276	0376	2076	3076	4076		
1.5	A	10	T252A155K 050(1)S	.5	4	0077	0177	0277	0377	2077	3077	4077		
1.5	A	20	T252A155M050(1)S	.5	4	0078	0178	0278	0378	2078	3078	4078		
5.6	B	10	T252B565K 050(1)S	1.0	4	0079	0179	0279	0379	2079	3079	4079		
6.8	B	10	T252B685K 050(1)S	1.0	6	0080	0180	0280	0380	2080	3080	4080		
6.8	B	20	T252B685M050(1)S	1.0	6	0081	0181	0281	0381	2081	3081	4081		
22.0	C	10	T252C226K 050(1)S	1.0	6	0082	0182	0282	0382	2082	3082	4082		
22.0	C	20	T252C226M050(1)S	1.0	6	0083	0183	0283	0383	2083	3083	4083		
27.0	C	10	T252C276K 050(1)S	1.0	6	0084	0184	0284	0384	2084	3084	4084		
33.0	D	10	T252D336K 050(1)S	1.0	6	0085	0185	0285	0385	2085	3085	4085		
33.0	D	20	T252D336M050(1)S	1.0	6	0086	0186	0286	0386	2086	3086	4086		
39.0	D	10	T252D396K 050(1)S	1.0	6	0087	0187	0287	0387	2087	3087	4087		

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character, as shown on page 20.

**For Military Marking Information, see page 2.**

**T262 (CSR21) SERIES  
RATINGS AND PART NUMBER REFERENCE**

KEMET's new T262 (CSR21) per MIL-C-39003/09 hermetically sealed solid tantalum capacitors are similar to KEMET's popular T212 (CSR13 per MIL-C-39003/01) capacitors shown on page 4, but offer higher ripple current handling capability and exhibit low Equivalent Series Resistance (ESR).

The T262 Series are ideal for filtering applications and in military power supplies where low ESR is essential.

T262's are 100% surge current tested and their dissipation factor is screened at 1 kHz. This testing procedure is performed on all KEMET T262 Series Capacitors without special requirements needed from the customer, as is the case with KEMET T212 (CSR13) Capacitors. Available in C & D case sizes only, 5.6 to 330 μF, 6 to 50 VDC. For Capacitor Outline Drawing and dimensions, see page 4.

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ± %	KEMET T262 SERIES					MIL-C-39003/09 (CSR21) CAPACITORS							
			KEMET EQUIVALENT PART NUMBER FOR CSR21 CAPACITORS	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 1 kHz	MAX. ESR Ω @ 25°C 100 kHz	MAX. RIPPLE CURRENT Arms @ 25°C 40 kHz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)							
								MIL-C-39003/9A EXPONENTIAL				MIL-C-39003/9B GRADED			
								M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)	
<b>6 VOLT RATING AT 85° — 4 VOLT RATING AT 125°C</b>															
150.0	C	5	T262C157J 006ΔS	4.5	10	.065	3.3	0001	0101	0201	0301	2001	3001	4001	
150.0	C	10	T262C157K 006ΔS	4.5	10	.065	3.3	0002	0102	0202	0302	2002	3002	4002	
150.0	C	20	T262C157M006ΔS	4.5	10	.065	3.3	0003	0103	0203	0303	2003	3003	4003	
180.0	C	5	T262C187J 006ΔS	5.5	10	.060	3.4	0004	0104	0204	0304	2004	3004	4004	
180.0	C	10	T262C187K 006ΔS	5.5	10	.060	3.4	0005	0105	0205	0305	2005	3005	4005	
270.0	D	5	T262D277J 006ΔS	6.5	10	.050	4.1	0006	0106	0206	0306	2006	3006	4006	
270.0	D	10	T262D277K 006ΔS	6.5	10	.050	4.1	0007	0107	0207	0307	2007	3007	4007	
330.0	D	5	T262D337J 006ΔS	7.5	12	.045	4.3	0008	0108	0208	0308	2008	3008	4008	
330.0	D	10	T262D337K 006ΔS	7.5	12	.045	4.3	0009	0109	0209	0309	2009	3009	4009	
330.0	D	20	T262D337M006ΔS	7.5	12	.045	4.3	0010	0110	0210	0310	2010	3010	4010	
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>															
82.0	C	5	T262C826J 010ΔS	4.0	8	.085	2.9	0011	0111	0211	0311	2011	3011	4011	
82.0	C	10	T262C826K 010ΔS	4.0	8	.085	2.9	0012	0112	0212	0312	2012	3012	4012	
100.0	C	5	T262C107J 010ΔS	5.0	8	.075	3.0	0013	0113	0213	0313	2013	3013	4013	
100.0	C	10	T262C107K 010ΔS	5.0	8	.075	3.0	0014	0114	0214	0314	2014	3014	4014	
100.0	C	20	T262C107M010ΔS	5.0	8	.075	3.0	0015	0115	0215	0315	2015	3015	4015	
120.0	C	5	T262C127J 010ΔS	6.0	8	.070	3.2	0016	0116	0216	0316	2016	3016	4016	
120.0	C	10	T262C127K 010ΔS	6.0	8	.070	3.2	0017	0117	0217	0317	2017	3017	4017	
180.0	D	5	T262D187J 010ΔS	9.0	8	.060	3.7	0018	0118	0218	0318	2018	3018	4018	
180.0	D	10	T262D187K 010ΔS	9.0	8	.060	3.7	0019	0119	0219	0319	2019	3019	4019	
220.0	D	5	T262D227J 010ΔS	10.0	10	.055	3.9	0020	0120	0220	0320	2020	3020	4020	
220.0	D	10	T262D227K 010ΔS	10.0	10	.055	3.9	0021	0121	0221	0321	2021	3021	4021	
220.0	D	20	T262D227M010ΔS	10.0	10	.055	3.9	0022	0122	0222	0322	2022	3022	4022	
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>															
56.0	C	5	T262C566J 015ΔS	4.0	6	.100	2.6	0023	0123	0223	0323	2023	3023	4023	
56.0	C	10	T262C566K 015ΔS	4.0	6	.100	2.6	0024	0124	0224	0324	2024	3024	4024	
68.0	C	5	T262C686J 015ΔS	5.0	6	.095	2.7	0025	0125	0225	0325	2025	3025	4025	
68.0	C	10	T262C686K 015ΔS	5.0	6	.095	2.7	0026	0126	0226	0326	2026	3026	4026	
68.0	C	20	T262C686M015ΔS	5.0	6	.095	2.7	0027	0127	0227	0327	2027	3027	4027	
120.0	D	5	T262D127J 015ΔS	9.0	8	.070	3.5	0028	0128	0228	0328	2028	3028	4028	
120.0	D	10	T262D127K 015ΔS	9.0	8	.070	3.5	0029	0129	0229	0329	2029	3029	4029	
150.0	D	5	T262D157J 015ΔS	10.0	8	.065	3.6	0030	0130	0230	0330	2030	3030	4030	
150.0	D	10	T262D157K 015ΔS	10.0	8	.065	3.6	0031	0131	0231	0331	2031	3031	4031	
150.0	D	20	T262D157M015ΔS	10.0	8	.065	3.6	0032	0132	0232	0332	2032	3032	4032	

(1) To complete T262 Part Number insert failure rate symbol in the 13th character, as shown on page 4.  
 (2) For Capacitor outline drawing see page 4.

**T262 (CSR21) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T262 SERIES					MIL-C-39003/09 (CSR21) CAPACITORS							
			KEMET EQUIVALENT PART NUMBER FOR CSR21 CAPACITORS	D.C. LEAKAGE μA@25°C MAX.	MAX. DISSI- PATION FACTOR %@25°C, 1 kHz	MAX. ESR Ω@25°C 100 kHz	MAX. RIPPLE CURRENT Arms@25°C 40 kHz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)							
								MIL-C-39003/9A EXPONENTIAL				MIL-C-39003/9B GRADED			
								M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)	
<b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b>															
27.0	C	5	T262C276J 020ⓁS	2.5	5	.145	2.2	0033	0133	0233	0333	2033	3033	4033	
27.0	C	10	T262C276K 020ⓁS	2.5	5	.145	2.2	0034	0134	0234	0334	2034	3034	4034	
33.0	C	5	T262C336J 020ⓁS	3.5	5	.130	2.3	0035	0135	0235	0335	2035	3035	4035	
33.0	C	10	T262C336K 020ⓁS	3.5	5	.130	2.3	0036	0136	0236	0336	2036	3036	4036	
33.0	C	20	T262C336M020ⓁS	3.5	5	.130	2.3	0037	0137	0237	0337	2037	3037	4037	
39.0	C	5	T262C396J 020ⓁS	4.0	5	.120	2.4	0038	0138	0238	0338	2038	3038	4038	
39.0	C	10	T262C396K 020ⓁS	4.0	5	.120	2.4	0039	0139	0239	0339	2039	3039	4039	
47.0	C	5	T262C476J 020ⓁS	4.5	6	.110	2.5	0040	0140	0240	0340	2040	3040	4040	
47.0	C	10	T262C476K 020ⓁS	4.5	6	.110	2.5	0041	0141	0241	0341	2041	3041	4041	
47.0	C	20	T262C476M020ⓁS	4.5	6	.110	2.5	0042	0242	0242	0342	2042	3042	4042	
56.0	D	5	T262D566J 020ⓁS	5.5	6	.100	2.9	0043	0143	0243	0343	2043	3043	4043	
56.0	D	10	T262D566K 020ⓁS	5.5	6	.100	2.9	0044	0144	0244	0344	2044	3044	4044	
68.0	D	5	T262D686J 020ⓁS	7.0	6	.095	3.0	0045	0145	0245	0345	2045	3045	4045	
68.0	D	10	T262D686K 020ⓁS	7.0	6	.095	3.0	0046	0146	0246	0346	2046	3046	4046	
68.0	D	20	T262D686M020ⓁS	7.0	6	.095	3.0	0047	0147	0247	0347	2047	3047	4047	
82.0	D	5	T262D826J 020ⓁS	8.0	6	.085	3.1	0048	0148	0248	0348	2048	3048	4048	
82.0	D	10	T262D826K 020ⓁS	8.0	6	.085	3.1	0049	0149	0249	0349	2049	3049	4049	
100.0	D	5	T262D107J 020ⓁS	10.0	8	.075	3.3	0050	0150	0250	0350	2050	3050	4050	
100.0	D	10	T262D107K 020ⓁS	10.0	8	.075	3.3	0051	0151	0251	0351	2051	3051	4051	
100.0	D	20	T262D107M020ⓁS	10.0	8	.075	3.3	0052	0152	0252	0352	2052	3052	4052	
<b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b>															
22.0	C	5	T262C226J 035ⓁS	4.0	4	.160	2.1	0053	0153	0253	0353	2053	3053	4053	
22.0	C	10	T262C226K 035ⓁS	4.0	4	.160	2.1	0054	0154	0254	0354	2054	3054	4054	
22.0	C	20	T262C226M035ⓁS	4.0	4	.160	2.1	0055	0155	0255	0355	2055	3055	4055	
27.0	D	5	T262D276J 035ⓁS	4.5	4	.145	2.4	0056	0156	0256	0356	2056	3056	4056	
27.0	D	10	T262D276K 035ⓁS	4.5	4	.145	2.4	0057	0157	0257	0357	2057	3057	4057	
33.0	D	5	T262D336J 035ⓁS	5.5	5	.130	2.5	0058	0158	0258	0358	2058	3058	4058	
33.0	D	10	T262D336K 035ⓁS	5.5	5	.130	2.5	0059	0159	0259	0359	2059	3059	4059	
33.0	D	20	T262D336M035ⓁS	5.5	5	.130	2.5	0060	0160	0260	0360	2060	3060	4060	
39.0	D	5	T262D396J 035ⓁS	7.0	5	.120	2.6	0061	0161	0261	0361	2061	3061	4061	
39.0	D	10	T262D396K 035ⓁS	7.0	5	.120	2.6	0062	0162	0262	0362	2062	3062	4062	
47.0	D	5	T262D476J 035ⓁS	8.0	5	.110	2.7	0063	0163	0263	0363	2063	3063	4063	
47.0	D	10	T262D476K 035ⓁS	8.0	5	.110	2.7	0064	0164	0264	0364	2064	3064	4064	
47.0	D	20	T262D476M035ⓁS	8.0	5	.110	2.7	0065	0165	0265	0365	2065	3065	4065	
<b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b>															
5.6	C	5	T262C565J 050ⓁS	2.2	3	.300	1.5	0066	0166	0266	0366	2066	3066	4066	
5.6	C	10	T262C565K 050ⓁS	2.2	3	.300	1.5	0067	0167	0267	0367	2067	3067	4067	
6.8	C	5	T262C685J 050ⓁS	2.2	3	.275	1.6	0068	0168	0268	0368	2068	3068	4068	
6.8	C	10	T262C685K 050ⓁS	2.2	3	.275	1.6	0069	0169	0269	0369	2069	3069	4069	
6.8	C	20	T262C685M050ⓁS	2.2	3	.275	1.6	0070	0170	0270	0370	2070	3070	4070	
8.2	C	5	T262C825J 050ⓁS	2.5	3	.250	1.6	0071	0171	0271	0371	2071	3071	4071	
8.2	C	10	T262C825K 050ⓁS	2.5	3	.250	1.6	0072	0172	0272	0372	2072	3072	4072	
10.0	C	5	T262C106J 050ⓁS	2.5	3	.230	1.7	0073	0173	0273	0373	2073	3073	4073	
10.0	C	10	T262C106K 050ⓁS	2.5	3	.230	1.7	0074	0174	0274	0374	2074	3074	4074	
10.0	C	20	T262C106M050ⓁS	2.5	3	.230	1.7	0075	0175	0275	0375	2075	3075	4075	
12.0	C	5	T262C126J 050ⓁS	3.0	3	.210	1.8	0076	0176	0276	0376	2076	3076	4076	
12.0	C	10	T262C126K 050ⓁS	3.0	3	.210	1.8	0077	0177	0277	0377	2077	3077	4077	
15.0	C	5	T262C156J 050ⓁS	4.0	3	.190	1.9	0078	0178	0278	0378	2078	3078	4078	
15.0	C	10	T262C156K 050ⓁS	4.0	3	.190	1.9	0079	0179	0279	0379	2079	3079	4079	
15.0	C	20	T262C156M050ⓁS	4.0	3	.190	1.9	0080	0180	0280	0380	2080	3080	4080	
18.0	C	5	T262C186J 050ⓁS	4.5	4	.175	2.0	0081	0181	0281	0381	2081	3081	4081	
18.0	C	10	T262C186K 050ⓁS	4.5	4	.175	2.0	0082	0182	0282	0382	2082	3082	4082	
22.0	D	5	T262D226J 050ⓁS	5.5	4	.160	2.3	0083	0183	0283	0383	2083	3083	4083	
22.0	D	10	T262D226K 050ⓁS	5.5	4	.160	2.3	0084	0184	0284	0384	2084	3084	4084	
22.0	D	20	T262D226M050ⓁS	5.5	4	.160	2.3	0085	0185	0285	0385	2085	3085	4085	

(1) To complete T262 Part Number insert failure rate symbol in the 13th character, as shown on page 4.  
 (2) For Capacitor outline drawing see page 4.

\* For Military Ordering Information, see page 2.

**T120 SERIES — POLAR MINIATURE & T222 (CSR09)**

KEMET ultra-miniature T120 Series solid tantalum capacitors are designed especially for cordwood construction modules. They offer circuit designers the highest density solid tantalum capacitors on the market. For example, the A case is two-thirds the size of the standard A case in T110 Series capacitors.

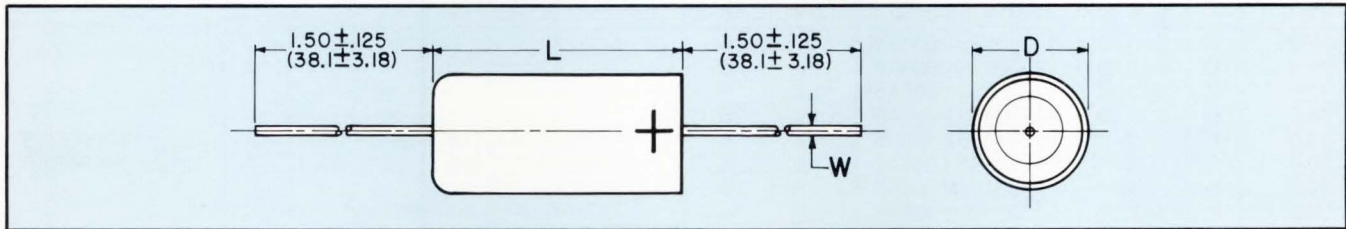
The T120 Series capacitors employ a unique glass-to-metal compression end seal which has no protruding eyelet. This flush end seal construction makes T120 Series capacitors ideally suited for all cordwood circuits, point-to-point wiring and other high density packaging applications. The capacitors consist of a dry porous tantalum pellet hermetically sealed in a solder coated metal case with solder coated alloy 52 and

solder coated nickel leads.

The T120 Series capacitors provide highly reliable performance. They meet the environmental characteristics of the established reliability specification MIL-C-39003.

T120 Series capacitors are available in capacitance values ranging from .0047 to 22 microfarads in  $\pm 20$ ,  $\pm 10$ , and  $\pm 5\%$  tolerances; and in DC working voltage from 6 to 125. They are constructed for continuous duty at nameplate voltage over a temperature range from  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ . Operation at  $+125^{\circ}\text{C}$  is equally as reliable when nameplate voltage is derated one-third.

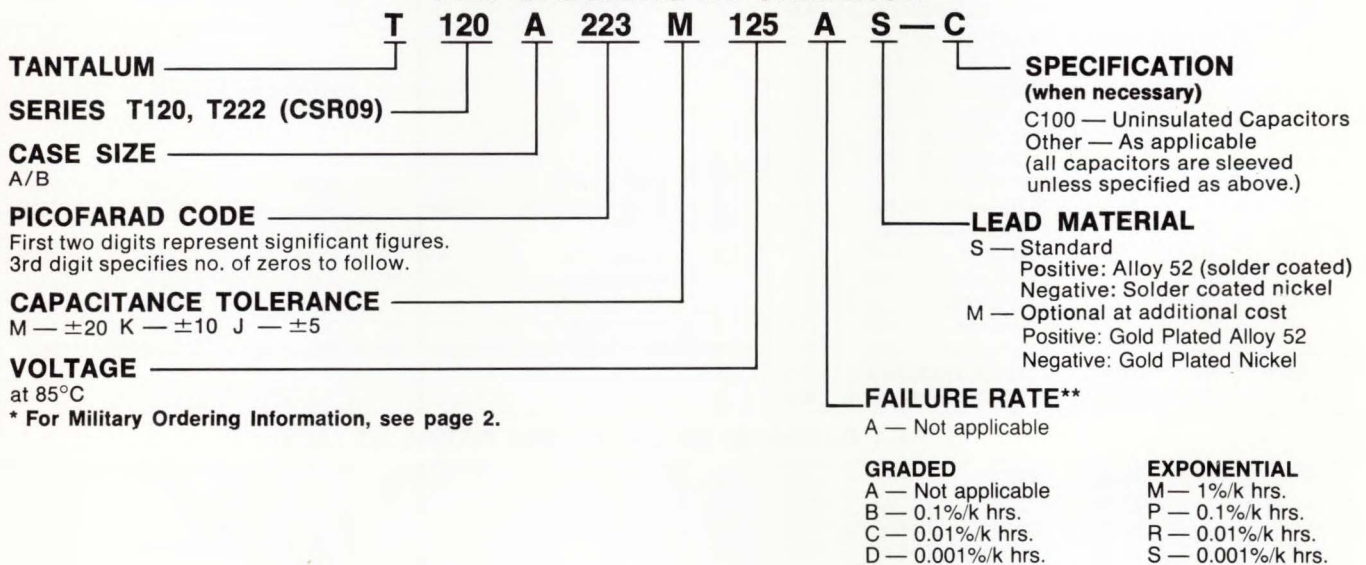
**CAPACITOR OUTLINE DRAWING**



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	UNINSULATED		INSULATED		W WIRE DIAMETER
	D $\pm 0.005$ ( $\pm .13$ )	L	D	L	
A	.085 (2.16)	.245 +.015 (6.22 +.38) -.010 (-.25)	.090 $\pm$ .009 (2.29 $\pm$ .23)	.250 +.031 (6.35 +.79) -.015 (-.38)	.016 +.005 (.41 +.13) -.001 (-.03)
B	.127 (3.23)	.375 $\pm$ .015 (9.53 $\pm$ .38)	.138 $\pm$ .010 (3.51 $\pm$ .25)	.390 $\pm$ .015 (9.91 $\pm$ .38)	.016 +.005 (.41 +.13) -.001 (-.03)

**T120 ORDERING INFORMATION\***



\* For Military Ordering Information, see page 2.

\*\*M, P, R & S Failure Rates available for T222 capacitors only.

For further details consult T120 Series Catalog F-2028

**T120 & T222 (CSR09) SERIES  
RATINGS AND PART NUMBER REFERENCE**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T120 SERIES			MIL-C-39003 (CSR09) CAPACITORS							KEMET EQUIVALENT PART NUMBER FOR CSR09 CAPACITORS	
			KEMET PART NUMBER	D.C. LEAKAGE μA@25°C MAX.	MAX. DISSI- PATION FACTOR %@25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								
						MIL-C-39003/2C EXPONENTIAL				MIL-C-39003/2D GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>														
1.2	A	5,10,20	T120A125□006AS	0.6	6									
1.5	A	5,10,20	T120A155□006AS	0.6	6									
1.8	A	5,10,20	T120A185□006AS	0.6	6									
2.2	A	5,10,20	T120A225□006AS	0.6	6									
2.7	A	5	T120A275J 006AS	0.6	6	1001	1061	1121	1181	2001	3001	4001	T222A275J 006(□)S	
<b>2.7</b>	<b>A</b>	<b>10</b>	<b>T120A275K 006AS</b>	<b>0.6</b>	<b>6</b>	<b>0001</b>	<b>0061</b>	<b>0121</b>	<b>0181</b>	<b>2002</b>	<b>3002</b>	<b>4002</b>	<b>T222A275K006(□)S</b>	
<b>2.7</b>	<b>A</b>	<b>20</b>	<b>T120A275M006AS</b>	<b>0.6</b>	<b>6</b>									
3.3	A	5,10,20	T120A335□006AS	0.6	6									
8.2	B	5,10,20	T120B825□006AS	1.4	6									
10.0	B	5,10,20	T120B106□006AS	1.4	6									
12.0	B	5,10,20	T120B126□006AS	1.4	6									
15.0	B	5,10,20	T120B156□006AS	1.4	6									
18.0	B	5	T120B186J 006AS	1.4	6	1002	1062	1122	1182	2003	3003	4003	T222B186J 006(□)S	
18.0	B	10	T120B186K 006AS	1.4	6	0002	0062	0122	0182	2004	3004	4004	T222B186K 006(□)S	
18.0	B	20	T120B186M 006AS	1.4	6									
22.0	B	5,10,20	T120B226□006AS	2.0	6									
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>														
0.22	A	5,10,20	T120A224□010AS	0.6	6									
0.27	A	5,10,20	T120A274□010AS	0.6	6									
0.33	A	5,10,20	T120A334□010AS	0.6	6									
0.39	A	5,10,20	T120A394□010AS	0.6	6									
0.47	A	5,10,20	T120A474□010AS	0.6	6									
0.56	A	5,10,20	T120A564□010AS	0.6	6									
0.68	A	5,10,20	T120A684□010AS	0.6	6									
0.82	A	5,10,20	T120A824□010AS	0.6	6									
1.0	A	5,10,20	T120A105□010AS	0.6	6									
1.2	A	5,10,20	T120A125□010AS	0.6	6									
1.5	A	5,10,20	T120A155□010AS	0.6	6									
1.8	A	5	T120A185J 010AS	0.6	6	1007	1067	1127	1187	2005	3005	4005	T222A185J 010(□)S	
1.8	A	10	T120A185K 010AS	0.6	6	0007	0067	0127	0187	2006	3006	4006	T222A185K 010(□)S	
1.8	A	20	T120A185M 010AS	0.6	6									
2.2	A	5	T120A225J 010AS	0.6	6	1008	1068	1128	1188	2007	3007	4007	T222A225J 010(□)S	
<b>2.2</b>	<b>A</b>	<b>10</b>	<b>T120A225K 010AS</b>	<b>0.6</b>	<b>6</b>	<b>0008</b>	<b>0068</b>	<b>0128</b>	<b>0188</b>	<b>2008</b>	<b>3008</b>	<b>4008</b>	<b>T222A225K 010(□)S</b>	
<b>2.2</b>	<b>A</b>	<b>20</b>	<b>T120A225M010AS</b>	<b>0.6</b>	<b>6</b>									
3.3	B	5,10,20	T120B335□010AS	2.0	6									
3.9	B	5,10,20	T120B395□010AS	2.0	6									
4.7	B	5,10,20	T120B475□010AS	2.0	6									
5.6	B	5,10,20	T120B565□010AS	2.0	6									
6.8	B	5,10,20	T120B685□010AS	2.0	6									
8.2	B	5,10,20	T120B825□010AS	2.0	6									
10.0	B	5	T120B106J 010AS	2.0	6	1009	1069	1129	1189	2009	3009	4009	T222B106J 010(□)S	
10.0	B	10	T120B106K 010AS	2.0	6	0009	0069	0129	0189	2010	3010	4010	T222B106K 010(□)S	
10.0	B	20	T120B106M 010AS	2.0	6									
12.0	B	5	T120B126J 010AS	2.0	6	1010	1070	1130	1190	2011	3011	4011	T222B126J 010(□)S	
12.0	B	10	T120B126K 010AS	2.0	6	0010	0070	0130	0190	2012	3012	4012	T222B126K 010(□)S	
12.0	B	20	T120B126M 010AS	2.0	6									
15.0	B	5	T120B156J 010AS	2.0	6	1011	1071	1131	1191	2013	3013	4013	T222B156J 010(□)S	
15.0	B	10	T120B156K 010AS	2.0	6	0011	0071	0131	0191	2014	3014	4014	T222B156K 010(□)S	
<b>15.0</b>	<b>B</b>	<b>20</b>	<b>T120B156M010AS</b>	<b>2.0</b>	<b>6</b>									
<b>18.0</b>	<b>B</b>	<b>5,10,20</b>	<b>T120B186□010AS</b>	<b>3.0</b>	<b>6</b>									
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>														
0.33	A	5,10,20	T120A334□015AS	0.6	6									
0.39	A	5,10,20	T120A394□015AS	0.6	6									
0.47	A	5,10,20	T120A474□015AS	0.6	6									
0.56	A	5,10,20	T120A564□015AS	0.6	6									
0.68	A	5,10,20	T120A684□015AS	0.6	6									
0.82	A	5,10,20	T120A824□015AS	0.6	6									
1.0	A	5	T120A105J 015AS	0.6	6	1012	1072	1132	1192	2015	3015	4015	T222A105J 015(□)S	
1.0	A	10	T120A105K 015AS	0.6	6	0012	0072	0132	0192	2016	3016	4016	T222A105K 015(□)S	

(1) To complete Part Number, insert Capacitance Tolerance Symbol in the 9th Character. M — ±20%, K — ±10%, J — ±5%.

(2) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on page 25.

**Bold Face** lines indicate popular part types and values.

For further details consult T120 Series Catalog F-2028

Union Carbide Corporation, Electronics Division, P.O. Box 5928, Greenville, S.C. 29606, (803) 963-6300

**T120 & T222 (CSR09) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T120 SERIES			MIL-C-39003 (CSR09) CAPACITORS							KEMET EQUIVALENT PART NUMBER FOR CSR09 CAPACITORS	
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								
						MIL-C-39003/2C EXPONENTIAL				MIL-C-39003/2D GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C (Cont'd)</b>														
1.0	A	20	T120A105M015AS	1.0	6									
1.2	A	5	T120A125J 015AS	0.6	6	1013	1073	1133	1193	2017	3017	4017	T222A125J 015(2)S	
1.2	A	10	T120A125K 015AS	0.6	6	0013	0073	0133	0193	2018	3018	4018	T222A125K 015(2)S	
1.2	A	20	T120A125M015AS	0.6	6									
1.5	A	5	T120A155J 015AS	0.6	6	1014	1074	1134	1194	2019	3019	4019	T222A155J 015(2)S	
1.5	A	10	<b>T120A155K 015AS</b>	0.6	6	<b>0014</b>	<b>0074</b>	<b>0134</b>	<b>0194</b>	<b>2020</b>	<b>3020</b>	<b>4020</b>	<b>T222A155K 015(2)S</b>	
1.5	A	20	<b>T120A155M015AS</b>	0.6	6									
1.8	B	5,10,20	T120B185(1)015AS	1.8	6									
2.2	B	5,10,20	T120B225(1)015AS	1.8	6									
2.7	B	5,10,20	T120B275(1)015AS	1.8	6									
3.3	B	5,10,20	T120B335(1)015AS	1.8	6									
3.9	B	5,10,20	T120B395(1)015AS	1.8	6									
4.7	B	5,10,20	T120B475(1)015AS	1.8	6									
5.6	B	5,10,20	T120B565(1)015AS	1.8	6									
6.8	B	5,10,20	T120B685(1)015AS	1.8	6									
8.2	B	5	T120B825J 015AS	1.8	6	1015	1075	1135	1195	2021	3021	4021	T222B825J 015(2)S	
8.2	B	10	T120B825K 015AS	1.8	6	0015	0075	0135	0195	2022	3022	4022	T222B825K 015(2)S	
8.2	B	20	T120B825M 015AS	1.8	6									
<b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b>														
0.10	A	5,10,20	T120A104(1)020AS	0.6	3									
0.12	A	5,10,20	T120A124(1)020AS	0.6	3									
0.15	A	5,10,20	T120A154(1)020AS	0.6	3									
0.18	A	5,10,20	T120A184(1)020AS	0.6	3									
0.22	A	5,10,20	T120A224(1)020AS	0.6	3									
0.27	A	5,10,20	T120A274(1)020AS	0.6	3									
0.33	A	5,10,20	T120A334(1)020AS	0.6	3									
0.39	A	5,10,20	T120A394(1)020AS	0.6	3									
0.47	A	5,10,20	T120A474(1)020AS	0.6	3									
0.56	A	5	T120A564J 020AS	0.6	3	1016	1076	1136	1196	2023	3023	4023	T222A564J 020(2)S	
0.56	A	10	T120A564K 020AS	0.6	3	0016	0076	0136	0196	2024	3024	4024	T222A564K 020(2)S	
0.56	A	20	T120A564M 020AS	0.6	3									
0.68	A	5	T120A684J 020AS	0.6	3	1017	1077	1137	1197	2025	3025	4025	T222A684J 020(2)S	
0.68	A	10	T120A684K 020AS	0.6	3	0017	0077	0137	0197	2026	3026	4026	T222A684K 020(2)S	
0.68	A	20	T120A684M 020AS	0.6	3									
0.82	A	5	T120A824J 020AS	0.6	3	1018	1078	1138	1198	2027	3027	4027	T222A824J 020(2)S	
0.82	A	10	T120A824K 020AS	0.6	3	0018	0078	0138	0198	2028	3028	4028	T222A824K 020(2)S	
0.82	A	20	T120A824M 020AS	0.6	3									
1.0	A	5	T120A105J 020AS	0.6	3	1019	1079	1139	1199	2029	3029	4029	T222A105J 020(2)S	
1.0	A	10	<b>T120A105K 020AS</b>	0.6	3	<b>0019</b>	<b>0079</b>	<b>0139</b>	<b>0199</b>	<b>2030</b>	<b>3030</b>	<b>4030</b>	<b>T222A105K 020(2)S</b>	
1.0	A	20	<b>T120A105M020AS</b>	0.6	3									
1.2	B	5,10,20	T120B125(1)020AS	1.0	3									
1.5	B	5,10,20	T120B155(1)020AS	1.0	3									
1.8	B	5,10,20	T120B185(1)020AS	1.0	3									
2.2	B	5,10,20	T120B225(1)020AS	1.0	3									
2.7	B	5,10,20	T120B275(1)020AS	1.0	3									
3.3	B	5	T120B335J 020AS	1.0	3	1020	1080	1140	1200	2031	3031	4031	T222B335J 020(2)S	
3.3	B	10	T120B335K 020AS	1.0	3	0020	0080	0140	0200	2032	3032	4032	T222B335K 020(2)S	
3.3	B	20	T120B335M 020AS	1.0	3									
3.9	B	5	T120B395J 020AS	2.0	3	1021	1081	1141	1201	2033	3033	4033	T222B395J 020(2)S	
3.9	B	10	T120B395K 020AS	2.0	3	0021	0081	0141	0201	2034	3034	4034	T222B395K 020(2)S	
3.9	B	20	T120B395M 020AS	2.0	3									
4.7	B	5	T120B475J 020AS	2.0	3	1022	1082	1142	1202	2035	3035	4035	T222B475J 020(2)S	
4.7	B	10	<b>T120B475K 020AS</b>	2.0	3	<b>0022</b>	<b>0082</b>	<b>0142</b>	<b>0202</b>	<b>2036</b>	<b>3036</b>	<b>4036</b>	<b>T222B475K 020(2)S</b>	
4.7	B	20	<b>T120B475M020AS</b>	2.0	3									
5.6	B	5	T120B565J 020AS	2.0	3	1023	1083	1143	1203	2037	3037	4037	T222B565J 020(2)S	
5.6	B	10	T120B565K 020AS	2.0	3	0023	0083	0143	0203	2038	3038	4038	T222B565K 020(2)S	
5.6	B	20	T120B565M 020AS	2.0	3									
6.8	B	5	T120B685J 020AS	2.0	3	1024	1084	1144	1204	2039	3039	4039	T222B685J 020(2)S	
6.8	B	10	<b>T120B685K 020AS</b>	2.0	3	<b>0024</b>	<b>0084</b>	<b>0144</b>	<b>0204</b>	<b>2040</b>	<b>3040</b>	<b>4040</b>	<b>T222B685K 020(2)S</b>	
6.8	B	20	<b>T120B685M020AS</b>	2.0	3									

(1) To complete Part Number, insert Capacitance Tolerance Symbol in the 9th Character. M — ±20%, K — ±10%, J — ±5%.

(2) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on page 25.

**Bold Face** lines indicate popular part types and values.

For further details consult T120 Series Catalog F-2028







**T120 & T222 (CSR09) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T120 SERIES			MIL-C-39003 (CSR09) CAPACITORS							KEMET EQUIVALENT PART NUMBER FOR CSR09 CAPACITORS		
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)						B (0.1)		C (0.01)	D (0.001)
						MIL-C-39003/2C EXPONENTIAL			MIL-C-39003/2D GRADED						
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)				
<b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C (Cont'd)</b>															
0.22	B	5	T120B224J 075AS	0.6	3	1042	1102	1162	1222	2075	3075	4075	T222B224J 075(2)S		
0.22	B	10	T120B224K 075AS	0.6	3	0042	0102	0162	0222	2076	3076	4076	T222B224K 075(2)S		
0.22	B	20	T120B224M 075AS	0.6	3										
0.27	B	5	T120B274J 075AS	0.6	3	1043	1103	1163	1223	2077	3077	4077	T222B274J 075(2)S		
0.27	B	10	T120B274K 075AS	0.6	3	0043	0103	0163	0223	2078	3078	4078	T222B274K 075(2)S		
0.27	B	20	T120B274M 075AS	0.6	3										
0.33	B	5	T120B334J 075AS	0.6	3	1044	1104	1164	1224	2079	3079	4079	T222B334J 075(2)S		
0.33	B	10	T120B334K 075AS	0.6	3	0044	0104	0164	0224	2080	3080	4080	T222B334K 075(2)S		
0.33	B	20	T120B334M 075AS	0.6	3										
0.39	B	5	T120B394J 075AS	0.6	3	1045	1105	1165	1225	2081	3081	4081	T222B394J 075(2)S		
0.39	B	10	T120B394K 075AS	0.6	3	0045	0105	0165	0225	2082	3082	4082	T222B394K 075(2)S		
0.39	B	20	T120B394M 075AS	0.6	3										
0.47	B	5	T120B474J 075AS	0.6	3	1046	1106	1166	1226	2083	3083	4083	T222B474J 075(2)S		
0.47	B	10	T120B474K 075AS	0.6	3	0046	0106	0166	0226	2084	3084	4084	T222B474K 075(2)S		
0.47	B	20	T120B474M 075AS	0.6	3										
0.56	B	5	T120B564J 075AS	0.6	3	1047	1107	1167	1227	2085	3085	4085	T222B564J 075(2)S		
0.56	B	10	T120B564K 075AS	0.6	3	0047	0107	0167	0227	2086	3086	4086	T222B564K 075(2)S		
0.56	B	20	T120B564M 075AS	0.6	3										
0.68	B	5	T120B684J 075AS	0.6	3	1048	1108	1168	1228	2087	3087	4087	T222B684J 075(2)S		
0.68	B	10	T120B684K 075AS	0.6	3	0048	0108	0168	0228	2088	3088	4088	T222B684K 075(2)S		
0.68	B	20	T120B684M 075AS	0.6	3										
0.82	B	5	T120B824J 075AS	0.7	3	1049	1109	1169	1229	2089	3089	4089	T222B824J 075(2)S		
0.82	B	10	T120B824K 075AS	0.7	3	0049	0109	0169	0229	2090	3090	4090	T222B824K 075(2)S		
0.82	B	20	T120B824M 075AS	0.7	3										
1.0	B	5	T120B105J 075AS	0.9	3	1050	1110	1170	1230	2091	3091	4091	T222B105J 075(2)S		
1.0	B	10	T120B105K 075AS	0.9	3	0050	0110	0170	0230	2092	3092	4092	T222B105K 075(2)S		
1.0	B	20	T120B105M 075AS	0.9	3										
1.2	B	5	T120B125J 075AS	0.9	3	1051	1111	1171	1231	2093	3093	4093	T222B125J 075(2)S		
1.2	B	10	T120B125K 075AS	0.9	3	0051	0111	0171	0231	2094	3094	4094	T222B125K 075(2)S		
1.2	B	20	T120B125M 075AS	0.9	3										
<b>100 VOLTS AT 85°C — 67 VOLTS AT 125°C</b>															
0.0047	A	5,10,20	T120A472(1)100AS	1.0	3										
0.0056	A	5,10,20	T120A562(1)100AS	1.0	3										
0.0068	A	5,10,20	T120A682(1)100AS	1.0	3										
0.0082	A	5,10,20	T120A822(1)100AS	1.0	3										
0.010	A	5,10,20	T120A103(1)100AS	1.0	3										
0.012	A	5,10,20	T120A123(1)100AS	1.0	3										
0.015	A	5,10,20	T120A153(1)100AS	1.0	3										
0.018	A	5,10,20	T120A183(1)100AS	1.0	3										
0.022	A	5,10,20	T120A223(1)100AS	1.0	3										
0.027	A	5,10,20	T120A273(1)100AS	1.0	3										
0.033	A	5,10,20	T120A333(1)100AS	1.0	3										
0.039	A	5,10,20	T120A393(1)100AS	1.0	3										
0.047	A	5,10,20	T120A473(1)100AS	1.0	3										
0.056	A	5,10,20	T120A563(1)100AS	1.0	3										
0.068	A	5,10,20	T120A683(1)100AS	1.0	3										
0.082	A	5,10,20	T120A823(1)100AS	1.0	3										
0.10	A	5,10,20	T120A104(1)100AS	1.0	3										
0.12	A	5,10,20	T120A124(1)100AS	1.0	3										
0.15	B	5,10,20	T120B154(1)100AS	2.5	3										
0.18	B	5,10,20	T120B184(1)100AS	2.5	3										
0.22	B	5,10,20	T120B224(1)100AS	2.5	3										
0.27	B	5,10,20	T120B274(1)100AS	2.5	3										
0.33	B	5,10,20	T120B334(1)100AS	2.5	3										
0.39	B	5,10,20	T120B394(1)100AS	2.5	3										
0.47	B	5,10,20	T120B474(1)100AS	2.5	3										
0.56	B	5,10,20	T120B564(1)100AS	2.5	3										
0.68	B	5,10,20	T120B684(1)100AS	2.5	3										
0.82	B	5,10,20	T120B824(1)100AS	2.5	3										

(1) To complete Part Number, insert Capacitance Tolerance Symbol in the 9th Character. M — ±20%, K — ±10%, J — ±5%.

(2) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on page 25.

**Bold Face** lines indicate popular part types and values.

For further details consult T120 Series Catalog F-2028

**T120 & T222 (CSR09) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T120 SERIES			MIL-C-39003 (CSR09) CAPACITORS							
			KEMET PART NUMBER	D.C. LEAKAGE μA@25°C MAX.	MAX. DISSI- PATION FACTOR %@25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)							KEMET EQUIVALENT PART NUMBER FOR CSR09 CAPACITORS
						MIL-C-39003/2C EXPONENTIAL				MIL-C-39003/2D GRADED			
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)	
<b>125 VOLTS AT 85°C — 82 VOLTS AT 125°C</b>													
0.0047	A	5,10,20	T120A472(1)125AS	1.0	3	<p><b>T120 CAPACITOR MARKINGS</b> <b>A &amp; B CASE</b></p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>+ T120 — Polarity and Series                      K 20% — Manufacturer's Identification &amp; Capacitance Tolerance                      6R8 μF — Nominal Capacitance — (μF) R denotes decimal point)                      15V — Voltage                      533XA — Date Code, Batch Code</p> </div>							
0.0056	A	5,10,20	T120A562(1)125AS	1.0	3								
0.0068	A	5,10,20	T120A682(1)125AS	1.0	3								
0.0082	A	5,10,20	T120A822(1)125AS	1.0	3								
0.010	A	5,10,20	T120A103(1)125AS	1.0	3								
0.012	A	5,10,20	T120A123(1)125AS	1.0	3								
0.015	A	5,10,20	T120A153(1)125AS	1.0	3								
0.018	A	5,10,20	T120A183(1)125AS	1.0	3								
0.022	A	5,10,20	T120A223(1)125AS	1.0	3								
0.027	A	5,10,20	T120A273(1)125AS	1.0	3								
0.033	A	5,10,20	T120A333(1)125AS	1.0	3								
0.039	A	5,10,20	T120A393(1)125AS	1.0	3								
0.047	A	5,10,20	T120A473(1)125AS	1.0	3								
0.056	A	5,10,20	T120A563(1)125AS	1.0	3								
0.068	A	5,10,20	T120A683(1)125AS	1.0	3								
0.082	A	5,10,20	T120A823(1)125AS	1.0	3								
0.10	A	5,10,20	T120A104(1)125AS	1.0	3								
0.12	B	5,10,20	T120B124(1)125AS	2.5	3								
0.15	B	5,10,20	T120B154(1)125AS	2.5	3								
0.18	B	5,10,20	T120B184(1)125AS	2.5	3								
0.22	B	5,10,20	T120B224(1)125AS	2.5	3								
0.27	B	5,10,20	T120B274(1)125AS	2.5	3								
0.33	B	5,10,20	T120B334(1)125AS	2.5	3								
0.39	B	5,10,20	T120B394(1)125AS	2.5	3								
0.47	B	5,10,20	T120B474(1)125AS	2.5	3								
0.56	B	5,10,20	T120B564(1)125AS	2.5	3								
0.68	B	5,10,20	T120B684(1)125AS	2.5	3								

(1) To complete Part Number, insert Capacitance Tolerance Symbol in the 9th Character. M — ±20%, K — ±10%, J — ±5%.  
 (2) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on page 25.  
**Bold Face** lines indicate popular part types and values.

**CSR09 CAPACITOR MARKINGS PER MIL-C-39003**

**GRADED**

**A CASE**

- 39003 — Military specification number
- 02 - K — Specification sheet number and trademark
- 9002J — Nonsignificant dash number and "J" for JAN
- + 533XY — Polarity, date code (1st digit indicates year and the next two digits indicate the week), and lot symbol

**B CASE**

- M39003 — Military specification number
- 02 - — Specification sheet number
- 8006J — Nonsignificant dash number and "J" for JAN
- 31433 — Source code
- + 533 NA K — Polarity, date code (1st digit indicates year and the next two digits indicate the week), lot symbol and trademark

**EXPONENTIAL**

**A CASE**

- 39003 — Military specification number
- 02 - K — Specification sheet number and trademark
- 2961J — Nonsignificant dash number and "J" for JAN
- + 533A — Polarity, date code (1st digit indicates year and the next two digits indicate the week), and lot symbol
- NA — Misc. batch I.D. code

**B CASE**

- M39003 — Military specification number
- 02 - — Specification sheet number
- 2244J — Nonsignificant dash number and "J" for JAN
- 31433 — Source code
- + 532A — Polarity, date code (1st digit indicates year and the next two digits indicate the week), and lot symbol
- NA K — Misc. batch I.D. code and trademark

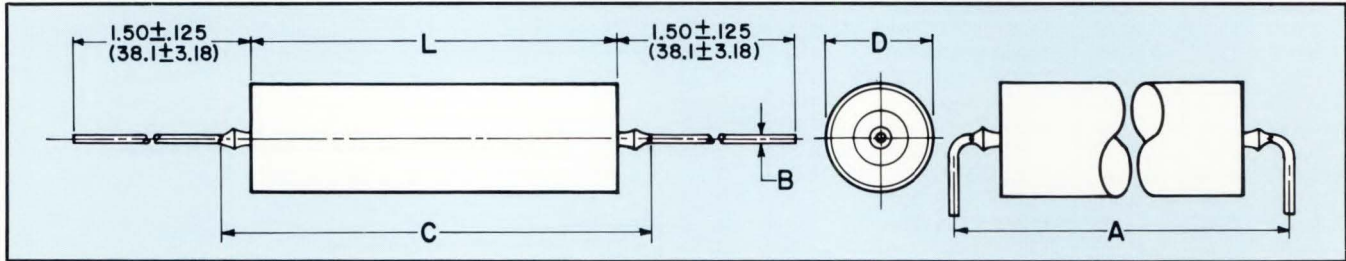
For further details consult T120 Series Catalog F-2028

**T111 SERIES — NON-POLAR & T213 (CSR91)**

Primarily designed for use in tuned low frequency circuits, phasing low voltage AC motors, servo systems and other applications where reversal of polarity is a primary consideration. Compact unit consists of two polar T110 Series hermetically sealed tantalum capacitors, electrically and mechanically connected back-to-back and supported by an outer corrosion-resistant metal sleeve. They exhibit comparable electrical and

performance characteristics of T110 Series. Available in capacitance values ranging from .0023 to 160  $\mu$ F in  $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  tolerances in working voltages from 6 to 125 VDC at +85°C. Also available is extended range version (T141 Series) and as MIL-C-39003 CSR91 Capacitors (T213 Series).

**CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	±.062 (±1.57)	±.001 (±.03)	UNINSULATED		INSULATED		C MAX.
			±.010 (±.25)	±.031 (±.79)	+ .010 (+.25) - .015 (-.38)	±.031 (±.79)	
A	0.91 (23.11)	.020 (.51)	0.147 (3.73)	0.565 (14.35)	0.161 (4.09)	0.575 (14.61)	0.750 (19.05)
B	1.29 (32.77)	.020 (.51)	0.194 (4.93)	0.916 (23.27)	0.207 (5.26)	0.955 (24.26)	1.130 (28.70)
C	1.83 (46.48)	.025 (.64)	0.300 (7.62)	1.340 (34.04)	0.314 (7.98)	1.350 (34.29)	1.525 (38.74)
D	2.03 (51.56)	.025 (.64)	0.362 (9.19)	1.540 (39.12)	0.376 (9.55)	1.550 (39.37)	1.725 (43.82)

**T111 ORDERING INFORMATION\***

**T** **111** **A** **504** **K** **050** **A** **S** — **C**

**TANTALUM** — T

**SERIES** — 111  
**T111, T213 (CSR91)**

**CASE SIZE** — A / B / C / D

**PICOFARAD CODE** — 504  
First two digits represent significant figures. Third digit specifies number of zeros to follow.

**CAPACITANCE TOLERANCE** — K  
M —  $\pm 20\%$       G —  $\pm 2\%$   
K —  $\pm 10\%$       F —  $\pm 1\%$   
J —  $\pm 5\%$         X — Other

**VOLTAGE** — 050  
At 85°C

**FAILURE RATE\*\*** — A  
**GRADED**      **EXPONENTIAL**  
A — Not applicable      M — 1%/k hrs.  
B — 0.1%/k hrs.      P — 0.1%/k hrs.  
C — 0.01%/k hrs.      R — 0.01%/k hrs.  
D — 0.001%/k hrs.      S — 0.001%/k hrs.

**SPECIFICATION** — C  
(when necessary)  
C100 — Uninsulated Capacitors  
C7000 — Reeling Per EIA Specification RS-296  
Other — As Applicable  
(All capacitors are sleeved unless specified as above.)

**LEAD MATERIAL** — S  
S — Standard  
Available on special order at additional cost:  
(Contact your sales representative.)  
F — Bare Nickel  
G — Gold Plated Nickel  
I — Alloy 180 (Bare)

\*\*M, P, R & S Failure Rates available for T213 capacitors only.

\* For Military Ordering Information, see page 2.

**T111 SERIES  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE µF	CASE SIZE	*CAPACITANCE TOLERANCE ±%	KEMET T111 & T213 SERIES			MIL-C-39003 (CSR91) CAPACITORS							KEMET EQUIVALENT PART NUMBER TO CSR91 CAPACITORS
			KEMET PART NUMBER	D.C. LEAKAGE µA @ 25°C MAX.	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)							
						MIL-C-39003/4B EXPONENTIAL				MIL-C-39003/4C GRADED			
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)	
<b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>													
2.8	A	10	T111A285K 006AS	0.3	4	0221	0441	0661	0881	3001	4001	5001	T213A285K 006ⓁS
3.4	A	10	T111A345K 006AS	0.3	6	0222	0442	0662	0882	3002	4002	5002	T213A345K 006ⓁS
3.4	A	20	T111A345M006AS	0.3	6	0223	0443	0663	0883	3003	4003	5003	T213A345M006ⓁS
23.0	B	10	T111B236K 006AS	1.5	6	0224	0444	0664	0884	3004	4004	5004	T213B236K 006ⓁS
23.0	B	20	T111B236M006AS	1.5	6	0225	0445	0665	0885	3005	4005	5005	T213B236M006ⓁS
28.0	B	10	T111B286K 006AS	1.5	6	0226	0446	0666	0886	3006	4006	5006	T213B286K 006ⓁS
75.0	C	10	T111C756K 006AS	4.5	6	0227	0447	0667	0887	3007	4007	5007	T213C756K 006ⓁS
75.0	C	20	T111C756M006AS	4.5	6	0228	0448	0668	0888	3008	4008	5008	T213C756M006ⓁS
90.0	C	10	T111C906K 006AS	4.5	6	0229	0449	0669	0889	3009	4009	5009	T213C906K 006ⓁS
90.0	C	20	T111C906M006AS	5.5	6	0230	0450	0670	0890				T213C906M006ⓁS
130.0	D	10	T111D137K 006AS	6.0	8	0231	0451	0671	0891	3010	4010	5010	T213D137K 006ⓁS
130.0	D	20	T111D137M006AS	6.0	8	0232	0452	0672	0892				T213D137M006ⓁS
160.0	D	10	T111D167K 006AS	7.5	8	0233	0453	0673	0893	3011	4011	5011	T213D167K 006ⓁS
160.0	D	20	T111D167M006AS	7.5	8	0234	0454	0674	0894	3012	4012	5012	T213D167M006ⓁS
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>													
1.9	A	10	T111A195K 010AS	0.3	4	0235	0455	0675	0895	3013	4013	5013	T213A195K 010ⓁS
2.3	A	10	T111A235K 010AS	0.4	4	0236	0456	0676	0896	3014	4014	5014	T213A235K 010ⓁS
2.3	A	20	T111A235M010AS	0.4	4	0237	0457	0677	0897	3015	4015	5015	T213A235M010ⓁS
13.0	B	10	T111B136K 010AS	2.0	6	0238	0458	0678	0898	3016	4016	5016	T213B136K 010ⓁS
16.0	B	10	T111B166K 010AS	2.0	6	0239	0459	0679	0899	3017	4017	5017	T213B166K 010ⓁS
16.0	B	20	T111B166M010AS	2.0	6	0240	0460	0680	0900	3018	4018	5018	T213B166M010ⓁS
19.0	B	10	T111B196K 010AS	2.0	6	0241	0461	0681	0901	3019	4019	5019	T213B196K 010ⓁS
41.0	C	10	T111C416K 010AS	3.0	6	0242	0462	0682	0902	3020	4020	5020	T213C416K 010ⓁS
50.0	C	10	T111C506K 010AS	5.0	6	0243	0463	0683	0903	3021	4021	5021	T213C506K 010ⓁS
50.0	C	20	T111C506M010AS	5.0	6	0244	0464	0684	0904	3022	4022	5023	T213C506M010ⓁS
60.0	C	10	T111C606K 010AS	6.0	6	0245	0465	0685	0905	3023	4023	5023	T213C606K 010ⓁS
60.0	C	20	T111C606M010AS	6.0	6	0246	0466	0686	0906				T213C606M010ⓁS
90.0	D	10	T111D906K 010AS	9.0	6	0247	0467	0687	0907	3024	4024	5024	T213D906K 010ⓁS
110.0	D	10	T111D117K 010AS	10.0	8	0248	0468	0688	0908	3025	4025	5025	T213D117K 010ⓁS
110.0	D	20	T111D117M010AS	10.0	8	0249	0469	0689	0909	3026	4026	5026	T213D117M010ⓁS
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>													
1.3	A	10	T111A135K 015AS	0.3	4	0250	0470	0690	0910	3027	4027	5027	T213A135K 015ⓁS
1.6	A	10	T111A165K 015AS	0.4	4	0251	0471	0691	0911	3028	4028	5028	T213A165K 015ⓁS
1.6	A	20	T111A165M015AS	0.4	4	0252	0472	0692	0912	3029	4029	5029	T213A165M015ⓁS
9.0	B	10	T111B905K 015AS	2.0	6	0253	0473	0693	0913	3030	4030	5030	T213B905K 015ⓁS
11.0	B	10	T111B116K 015AS	2.0	6	0254	0474	0694	0914	3031	4031	5031	T213B116K 015ⓁS
11.0	B	20	T111B116M015AS	2.0	6	0255	0475	0695	0915	3032	4032	5032	T213B116M015ⓁS
28.0	C	10	T111C286K 015AS	4.0	6	0256	0476	0696	0916	3033	4033	5033	T213C286K 015ⓁS
34.0	C	10	T111C346K 015AS	5.0	6	0257	0477	0697	0917	3034	4034	5034	T213C346K 015ⓁS
34.0	C	20	T111C346M015AS	5.0	6	0258	0478	0698	0918	3035	4035	5035	T213C346M015ⓁS
60.0	D	10	T111D606K 015AS	6.0	6	0259	0479	0699	0919	3036	4036	5036	T213D606K 015ⓁS
75.0	D	10	T111D756K 015AS	10.0	6	0260	0480	0700	0920	3037	4037	5037	T213D756K 015ⓁS
75.0	D	20	T111D756M015AS	10.0	6	0261	0481	0701	0921	3038	4038	5038	T213D756M015ⓁS
<b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b>													
0.6	A	10	T111A604K 020AS	0.3	4	0262	0482	0702	0922	3039	4039	5039	T213A604K 020ⓁS
0.75	A	10	T111A754K 020AS	0.3	4	0263	0483	0703	0923	3040	4040	5040	T213A754K 020ⓁS
0.75	A	20	T111A754M020AS	0.3	4	0264	0484	0704	0924	3041	4041	5041	T213A754M020ⓁS
0.9	A	10	T111A904K 020AS	0.3	4	0265	0485	0705	0925	3042	4042	5042	T213A904K 020ⓁS
1.1	A	10	T111A115K 020AS	0.4	4	0266	0486	0706	0926	3043	4043	5043	T213A115K 020ⓁS
1.1	A	20	T111A115M020AS	0.4	4	0267	0487	0707	0927	3044	4044	5044	T213A115M020ⓁS
4.1	B	10	T111B415K 020AS	1.0	6	0268	0488	0708	0928	3045	4045	5045	T213B415K 020ⓁS
5.0	B	10	T111B505K 020AS	1.0	6	0269	0489	0709	0929	3046	4046	5046	T213B505K 020ⓁS
5.0	B	20	T111B505M020AS	1.0	6	0270	0490	0710	0930	3047	4047	5047	T213B505M020ⓁS
6.0	B	10	T111B605K 020AS	1.0	6	0271	0491	0711	0931	3048	4048	5048	T213B605K 020ⓁS
7.5	B	10	T111B755K 020AS	2.0	6	0272	0492	0712	0932	3049	4049	5049	T213B755K 020ⓁS
7.5	B	20	T111B755M020AS	2.0	6	0273	0493	0713	0933	3050	4050	5050	T213B755M020ⓁS
13.0	C	10	T111C136K 020AS	2.5	6	0274	0494	0714	0934	3051	4051	5051	T213C136K 020ⓁS
16.0	C	10	T111C166K 020AS	3.0	6	0275	0495	0715	0935	3052	4052	5052	T213C166K 020ⓁS
16.0	C	20	T111C166M020AS	3.0	6	0276	0496	0716	0936	3053	4053	5053	T213C166M020ⓁS

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 32.

\* ± 5% Capacitance Tolerance Capacitors are also available in T111 Series.



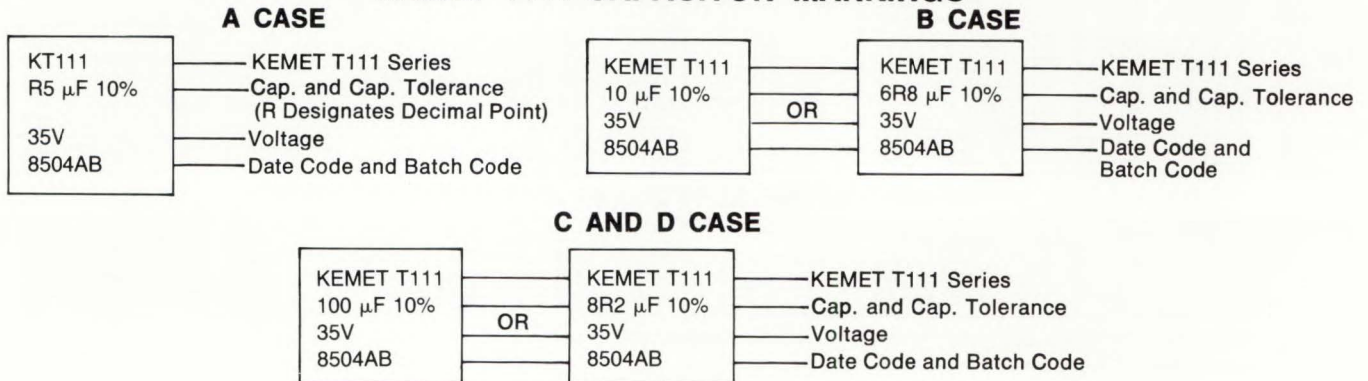


**T111 SERIES**

CAPACITANCE μF	CASE SIZE	*CAPACITANCE TOLERANCE ± %	KEMET T111 & T213 SERIES			MIL-C-39003 (CSR91) CAPACITORS								
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C MAX.	MAX. DISSIPATION FACTOR % @ 25°C, 120 Hz	DASH NUMBER REFERENCE FAILURE RATE LEVEL (%/1000 HRS.)								KEMET EQUIVALENT PART NUMBER TO CSR91 CAPACITORS
						MIL-C-39003/48 EXPONENTIAL				MIL-C-39003/4C GRADED				
						M (1.0)	P (0.1)	R (0.01)	S (0.001)	B (0.1)	C (0.01)	D (0.001)		
<b>100 VOLT RATING AT 85°—67 VOLT RATING AT 125°C (Cont'd)</b>														
0.0034	A	20	T111A342M100AS	0.3	2	0324	0544	0764	0984	3172	4172	5172	T213A342M100AS	
0.0041	A	10	T111A412K100AS	0.3	2	0325	0545	0765	0985	3173	4173	5173	T213A412K100AS	
0.005	A	10	T111A502K100AS	0.3	2	0326	0546	0766	0986	3174	4174	5174	T213A502K100AS	
0.005	A	20	T111A502M100AS	0.3	2	0327	0547	0767	0987	3175	4175	5175	T213A502M100AS	
0.006	A	10	T111A602K100AS	0.3	2	0328	0548	0768	0988	3176	4176	5176	T213A602K100AS	
0.0075	A	10	T111A752K100AS	0.3	2	0329	0549	0769	0989	3177	4177	5177	T213A752K100AS	
0.0075	A	20	T111A752M100AS	0.3	2	0330	0550	0770	0990	3178	4178	5178	T213A752M100AS	
0.009	A	10	T111A902K100AS	0.3	2	0331	0551	0771	0991	3179	4179	5179	T213A902K100AS	
0.011	A	10	T111A113K100AS	0.3	2	0332	0552	0772	0992	3180	4180	5180	T213A113K100AS	
0.011	A	20	T111A113M100AS	0.3	2	0333	0553	0773	0993	3181	4181	5181	T213A113M100AS	
0.013	A	10	T111A133K100AS	0.3	2	0334	0554	0774	0994	3182	4182	5182	T213A133K100AS	
0.016	A	10	T111A163K100AS	0.3	2	0335	0555	0775	0995	3183	4183	5183	T213A163K100AS	
0.016	A	20	T111A163M100AS	0.3	2	0336	0556	0775	0996	3184	4184	5184	T213A163M100AS	
0.019	A	10	T111A193K100AS	0.3	2	0337	0557	0777	0997	3185	4185	5185	T213A193K100AS	
0.023	A	10	T111A233K100AS	0.3	2	0338	0558	0778	0998	3186	4186	5186	T213A233K100AS	
0.023	A	20	T111A233M100AS	0.3	2	0339	0559	0779	0999	3187	4187	5187	T213A233M100AS	
0.028	A	10	T111A283K100AS	0.3	2	0340	0560	0780	1000	3188	4188	5188	T213A283K100AS	
0.034	A	10	T111A343K100AS	0.3	2	0341	0561	0781	1001	3189	4189	5189	T213A343K100AS	
0.034	A	20	T111A343M100AS	0.3	2	0342	0562	0782	1002	3190	4190	5190	T213A343M100AS	
0.041	A	10	T111A413K100AS	0.3	2	0343	0563	0783	1003	3191	4191	5191	T213A413K100AS	
0.05	A	10	T111A503K100AS	0.3	2	0344	0564	0784	1004	3192	4192	5192	T213A503K100AS	
0.05	A	20	T111A503M100AS	0.3	2	0345	0565	0785	1005	3193	4193	5193	T213A503M100AS	
0.06	A	10	T111A603K100AS	0.3	2	0346	0566	0786	1006	3194	4194	5194	T213A603K100AS	
0.075	A	10	T111A753K100AS	0.3	2	0347	0567	0787	1007	3195	4195	5195	T213A753K100AS	
0.075	A	20	T111A753M100AS	0.3	2	0348	0568	0788	1008	3196	4196	5196	T213A753M100AS	
0.09	A	10	T111A903K100AS	0.3	2	0349	0569	0789	1009	3197	4197	5197	T213A903K100AS	
0.11	A	10	T111A114K100AS	0.3	2	0350	0570	0790	1010	3198	4198	5198	T213A114K100AS	
0.11	A	20	T111A114M100AS	0.3	2	0351	0571	0791	1011	3199	4199	5199	T213A114M100AS	
0.13	A	10	T111A134K100AS	0.3	2	0352	0572	0792	1012	3200	4200	5200	T213A134K100AS	
0.16	A	10	T111A164K100AS	0.3	2	0353	0573	0793	1013	3201	4201	5201	T213A164K100AS	
0.16	A	20	T111A164M100AS	0.3	2	0354	0574	0794	1014	3202	4202	5202	T213A164M100AS	
0.19	A	10	T111A194K100AS	0.3	2	0355	0575	0795	1015	3203	4203	5203	T213A194K100AS	
0.23	A	10	T111A234K100AS	0.3	2	0356	0576	0796	1016	3204	4204	5204	T213A234K100AS	
0.23	A	20	T111A234M100AS	0.3	2	0357	0577	0797	1017	3205	4205	5205	T213A234M100AS	
0.28	A	10	T111A284K100AS	0.3	2	0358	0578	0798	1018	3206	4206	5206	T213A284K100AS	
0.34	B	10	T111B344K100AS	0.3	2	0359	0579	0799	1019	3207	4207	5207	T213B344K100AS	
0.34	B	20	T111B344M100AS	0.3	2	0360	0580	0800	1020	3208	4208	5208	T213B344M100AS	
0.41	B	10	T111B414K100AS	0.4	2	0361	0581	0801	1021	3209	4209	5209	T213B414K100AS	
0.5	B	10	T111B504K100AS	0.5	2	0362	0582	0802	1022	3210	4210	5210	T213B504K100AS	
0.5	B	20	T111B504M100AS	0.5	2	0363	0583	0803	1023	3211	4211	5211	T213B504M100AS	
0.6	B	10	T111B604K100AS	0.5	3	0364	0584	0804	1024	3212	4212	5212	T213B604K100AS	
0.75	B	10	T111B754K100AS	0.7	3	0365	0585	0805	1025	3213	4213	5213	T213B754K100AS	
0.75	B	20	T111B754M100AS	0.7	3	0366	0586	0806	1026	3214	4214	5214	T213B754M100AS	
0.9	B	10	T111B904K100AS	0.7	3	0367	0587	0807	1027	3215	4215	5215	T213B904K100AS	
1.1	B	10	T111B115K100AS	0.9	3	0368	0588	0808	1028	3216	4216	5216	T213B115K100AS	
1.1	B	20	T111B115M100AS	0.9	3	0369	0589	0809	1029	3217	4217	5217	T213B115M100AS	
1.3	B	10	T111B135K100AS	1.1	3	0370	0590	0810	1030	3218	4218	5218	T213B135K100AS	

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 32.  
 \* ± 5% Capacitance Tolerance Capacitors are also available in T111 Series.

**KEMET T111 CAPACITOR MARKINGS\***



\* For Military Marking Information, see page 2.

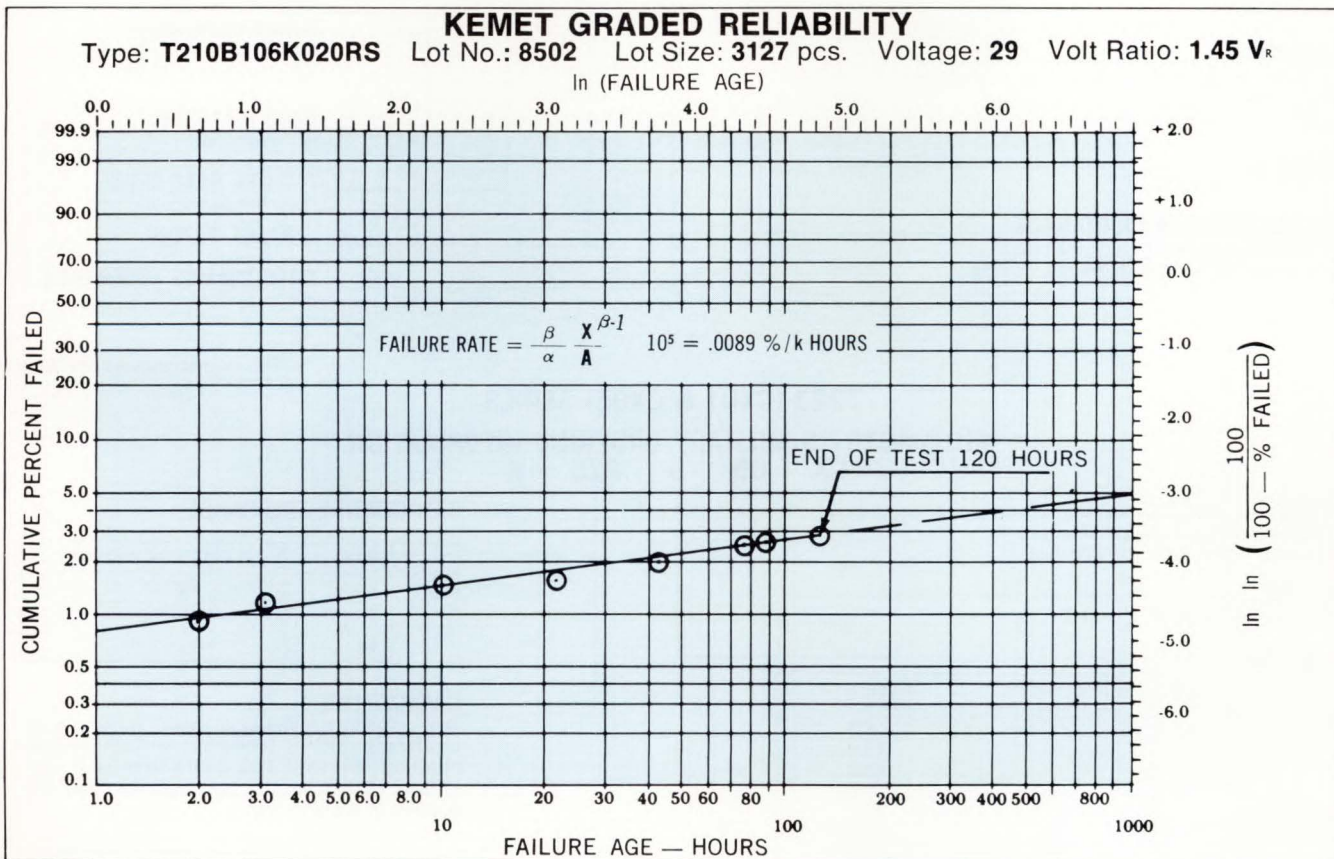
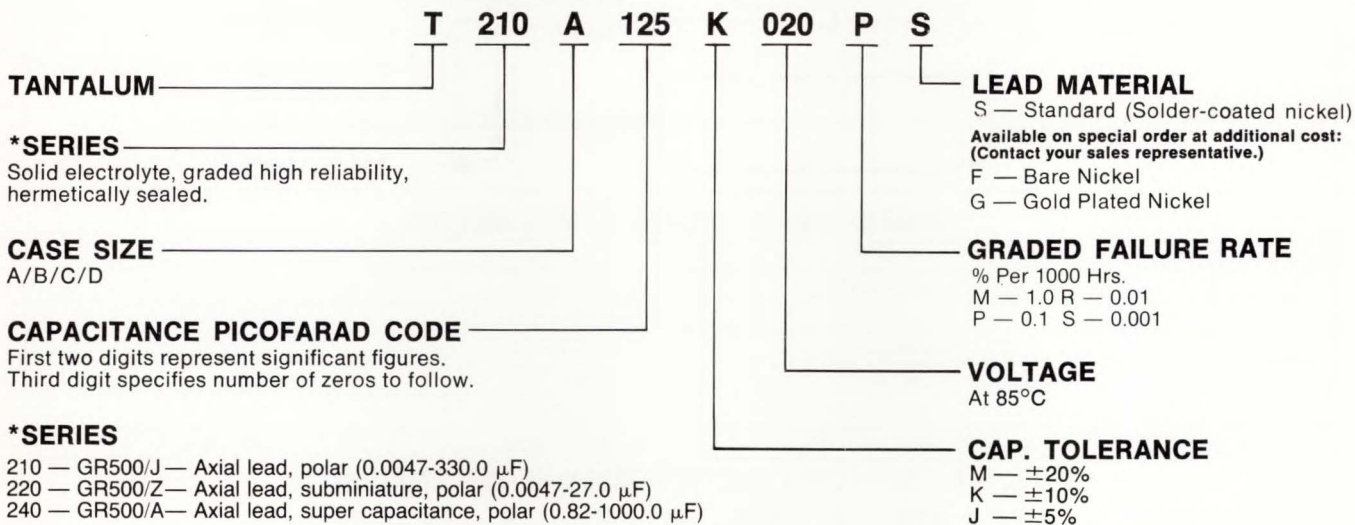


**T210, T220, T240 GR500 SERIES—  
GRADED RELIABILITY**

For the ultimate in high reliability and design in KEMET's GR500 Capacitors with failure rates as low as .001% per 1,000 hours. These Capacitors are manufactured to KEMET's Specification GR500 and meet or exceed all requirements of MIL-C-39003. Capacitance ranges are shown below in ordering information. GR500 Capacitors offer a demonstrated failure rate calculated from the most sophisticated and accurate reliability measurement method in the capacitor industry. Each production lot of these capacitors is subjected to accelerated life testing on a 100% basis

under low impedance circuit conditions. The subsequent accumulated data are applied to Weibull Analysis for establishing the demonstrated failure rate. These test results, including the Weibull plot and a summary of failure rate calculations, are supplied with each shipment of capacitors. In addition, all KEMET GR500 Capacitors are temperature cycled from -65°C to +125°C and receive fine leak seal test, leakage current, capacitance, dissipation factor, two plane X-ray, and visual and mechanical inspection on a 100% basis.

**GR500 ORDERING INFORMATION**



**T322 & T323 (CX01 & CX05) SERIES (MINIATURE)—  
EXTENDED RANGE—PRECISION MOLDED**

The KEMET T322 and T323 (CX01 & CX05) Series offers a complete line of extended range molded solid tantalum capacitors designed specifically for high speed automatic insertion applications. These capacitors offer an extremely high capacitance-to-volume ratio while still maintaining excellent performance characteristics.

Supplied in six axial lead tubular case sizes, these capacitors are ideally suited for use in printed wiring boards and all applications requiring a high degree of packaging density and can be supplied in bulk packaging or lead-taped on reels.

The T322/T323 Series dimensions and tight lead wire-to-body concentricity permit installation by the same automatic insertion equipment used for diodes and resistors. Available in working

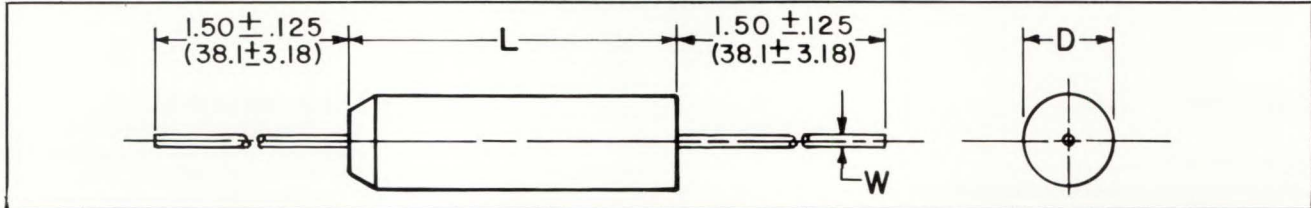
voltages of 2,4,6,10,15,20,25,35 and 50 volts. Operating temperature range -55°C to +85°C at full rated voltage and with 2/3 85°C rated voltage at 125°C.

The new gold color epoxy utilized permits laser marking with outstanding permanency and legibility.

T323 Series capacitors are qualified under MIL-C-49137/1 & 5 as Military Style CX02 & CX05.

Typical applications include decoupling, blocking, bypassing and filtering in commercial computers, data processing, communications, and other electronic equipment. The low impedance at high frequencies offered by this capacitor is especially suitable for decoupling required by high-speed computers.

**T322 & T323 (CX01 & CX05) SERIES  
CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	D (MAX)	L (MAX)	W
A	.095 (2.41)	.260 (6.6)	.020 (.51)
B	.110 (2.79)	.290 (7.37)	.020 (.51)
C	.180 (4.57)	.345 (8.76)	.020 (.51)
D	.180 (4.57)	.420 (10.67)	.020 (.51)
E	.280 (7.11)	.550 (13.97)	.025 (.64)
F	.300 (7.62)	.710 (18.03)	.025 (.64)

**T322 & T323 (CX01 & CX05) ORDERING INFORMATION**

**TANTALUM** — T

**SERIES** — 32X  
Sub-Miniature, Molded, Polar, Solid Tantalum. Insert appropriate number to replace letter "X" — 322 or 323 (CX01, CX05).

**CASE SIZE** — A, B, C, D, E, or F

**CAPACITANCE IN PICOFARADS** — 474  
First two digits are significant figures. Third digit is number of zeros following.

**FAILURE RATE LEVEL** — M

**VOLTAGE RATING** — 035

**CAPACITANCE TOLERANCE** — A  
\*M — ± 20%  
\*K — ± 10%  
J — ± 5%  
\*M & K only tolerances available for T323 Series.

**LEAD MATERIAL** — S — Standard

**SPECIFICATION (when necessary)** — C  
C7200 — Reeling Per EIA Specification RS-296

**T323 (CX01 & CX05) SERIES  
MIL-C-49137/5 MILITARY ORDERING INFORMATION**

**TYPE** — CX  
Capacitors, Fixed, Solid Tantalum, Molded, Non-hermetically Sealed.

**STYLE** — 05  
01, 05 (T323) A, B, C and D

**VOLTAGE** — D

**CAPACITANCE TOLERANCE** — 225  
K

Symbol	Capciance Tolerance
K	10
M	20

**CAPACITANCE**  
The nominal capacitance value, expressed in picofarads (pF), is identified by a three-digit number; the first two digits represent significant figures and the last digit specifies the number of zeros to follow.

Symbol	Rated (85°C) Volts, DC	Surge (85°C) Volts, DC
D	6	8.0
F	10	13.0
H	15	20.0
J	20	26.0
K	25	32.0
M	35	46.0
N	50	65.0

For further details consult T322 Series Catalog F-2875

**T322 & T323 (CX01 & CX05) SERIES  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T322 SERIES			CX01 & CX05 CAPACITORS PER MIL-C-49137/1 & 5	
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	MILITARY PART NUMBER	KEMET PART NUMBER
<b>2 VOLT RATING AT 85°C — 1.3 VOLT RATING AT 125°C</b>							
<b>6.8</b>	<b>A</b>	<b>5,10,20</b>	<b>T322A685(□)002AS</b>	<b>0.5</b>	<b>10</b>		
8.2	A	5,10,20	T322A825(□)002AS	0.5	10		
10.0	A	5,10,20	T322A106(□)002AS	0.5	10		
12.0	B	5,10,20	T322B126(□)002AS	0.5	10		
<b>15.0</b>	<b>B</b>	<b>5,10,20</b>	<b>T322B156(□)002AS</b>	<b>0.5</b>	<b>10</b>		
18.0	B	5,10,20	T322B186(□)002AS	0.5	10		
<b>22.0</b>	<b>B</b>	<b>5,10,20</b>	<b>T322B226(□)002AS</b>	<b>0.5</b>	<b>10</b>		
27.0	B	5,10,20	T322B276(□)002AS	0.5	10		
<b>33.0</b>	<b>B</b>	<b>5,10,20</b>	<b>T322B336(□)002AS</b>	<b>0.5</b>	<b>10</b>		
39.0	C	5,10,20	T322C396(□)002AS	0.6	10		
<b>47.0</b>	<b>C</b>	<b>5,10,20</b>	<b>T322C476(□)002AS</b>	<b>0.8</b>	<b>10</b>		
56.0	C	5,10,20	T322C566(□)002AS	0.9	10		
<b>68.0</b>	<b>C</b>	<b>5,10,20</b>	<b>T322C686(□)002AS</b>	<b>1.1</b>	<b>10</b>		
<b>4 VOLT RATING AT 85°C — 2.7 VOLT RATING AT 125°C</b>							
<b>4.7</b>	<b>A</b>	<b>5,10,20</b>	<b>T322A475(□)004AS</b>	<b>0.5</b>	<b>8</b>		
5.6	A	5,10,20	T322A565(□)004AS	0.5	8		
<b>6.8</b>	<b>A</b>	<b>5,10,20</b>	<b>T322A685(□)004AS</b>	<b>0.5</b>	<b>8</b>		
8.2	B	5,10,20	T322B825(□)004AS	0.5	8		
<b>10.0</b>	<b>B</b>	<b>5,10,20</b>	<b>T322B106(□)004AS</b>	<b>0.5</b>	<b>8</b>		
12.0	B	5,10,20	T322B126(□)004AS	0.5	8		
<b>15.0</b>	<b>B</b>	<b>5,10,20</b>	<b>T322B156(□)004AS</b>	<b>0.5</b>	<b>8</b>		
18.0	B	5,10,20	T322B186(□)004AS	0.6	8		
<b>22.0</b>	<b>B</b>	<b>5,10,20</b>	<b>T322B226(□)004AS</b>	<b>0.7</b>	<b>8</b>		
27.0	C	5,10,20	T322C276(□)004AS	0.9	8		
<b>33.0</b>	<b>C</b>	<b>5,10,20</b>	<b>T322C336(□)004AS</b>	<b>1.1</b>	<b>8</b>		
39.0	C	5,10,20	T322C396(□)004AS	1.2	8		
<b>47.0</b>	<b>C</b>	<b>5,10,20</b>	<b>T322C476(□)004AS</b>	<b>1.5</b>	<b>8</b>		
56.0	D	5,10,20	T322D566(□)004AS	1.8	8		
<b>68.0</b>	<b>D</b>	<b>5,10,20</b>	<b>T322D686(□)004AS</b>	<b>2.2</b>	<b>8</b>		
<b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>							
<b>3.3</b>	<b>A</b>	<b>5,10,20</b>	<b>T322A335(□)006AS</b>	<b>0.5</b>	<b>4</b>		
3.9	A	5,10,20	T322A395(□)006AS	0.5	4		
<b>4.7</b>	<b>A</b>	<b>5</b>	<b>T322A475J 006AS</b>	<b>0.5</b>	<b>4</b>		
<b>4.7</b>	<b>A</b>	<b>10</b>	<b>T322A475K 006AS</b>	<b>0.5</b>	<b>4</b>	<b>CX05D475K</b>	<b>T323A475K006AS</b>
<b>4.7</b>	<b>A</b>	<b>20</b>	<b>T322A475M 006AS</b>	<b>0.5</b>	<b>4</b>	<b>CX05D475M</b>	<b>T323A475M006AS</b>
5.6	B	5	T322B565J 006AS	0.5	4		
5.6	B	10	T322B565K 006AS	0.5	4	CX01D565K	T323B565K 006AS
5.6	B	20	T322B565M 006AS	0.5	4	CX01D565M	T323B565M006AS
<b>6.8</b>	<b>B</b>	<b>5</b>	<b>T322B685J 006AS</b>	<b>0.5</b>	<b>6</b>		
<b>6.8</b>	<b>B</b>	<b>10</b>	<b>T322B685K 006AS</b>	<b>0.5</b>	<b>6</b>	<b>CX01D685K</b>	<b>T323B685K006AS</b>
<b>6.8</b>	<b>B</b>	<b>20</b>	<b>T322B685M 006AS</b>	<b>0.5</b>	<b>6</b>	<b>CX01D685M</b>	<b>T323B685M006AS</b>
8.2	B	5	T322B825J 006AS	0.5	6		
8.2	B	10	T322B825K 006AS	0.5	6	CX01D825K	T323B825K 006AS
8.2	B	20	T322B825M 006AS	0.5	6	CX01D825M	T323B825M006AS
<b>10.0</b>	<b>B</b>	<b>5</b>	<b>T322B106J 006AS</b>	<b>0.5</b>	<b>6</b>		
<b>10.0</b>	<b>B</b>	<b>10</b>	<b>T322B106K 006AS</b>	<b>0.5</b>	<b>6</b>	<b>CX01D106K</b>	<b>T323B106K006AS</b>
<b>10.0</b>	<b>B</b>	<b>20</b>	<b>T322B106M 006AS</b>	<b>0.5</b>	<b>6</b>	<b>CX01D106M</b>	<b>T323B106M006AS</b>
12.0	B	5	T322B126J 006AS	0.6	6		
12.0	B	10	T322B126K 006AS	0.6	6	CX01D126K	T323B126K 006AS
12.0	B	20	T322B126M 006AS	0.6	6	CX01D126M	T323B126M006AS
<b>15.0</b>	<b>B</b>	<b>5</b>	<b>T322B156J 006AS</b>	<b>0.7</b>	<b>6</b>		
<b>15.0</b>	<b>B</b>	<b>10</b>	<b>T322B156K 006AS</b>	<b>0.7</b>	<b>6</b>	<b>CX05D156K</b>	<b>T323B156K006AS</b>
<b>15.0</b>	<b>B</b>	<b>20</b>	<b>T322B156M 006AS</b>	<b>0.7</b>	<b>6</b>	<b>CX05D156M</b>	<b>T323B156M006AS</b>
18.0	C	5,10,20	T322C186(□)006AS	0.9	6		
<b>22.0</b>	<b>C</b>	<b>5,10,20</b>	<b>T322C226(□)006AS</b>	<b>1.1</b>	<b>6</b>		
27.0	C	5,10,20	T322C276(□)006AS	1.3	6		
<b>33.0</b>	<b>C</b>	<b>5</b>	<b>T322C336J 006AS</b>	<b>1.5</b>	<b>6</b>		
<b>33.0</b>	<b>C</b>	<b>10</b>	<b>T322C336K 006AS</b>	<b>1.5</b>	<b>6</b>	<b>CX05D336K</b>	<b>T323C336K006AS</b>
<b>33.0</b>	<b>C</b>	<b>20</b>	<b>T322C336M 006AS</b>	<b>1.5</b>	<b>6</b>	<b>CX05D336M</b>	<b>T323C336M006AS</b>
39.0	D	5,10,20	T322D396(□)006AS	1.9	6		
<b>47.0</b>	<b>D</b>	<b>5</b>	<b>T322D476J 006AS</b>	<b>2.3</b>	<b>6</b>		
<b>47.0</b>	<b>D</b>	<b>10</b>	<b>T322D476K 006AS</b>	<b>2.3</b>	<b>6</b>	<b>CX05D476K</b>	<b>T323D476K006AS</b>
<b>47.0</b>	<b>D</b>	<b>20</b>	<b>T322D476M 006AS</b>	<b>2.3</b>	<b>6</b>	<b>CX05D476M</b>	<b>T323D476M006AS</b>
56.0	D	5,10,20	T322D566(□)006AS	2.7	6		
<b>68.0</b>	<b>D</b>	<b>5,10,20</b>	<b>T322D686(□)006AS</b>	<b>3.3</b>	<b>6</b>		

(1) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M — ±20%, K — ±10%, J — ±5%.  
**Bold Face** lines indicate preferred part types and values.  
 Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

*For further details consult T322 Series Catalog F-2875.*

**T322 & T323 (CX01 & CX05) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T322 SERIES			CX01 & CX05 CAPACITORS PER MIL-C-49137/1 & 5	
			KEMET PART NUMBER	D.C. LEAKAGE μA@25°C	MAX. DISSI- PATION FACTOR %@25°C, 120 Hz	MILITARY PART NUMBER	KEMET PART NUMBER
<b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C (Cont'd)</b>							
82.0	E	5,10,20	T322E826(Δ) 006AS	3.9	8		
<b>100.0</b>	<b>E</b>	<b>5,10,20</b>	<b>T322E107(Δ) 006AS</b>	<b>4.8</b>	<b>8</b>		
120.0	E	5,10,20	T322E127(Δ) 006AS	5.0	8		
<b>150.0</b>	<b>E</b>	<b>5,10,20</b>	<b>T322E157(Δ) 006AS</b>	<b>5.0</b>	<b>8</b>		
180.0	E	5,10,20	T322E187(Δ) 006AS	8.6	8		
<b>220.0</b>	<b>E</b>	<b>5,10,20</b>	<b>T322E227(Δ) 006AS</b>	<b>10.0</b>	<b>8</b>		
270.0	F	5,10,20	T322F277(Δ) 006AS	10.0	8		
<b>330.0</b>	<b>F</b>	<b>5,10,20</b>	<b>T322F337(Δ) 006AS</b>	<b>10.0</b>	<b>8</b>		
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>							
2.2	A	5,10,20	T322A225(Δ) 010AS	0.5	4		
2.7	A	5,10,20	T322A275(Δ) 010AS	0.5	4		
3.3	A	5	T322A335J 010AS	0.5	4		
3.3	A	10	T322A335K 010AS	0.5	4	CX05F335K	T323A335K010AS
3.3	A	20	T322A335M 010AS	0.5	4	CX05F335K	T323A335M010AS
3.9	B	5,10,20	T322B395(Δ) 010AS	0.5	4		
4.7	B	5,10,20	T322B475(Δ) 010AS	0.5	4		
5.6	B	5,10,20	T322B565(Δ) 010AS	0.5	4		
6.8	B	5,10,20	T322B685(Δ) 010AS	0.5	6		
8.2	B	5,10,20	T322B825(Δ) 010AS	0.7	6		
10.0	B	5	T322B106J 010AS	0.8	6		
10.0	B	10	T322B106K 010AS	0.8	6	CX05F106K	T323B106K010AS
10.0	B	20	T322B106M 010AS	0.8	6	CX05F106M	T323B106M010AS
12.0	C	5,10,20	T322C126(Δ) 010AS	1.0	6		
15.0	C	5,10,20	T322C156(Δ) 010AS	1.2	6		
18.0	C	5,10,20	T322C186(Δ) 010AS	1.4	6		
22.0	C	5	T322C226J 010AS	1.5	6		
22.0	C	10	T322C226K 010AS	1.5	6	CX05F226K	T323C226K010AS
22.0	C	20	T322C226M 010AS	1.5	6	CX05F226M	T323C226M010AS
27.0	D	5	T322D276J 010AS	2.2	6		
27.0	D	10	T322D276K 010AS	2.2	6	CX05F276K	T323D276K 010AS
27.0	D	20	T322D276M 010AS	2.2	6	CX05F276M	T323D276M010AS
33.0	D	5	T322D336J 010AS	2.6	6		
33.0	D	10	T322D336K 010AS	2.6	6	CX05F336K	T323D336K010AS
33.0	D	20	T322D336M 010AS	2.6	6	CX05F336M	T323D336M010AS
39.0	D	5	T322D396J 010AS	3.1	6		
39.0	D	10	T322D396K 010AS	3.1	6	CX05F396K	T323D396K 010AS
39.0	D	20	T322D396M 010AS	3.1	6	CX05F396M	T323D396M010AS
47.0	D	5	T322D476J 010AS	3.8	6		
47.0	D	10	T322D476K 010AS	3.8	6	CX05F476K	T323D476K010AS
47.0	D	20	T322D476M 010AS	3.8	6	CX05F476M	T323D476M010AS
56.0	E	5,10,20	T322E566(Δ) 010AS	4.4	6		
68.0	E	5,10,20	T322E686(Δ) 010AS	5.0	6		
82.0	E	5,10,20	T322E826(Δ) 010AS	5.0	8		
100.0	E	5,10,20	T322E107(Δ) 010AS	8.0	8		
120.0	E	5,10,20	T322E127(Δ) 010AS	9.6	8		
150.0	E	5,10,20	T322E157(Δ) 010AS	10.0	8		
180.0	F	5,10,20	T322F187(Δ) 010AS	10.0	8		
220.0	F	5,10,20	T322F227(Δ) 010AS	10.0	8		
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>							
1.5	A	5,10,20	T322A155(Δ) 015AS	0.5	4		
1.8	A	5,10,20	T322A185(Δ) 015AS	0.5	4		
2.2	A	5	T322A225J 015AS	0.5	4		
2.2	A	10	T322A225K 015AS	0.5	4	CX05H225K	T323A225K015AS
2.2	A	20	T322A225M 015AS	0.5	4	CX05H225M	T323A225M015AS
2.7	B	5,10,20	T322B275(Δ) 015AS	0.5	4		
3.3	B	5,10,20	T322B335(Δ) 015AS	0.5	4		
3.9	B	5,10,20	T322B395(Δ) 015AS	0.5	4		
4.7	B	5,10,20	T322B475(Δ) 015AS	0.6	4		
5.6	B	5,10,20	T322B565(Δ) 015AS	0.7	4		
6.8	B	5	T322B685J 015AS	0.8	6		
6.8	B	10	T322B685K 015AS	0.8	6	CX05H685K	T323B685K015AS
6.8	B	20	T322B685M 015AS	0.8	6	CX05H685M	T323B685M015AS
8.2	C	5,10,20	T322C825(Δ) 015AS	1.0	6		
10.0	C	5,10,20	T322C106(Δ) 015AS	1.2	6		
12.0	C	5,10,20	T322C126(Δ) 015AS	1.4	6		
15.0	C	5	T322C156J 015AS	1.5	6		
15.0	C	10	T322C156K 015AS	1.5	6	CX05H156K	T323C156K015AS
15.0	C	20	T322C156M 015AS	1.5	6	CX05H156M	T323C156M015AS

(1) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M — ±20%, K — ±10%, J — ±5%.

**Bold Face** lines indicate preferred part types and values.

Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

*For further details consult T322 Series Catalog F-2875.*

Union Carbide Corporation, Electronics Division, P.O. Box 5928, Greenville, S.C. 29606, (803) 963-6300

**T322 & T323 (CX01 & CX05) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ± %	KEMET T322 SERIES			CX01 & CX05 CAPACITORS PER MIL-C-49137/1 & 5	
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C	MAX. DISSI- PATION FACTOR % @ 25°C, 120 Hz	MILITARY PART NUMBER	KEMET PART NUMBER
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C (Cont'd)</b>							
18.0	D	5,10,20	T322D186(Δ) 015AS	2.2	6		
<b>22.0</b>	<b>D</b>	<b>5</b>	<b>T322D226J 015AS</b>	<b>2.6</b>	<b>6</b>		
22.0	D	10	T322D226K 015AS	2.6	6	CX05H226K	T323D226K015AS
22.0	D	20	T322D226M 015AS	2.6	6	CX05H226M	T323D226M015AS
27.0	D	5,10,20	T322D276(Δ) 015AS	3.2	6		
33.0	D	5	T322D336J 015AS	4.0	6		
33.0	D	10	T322D336K 015AS	4.0	6	CX05H336K	T323D336K015AS
33.0	D	20	T322D336M 015AS	4.0	6	CX05H336M	T323D336M015AS
39.0	E	5,10,20	T322E396(Δ) 015AS	4.7	6		
47.0	E	5,10,20	T322E476(Δ) 015AS	5.0	6		
56.0	E	5,10,20	T322E566(Δ) 015AS	6.7	6		
68.0	E	5,10,20	T322E686(Δ) 015AS	8.2	6		
82.0	E	5,10,20	T322E826(Δ) 015AS	9.8	8		
100.0	E	5,10,20	T322E107(Δ) 015AS	10.0	8		
120.0	F	5,10,20	T322F127(Δ) 015AS	10.0	8		
150.0	F	5,10,20	T322F157(Δ) 015AS	10.0	8		
<b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b>							
1.0	A	5,10,20	T322A105(Δ) 020AS	0.5	4		
1.2	A	5,10,20	T322A125(Δ) 020AS	0.5	4		
1.5	A	5	T322A155J 020AS	0.5	4		
1.5	A	10	T322A155K 020AS	0.5	4	CX05J155K	T323A155K020AS
1.5	A	20	T322A155M 020AS	0.5	4	CX05J155M	T323A155M020AS
1.8	B	5,10,20	T322B185(Δ) 020AS	0.5	4		
2.2	B	5,10,20	T322B225(Δ) 020AS	0.5	4		
2.7	B	5,10,20	T322B275(Δ) 020AS	0.5	4		
3.3	B	5,10,20	T322B335(Δ) 020AS	0.5	4		
3.9	B	5,10,20	T322B395(Δ) 020AS	0.6	4		
4.7	B	5	T322B475J 020AS	0.8	4		
4.7	B	10	T322B475K 020AS	0.8	4	CX05J475K	T323B475K020AS
4.7	B	20	T322B475M 020AS	0.8	4	CX05J475M	T323B475M020AS
5.6	C	5,10,20	T322C565(Δ) 020AS	0.9	4		
6.8	C	5,10,20	T322C685(Δ) 020AS	1.1	6		
8.2	C	5,10,20	T322C825(Δ) 020AS	1.3	6		
10.0	C	5,10,20	T322C106(Δ) 020AS	1.6	6		
12.0	D	5	T322D126J 020AS	1.9	6		
12.0	D	10	T322D126K 020AS	1.9	6	CX05J126K	T323D126K020AS
12.0	D	20	T322D126M 020AS	1.9	6	CX05J126M	T323D126M020AS
15.0	D	5	T322D156J 020AS	2.4	6		
15.0	D	10	T322D156K 020AS	2.4	6	CX05J156K	T323D156K020AS
15.0	D	20	T322D156M 020AS	2.4	6	CX05J156M	T323D156M020AS
18.0	D	5,10,20	T322D186(Δ) 020AS	2.9	6		
22.0	D	5,10,20	T322D226(Δ) 020AS	3.5	6		
27.0	E	5,10,20	T322E276(Δ) 020AS	4.3	6		
33.0	E	5,10,20	T322E336(Δ) 020AS	5.0	6		
39.0	E	5,10,20	T322E396(Δ) 020AS	6.2	6		
47.0	E	5,10,20	T322E476(Δ) 020AS	7.5	6		
56.0	E	5,10,20	T322E566(Δ) 020AS	8.9	6		
68.0	E	5,10,20	T322E686(Δ) 020AS	10.0	6		
82.0	F	5,10,20	T322F826(Δ) 020AS	10.0	8		
100.0	F	5,10,20	T322F107(Δ) 020AS	10.0	8		
<b>25 VOLT RATING AT 85°C — 17 VOLT RATING AT 125°C</b>							
0.47	A	5,10,20	T322A474(Δ) 025AS	0.5	3		
0.56	A	5,10,20	T322A564(Δ) 025AS	0.5	3		
0.68	A	5,10,20	T322A684(Δ) 025AS	0.5	3		
0.82	A	5,10,20	T322A824(Δ) 025AS	0.5	3		
1.0	A	5	T322A105J 025AS	0.5	3		
1.0	A	10	T322A105K 025AS	0.5	3	CX05K105K	T323A105K025AS
1.0	A	20	T322A105M 025AS	0.5	3	CX05K105M	T323A105M025AS
1.2	B	5,10,20	T322B125(Δ) 025AS	0.5	3		
1.5	B	5	T322B155J 025AS	0.5	3		
1.5	B	10	T322B155K 025AS	0.5	3	CX01K155K	T323B155K025AS
1.5	B	20	T322B155M 025AS	0.5	3	CX01K155M	T323B155M020AS
1.8	B	5	T322B185J 025AS	0.5	3		
1.8	B	10	T322B185K 025AS	0.5	3	CX01K185K	T323B185K025AS
1.8	B	20	T322B185M 025AS	0.5	3	CX01K185M	T323B185M025AS
2.2	B	5	T322B225J 025AS	0.5	3		
2.2	B	10	T322B225K 025AS	0.5	3	CX01/5K225K	T323B225K025AS

(1) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M — ±20%, K — ±10%, J — ±5%.

**Bold Face** lines indicate preferred part types and values.

Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

For further details consult T322 Series Catalog F-2875.

**T322 & T323 (CX01 & CX05) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T322 SERIES			CX01 & CX05 CAPACITORS PER MIL-C-49137/1 & 5	
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C	MAX. DISSIPATION FACTOR % @ 25°C, 120 Hz	MILITARY PART NUMBER	KEMET PART NUMBER
<b>25 VOLT RATING AT 85°C — 17 VOLT RATING AT 125°C (Cont'd)</b>							
2.2	<b>B</b>	<b>20</b>	<b>T322B225M 025AS</b>	<b>0.5</b>	<b>3</b>	<b>CX01/5K225M</b>	<b>T323B225M025AS</b>
2.7	B	5,10,20	T322B275(□) 025AS	0.5	3		
3.3	<b>B</b>	<b>5</b>	<b>T322B335J 025AS</b>	<b>0.7</b>	<b>3</b>		
3.3	B	10	T322B335K 025AS	0.7	3	<b>CX05K335K</b>	<b>T323B335K025AS</b>
3.3	B	20	T322B335M 025AS	0.7	3	<b>CX05K335M</b>	<b>T323B335M025AS</b>
3.9	C	5,10,20	T322C395(□) 025AS	0.8	3		
4.7	<b>C</b>	<b>5,10,20</b>	<b>T322C475(□) 025AS</b>	<b>0.9</b>	<b>4</b>		
5.6	C	5,10,20	T322C565(□) 025AS	1.1	4		
6.8	<b>C</b>	<b>5</b>	<b>T322C685J 025AS</b>	<b>1.4</b>	<b>4</b>		
6.8	C	10	T322C685K 025AS	1.4	4	<b>CX05K685K</b>	<b>T323C685K025AS</b>
6.8	<b>C</b>	<b>20</b>	<b>T322C685M 025AS</b>	<b>1.4</b>	<b>4</b>	<b>CX05K685M</b>	<b>T323C685M025AS</b>
8.2	C	5,10,20	T322C825(□) 025AS	1.5	4		
10.0	C	5	T322C106J 025AS	1.5	4		
10.0	C	10	T322C106K 025AS	1.5	4	<b>CX05K106K</b>	<b>T323C106K 025AS</b>
10.0	C	20	T322C106M 025AS	1.5	4	<b>CX05K106M</b>	<b>T323C106M025AS</b>
12.0	D	5,10,20	T322D126(□) 025AS	2.4	4		
15.0	<b>D</b>	<b>5,10,20</b>	<b>T322D156(□) 025AS</b>	<b>3.0</b>	<b>4</b>		
18.0	E	5,10,20	T322E186(□) 025AS	3.6	6		
22.0	<b>E</b>	<b>5,10,20</b>	<b>T322E226(□) 025AS</b>	<b>4.4</b>	<b>6</b>		
27.0	E	5,10,20	T322E276(□) 025AS	5.4	6		
33.0	<b>E</b>	<b>5,10,20</b>	<b>T322E336(□) 025AS</b>	<b>6.6</b>	<b>6</b>		
39.0	E	5,10,20	T322E396(□) 025AS	7.8	6		
47.0	<b>E</b>	<b>5,10,20</b>	<b>T322E476(□) 025AS</b>	<b>9.4</b>	<b>6</b>		
56.0	F	5,10,20	T322F566(□) 025AS	10.0	6		
68.0	<b>F</b>	<b>5,10,20</b>	<b>T322F686(□) 025AS</b>	<b>10.0</b>	<b>6</b>		
<b>35 VOLTS RATING AT 85°C — 23 VOLT RATING AT 125°C</b>							
0.1	<b>A</b>	<b>5,10,20</b>	<b>T322A104(□) 035AS</b>	<b>0.5</b>	<b>3</b>		
0.12	A	5,10,20	T322A124(□) 035AS	0.5	3		
0.15	<b>A</b>	<b>5,10,20</b>	<b>T322A154(□) 035AS</b>	<b>0.5</b>	<b>3</b>		
0.18	A	5,10,20	T322A184(□) 035AS	0.5	3		
0.22	<b>A</b>	<b>5,10,20</b>	<b>T322A224(□) 035AS</b>	<b>0.5</b>	<b>3</b>		
0.27	A	5,10,20	T322A274(□) 035AS	0.5	3		
0.33	<b>A</b>	<b>5</b>	<b>T322A334J 035AS</b>	<b>0.5</b>	<b>3</b>		
0.33	A	10	T322A334K 035AS	0.5	3	<b>CX05M334K</b>	<b>T323A334K035AS</b>
0.33	<b>A</b>	<b>20</b>	<b>T322A334M 035AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05M334M</b>	<b>T323A334M035AS</b>
0.39	A	5,10,20	T322A394(□) 035AS	0.5	3		
0.47	<b>A</b>	<b>5</b>	<b>T322A474J 035AS</b>	<b>0.5</b>	<b>3</b>		
0.47	A	10	T322A474K 035AS	0.5	3	<b>CX05M474K</b>	<b>T323A474K035AS</b>
0.47	<b>A</b>	<b>20</b>	<b>T322A474M 035AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05M474M</b>	<b>T323A474M035AS</b>
0.56	B	5	T322B564J 035AS	0.5	3		
0.56	B	10	T322B564K 035AS	0.5	3	<b>CX01M564K</b>	<b>T323B564K 035AS</b>
0.56	B	20	T322B564M 035AS	0.5	3	<b>CX01M564M</b>	<b>T323B564M035AS</b>
0.68	<b>B</b>	<b>5</b>	<b>T322B684J 035AS</b>	<b>0.5</b>	<b>3</b>		
0.68	B	10	T322B684K 035AS	0.5	3	<b>CX01M684K</b>	<b>T323B684K035AS</b>
0.68	<b>B</b>	<b>20</b>	<b>T322B684M 035AS</b>	<b>0.5</b>	<b>3</b>	<b>CX01M684M</b>	<b>T323B684M035AS</b>
0.82	B	5	T322B824J 035AS	0.5	3		
0.82	B	10	T322B824K 035AS	0.5	3	<b>CX01M824K</b>	<b>T323B824K 035AS</b>
0.82	B	20	T322B824M 035AS	0.5	3	<b>CX01M824M</b>	<b>T323B824M035AS</b>
1.0	<b>B</b>	<b>5</b>	<b>T322B105J 035AS</b>	<b>0.5</b>	<b>3</b>		
1.0	B	10	T322B105K 035AS	0.5	3	<b>CX01M105K</b>	<b>T323B105K035AS</b>
1.0	<b>B</b>	<b>20</b>	<b>T322B105M 035AS</b>	<b>0.5</b>	<b>3</b>	<b>CX01M105M</b>	<b>T323B105M035AS</b>
1.2	B	5	T322B125J 035AS	0.5	3		
1.2	B	10	T322B125K 035AS	0.5	3	<b>CX01M125K</b>	<b>T323B125K 035AS</b>
1.2	B	20	T322B125M 035AS	0.5	3	<b>CX01M125M</b>	<b>T323B125M035AS</b>
1.5	<b>B</b>	<b>5</b>	<b>T322B155J 035AS</b>	<b>0.5</b>	<b>3</b>		
1.5	B	10	T322B155K 035AS	0.5	3	<b>CX05M155K</b>	<b>T323B155K035AS</b>
1.5	<b>B</b>	<b>20</b>	<b>T322B155M 035AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05M155M</b>	<b>T323B155M035AS</b>
1.8	C	5,10,20	T322C185(□) 035AS	0.5	3		
2.2	<b>C</b>	<b>5,10,20</b>	<b>T322C225(□) 035AS</b>	<b>0.6</b>	<b>3</b>		
2.7	C	5,10,20	T322C275(□) 035AS	0.8	3		
3.3	<b>C</b>	<b>5</b>	<b>T322C335J 035AS</b>	<b>0.9</b>	<b>4</b>		
3.3	C	10	T322C335K 035AS	0.9	4	<b>CX05M335K</b>	<b>T323C335K035AS</b>
3.3	<b>C</b>	<b>20</b>	<b>T322C335M 035AS</b>	<b>0.9</b>	<b>4</b>	<b>CX05M335M</b>	<b>T323C335M035AS</b>
3.9	C	5	T322C395J 035AS	1.1	4		
3.9	C	10	T322C395K 035AS	1.1	4	<b>CX05M395K</b>	<b>T323C395K 035AS</b>
3.9	C	20	T322C395M 035AS	1.1	4	<b>CX05M395M</b>	<b>T323C395M035AS</b>
4.7	<b>C</b>	<b>5</b>	<b>T322C475J 035AS</b>	<b>1.3</b>	<b>4</b>		
4.7	C	10	T322C475K 035AS	1.3	4	<b>CX05M475K</b>	<b>T323C475K035AS</b>
4.7	<b>C</b>	<b>20</b>	<b>T322C475M 035AS</b>	<b>1.3</b>	<b>4</b>	<b>CX05M475M</b>	<b>T323C475M035AS</b>

(1) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M — ±20%, K — ±10%, J — ±5%.

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*For further details consult T322 Series Catalog F-2875.*

**T322 & T323 (CX01 & CX05) SERIES**

CAPACITANCE μF	CASE SIZE	CAPACITANCE TOLERANCE ±%	KEMET T322 SERIES			CX01 & CX05 CAPACITORS PER MIL-C-49137/1 & 5	
			KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C	MAX. DISSIPATION FACTOR % @ 25°C, 120 Hz	MILITARY PART NUMBER	KEMET PART NUMBER
<b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C (Cont'd)</b>							
5.6	D	5,10,20	T322D565(□) 035AS	1.6	4		
<b>6.8</b>	<b>D</b>	<b>5</b>	<b>T322D685J 035AS</b>	<b>1.9</b>	<b>4</b>		
<b>6.8</b>	<b>D</b>	<b>10</b>	<b>T322D685K 035AS</b>	<b>1.9</b>	<b>4</b>	<b>CX05M685K</b>	<b>T323D685K035AS</b>
<b>6.8</b>	<b>D</b>	<b>20</b>	<b>T322D685M 035AS</b>	<b>1.9</b>	<b>4</b>	<b>CX05M685M</b>	<b>T323D685M035AS</b>
8.2	D	5,10,20	T322D825(□) 035AS	2.3	4		
<b>10.0</b>	<b>D</b>	<b>5</b>	<b>T322D106J 035AS</b>	<b>2.8</b>	<b>4</b>		
<b>10.0</b>	<b>D</b>	<b>10</b>	<b>T322D106K 035AS</b>	<b>2.8</b>	<b>4</b>	<b>CX05M106K</b>	<b>T323D106K035AS</b>
<b>10.0</b>	<b>D</b>	<b>20</b>	<b>T322D106M 035AS</b>	<b>2.8</b>	<b>4</b>	<b>CX05M106M</b>	<b>T323D106M035AS</b>
12.0	E	5,10,20	T322E126(□) 035AS	3.3	4		
<b>15.0</b>	<b>E</b>	<b>5,10,20</b>	<b>T322E156(□) 035AS</b>	<b>4.2</b>	<b>6</b>		
18.0	E	5,10,20	T322E186(□) 035AS	5.0	6		
<b>22.0</b>	<b>E</b>	<b>5,10,20</b>	<b>T322E226(□) 035AS</b>	<b>6.2</b>	<b>6</b>		
27.0	E	5,10,20	T322E276(□) 035AS	7.5	6		
<b>33.0</b>	<b>E</b>	<b>5,10,20</b>	<b>T322E336(□) 035AS</b>	<b>9.2</b>	<b>6</b>		
39.0	F	5,10,20	T322F396(□) 035AS	10.0	6		
<b>47.0</b>	<b>F</b>	<b>5,10,20</b>	<b>T322F476(□) 035AS</b>	<b>10.0</b>	<b>6</b>		
<b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b>							
<b>0.1</b>	<b>A</b>	<b>5</b>	<b>T322A104J 050AS</b>	<b>0.5</b>	<b>3</b>		
<b>0.1</b>	<b>A</b>	<b>10</b>	<b>T322A104K 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N104K</b>	<b>T323A104K050AS</b>
<b>0.1</b>	<b>A</b>	<b>20</b>	<b>T322A104M 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N104M</b>	<b>T323A104M050AS</b>
0.12	A	5,10,20	T322A124(□) 050AS	0.5	3		
<b>0.15</b>	<b>A</b>	<b>5</b>	<b>T322A154J 050AS</b>	<b>0.5</b>	<b>3</b>		
<b>0.15</b>	<b>A</b>	<b>10</b>	<b>T322A154K 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N154K</b>	<b>T323A154K050AS</b>
<b>0.15</b>	<b>A</b>	<b>20</b>	<b>T322A154M 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N154M</b>	<b>T323A154M050AS</b>
0.18	A	5,10,20	T322A184(□) 050AS	0.5	3		
<b>0.22</b>	<b>A</b>	<b>5</b>	<b>T322A224J 050AS</b>	<b>0.5</b>	<b>3</b>		
<b>0.22</b>	<b>A</b>	<b>10</b>	<b>T322A224K 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N224K</b>	<b>T323A334K050AS</b>
<b>0.22</b>	<b>A</b>	<b>20</b>	<b>T322A224M 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N224M</b>	<b>T323A224M050AS</b>
0.27	A	5,10,20	T322A274(□) 050AS	0.5	3		
<b>0.33</b>	<b>B</b>	<b>5</b>	<b>T322B334J 050AS</b>	<b>0.5</b>	<b>3</b>		
<b>0.33</b>	<b>B</b>	<b>10</b>	<b>T322B334K 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N334K</b>	<b>T323B334K050AS</b>
<b>0.33</b>	<b>B</b>	<b>20</b>	<b>T322B334M 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N334M</b>	<b>T323B334M050AS</b>
0.39	B	5	T322B394J 050AS	0.5	3		
0.39	B	10	T322B394K 050AS	0.5	3	CX05N394K	T323B394K 050AS
0.39	B	20	T322B394M 050AS	0.5	3	CX05N394M	T323B394M 050AS
<b>0.47</b>	<b>B</b>	<b>5</b>	<b>T322B474J 050AS</b>	<b>0.5</b>	<b>3</b>		
<b>0.47</b>	<b>B</b>	<b>10</b>	<b>T322B474K 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N474K</b>	<b>T323B474K050AS</b>
<b>0.47</b>	<b>B</b>	<b>20</b>	<b>T322B474M 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N474M</b>	<b>T323B474M050AS</b>
0.56	B	5,10,20	T322B564(□) 050AS	0.5	3		
<b>0.68</b>	<b>B</b>	<b>5</b>	<b>T322B684J 050AS</b>	<b>0.5</b>	<b>3</b>		
<b>0.68</b>	<b>B</b>	<b>10</b>	<b>T322B684K 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N684K</b>	<b>T323B684K050AS</b>
<b>0.68</b>	<b>B</b>	<b>20</b>	<b>T322B684M 050AS</b>	<b>0.5</b>	<b>3</b>	<b>CX05N684M</b>	<b>T323B684M050AS</b>
0.82	B	5,10,20	T322B824(□) 050AS	0.5	3		
1.0	B	5	T322B105J 050AS	0.5	3		
1.0	B	10	T322B105K 050AS	0.5	3	CX05N105K	T323B105K 050AS
1.0	B	20	T322B105M 050AS	0.5	3	CX05N105M	T323B105M 050AS
1.2	C	5,10,20	T322C125(□) 050AS	0.5	3		
<b>1.5</b>	<b>C</b>	<b>5</b>	<b>T322C155J 050AS</b>	<b>0.6</b>	<b>4</b>		
<b>1.5</b>	<b>C</b>	<b>10</b>	<b>T322C155K 050AS</b>	<b>0.6</b>	<b>4</b>	<b>CX05N155K</b>	<b>T323C155K050AS</b>
<b>1.5</b>	<b>C</b>	<b>20</b>	<b>T322C155M 050AS</b>	<b>0.6</b>	<b>4</b>	<b>CX05N155M</b>	<b>T323C155M050AS</b>
1.8	C	5,10,20	T322C185(□) 050AS	0.7	4		
<b>2.2</b>	<b>C</b>	<b>5</b>	<b>T322C225J 050AS</b>	<b>0.9</b>	<b>4</b>		
<b>2.2</b>	<b>C</b>	<b>10</b>	<b>T322C225K 050AS</b>	<b>0.9</b>	<b>4</b>	<b>CX05N225K</b>	<b>T323C225K050AS</b>
<b>2.2</b>	<b>C</b>	<b>20</b>	<b>T322C225M 050AS</b>	<b>0.9</b>	<b>4</b>	<b>CX05N225M</b>	<b>T323C225M050AS</b>
2.7	D	5,10,20	T322D275(□) 050AS	1.1	4		
<b>3.3</b>	<b>D</b>	<b>5</b>	<b>T322D335J 050AS</b>	<b>1.3</b>	<b>4</b>		
<b>3.3</b>	<b>D</b>	<b>10</b>	<b>T322D335K 050AS</b>	<b>1.3</b>	<b>4</b>	<b>CX05N335K</b>	<b>T323D335K050AS</b>
<b>3.3</b>	<b>D</b>	<b>20</b>	<b>T322D335M 050AS</b>	<b>1.3</b>	<b>4</b>	<b>CX05N335M</b>	<b>T323D335M050AS</b>
3.9	D	5,10,20	T322D395(□) 050AS	1.6	4		
<b>4.7</b>	<b>D</b>	<b>5</b>	<b>T322D475J 050AS</b>	<b>1.9</b>	<b>4</b>		
<b>4.7</b>	<b>D</b>	<b>10</b>	<b>T322D475K 050AS</b>	<b>1.9</b>	<b>4</b>	<b>CX05N475K</b>	<b>T323D475K050AS</b>
<b>4.7</b>	<b>D</b>	<b>20</b>	<b>T322D475M 050AS</b>	<b>1.9</b>	<b>4</b>	<b>CX05N475M</b>	<b>T323D475M050AS</b>
5.6	E	5,10,20	T322E565(□) 050AS	2.2	4		
<b>6.8</b>	<b>E</b>	<b>5,10,20</b>	<b>T322E685(□) 050AS</b>	<b>2.7</b>	<b>4</b>		
8.2	E	5,10,20	T322E825(□) 050AS	3.2	4		
<b>10.0</b>	<b>E</b>	<b>5,10,20</b>	<b>T322E106(□) 050AS</b>	<b>4.0</b>	<b>6</b>		
12.0	F	5,10,20	T322F126(□) 050AS	4.8	6		
<b>15.0</b>	<b>F</b>	<b>5,10,20</b>	<b>T322F156(□) 050AS</b>	<b>6.0</b>	<b>6</b>		
18.0	F	5,10,20	T322F186(□) 050AS	7.2	6		
<b>22.0</b>	<b>F</b>	<b>5,10,20</b>	<b>T322F226(□) 050AS</b>	<b>8.8</b>	<b>6</b>		

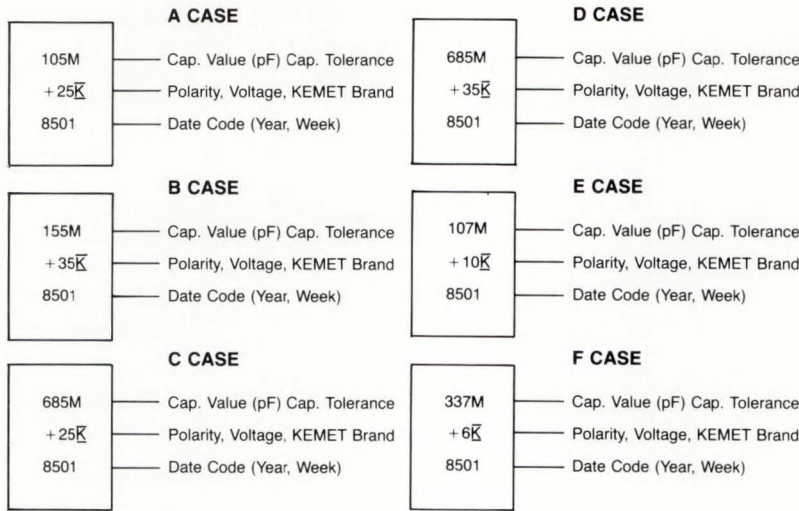
(1) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M — ±20%, K — ±10%, J — ±5%.

**Bold Face** lines indicate preferred part types and values.

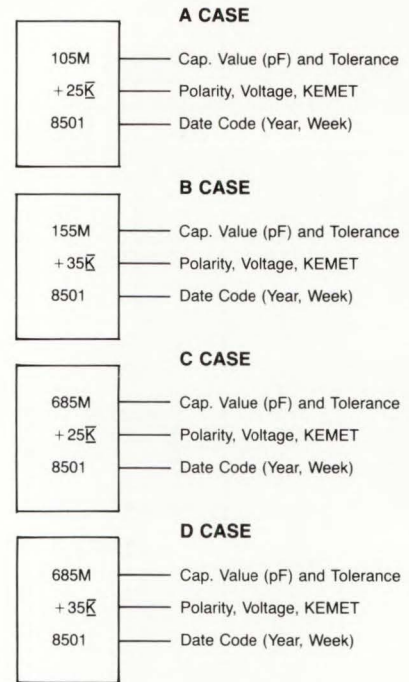
Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

For further details consult T322 Series Catalog F-2875.

**KEMET T322 CAPACITOR MARKINGS**



**T323 (CX01 & CX05) MIL-C-49137 MARKINGS**

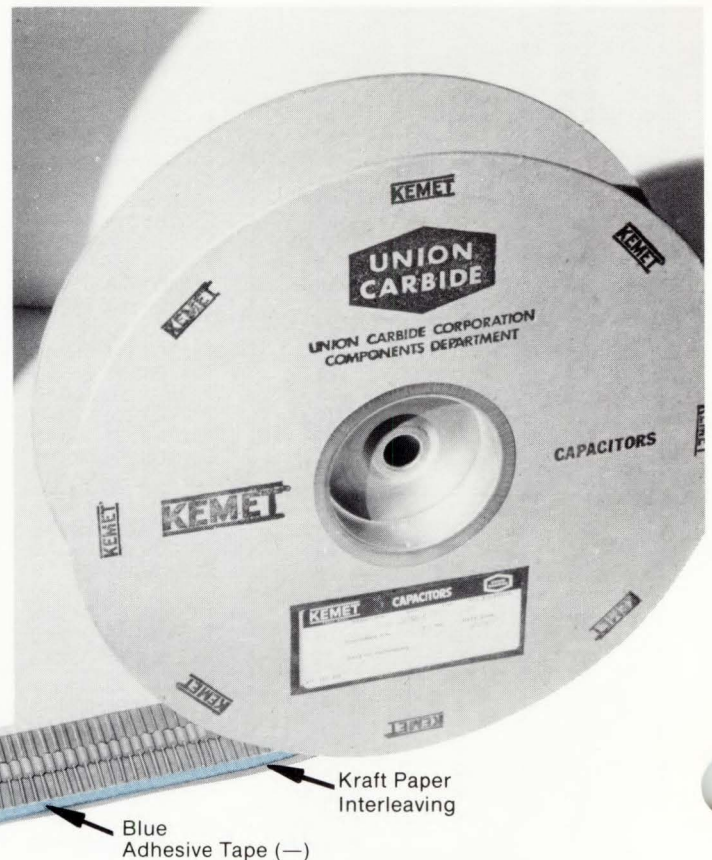


**LEAD TAPE and REEL PACKAGING for T322 & T323 (CX01 & CX05) SERIES**

KEMET offers standard reeling of T322 and T323 (CX01 and CX05) Molded Solid Tantalum Capacitors for automatic insertion or lead forming machines per EIA Specifications RS-296. Capacitors are reeled so that positive leads are oriented as shown in figure. Kraft paper (50 lb. test minimum) is inserted between the layers of capacitors wound on reels. Capacitor lead length may extend only a maximum of .0625" (1.59 mm) beyond the tapes' edges. Capacitors are centered in a row between the two tapes and will deviate only ±.031" (0.79 mm) from the row center. The distance between flanges of the reel is .218" ±.093" (5.54 ± 2.36 mm) greater than the overall capacitor length. A minimum of 36" (91.5 cm) leader tape is provided at each end of the reeled capacitors.

**STANDARD REEL QUANTITIES**

CASE SIZE	A	B	C	D	E	F
QTY	4500	4000	2500	2500	500	450



For further details consult T322 Series Catalog F-2875

Union Carbide Corporation, Electronics Division, P.O. Box 5928, Greenville, S.C. 29606, (803) 963-6300



**T330 SERIES—PRECISION MOLDED—RADIAL LEAD**

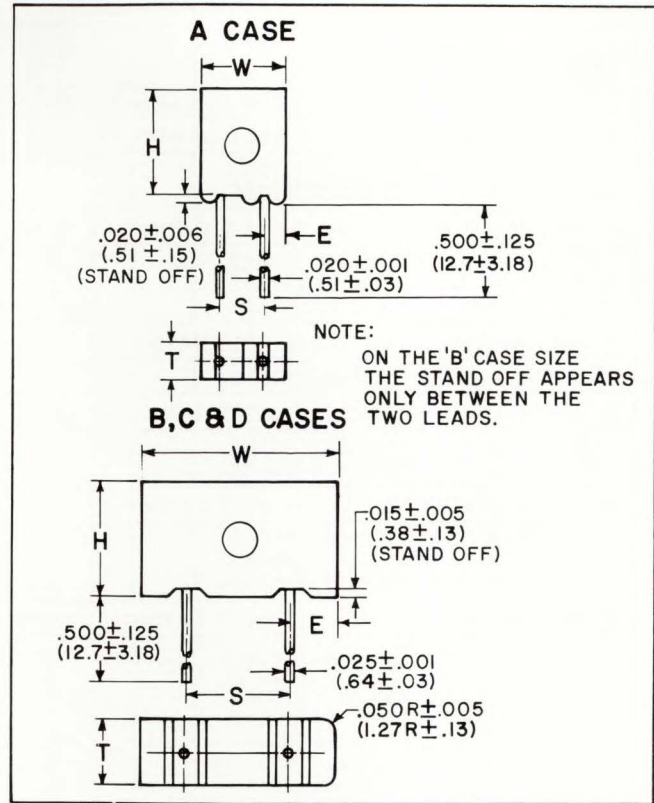
**CAPACITOR OUTLINE DRAWINGS**

KEMET T330 Series, polar-type, radial lead rectangular Precision Molded Tantalum (PMT) capacitors are primarily designed for applications that demand full use of the premium space available in printed circuitry and high density packaging. Compact, space saving T330 Series capacitors provide superior packing factor and space utilization compared with tubular units of the same microcoulomb (CV) rating.

T330 Series capacitors employ a rectangular sintered, dry tantalum anode, transfer molded in precision dies with a high impact resistant plastic having excellent electrical, physical, and moisture resistant properties. The A Case is printed with polarity marking whereas B, C, and D Cases have the polarity symbol permanently molded on top of the plastic case. All cases utilize the new gold color plastic which permit laser marking with outstanding permanency and legibility. The radius on the two vertical edges at the positive end of B, C, and D Cases can also be used as a sensing dimension for automatic insertion processes. The location of the standoffs may serve a similar sensing function for the A Case. These standoffs, located in the base of all case sizes, provide vents for air circulation and also allow easy removal of flux residues from leadwire and circuit board solder joints.

T330 Series capacitors are highly reliable and exhibit performance characteristics typical of military test standards. They are available in capacitance values ranging from 0.1 to 220 microfarads in  $\pm 20$ ,  $\pm 10$ ,  $\pm 5\%$  tolerance levels, and in working voltages from 6 to 50 volts. At 85°C the capacitors will operate continuously at full rated voltage. They are rated to 125°C when operated at 2/3 of nameplate voltage. In addition, they feature exceptionally low DC leakage and Dissipation Factor characteristics.

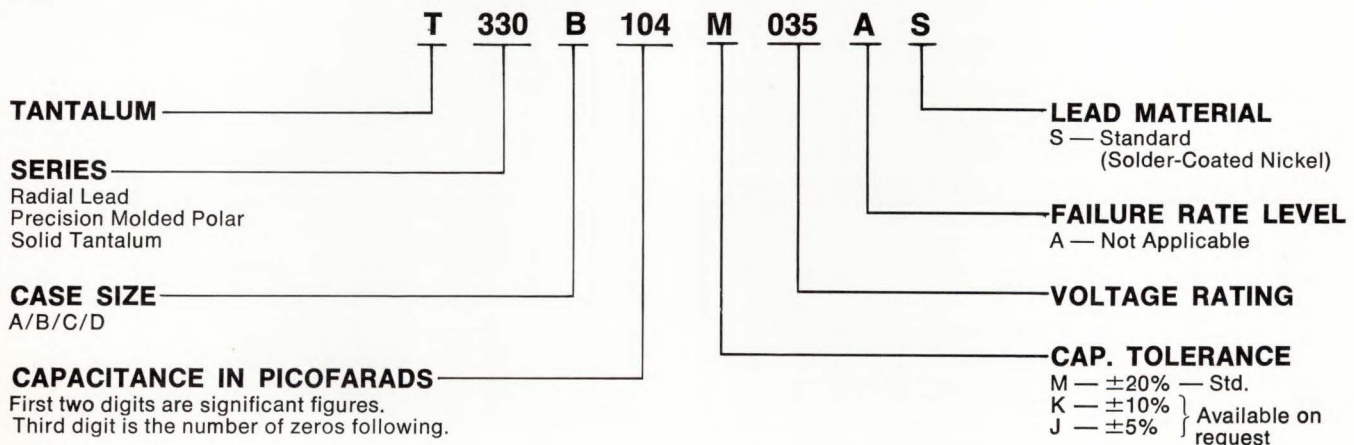
They are ideal for bypass, coupling, and timing applications in computers, military ordinance, industrial, entertainment, and consumer electronic equipment.



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	H CASE HEIGHT	W CASE WIDTH	T CASE THICKNESS	E CASE TO WIRE	S LEAD SPACING
A	.345 ± .008 (8.76 ± .203)	.230 ± .005 (5.84 ± .127)	.105 ± .005 (2.67 ± .127)	.050 ± .010 (1.27 ± .25)	.125 ± .005 (3.18 ± .127)
B	.225 ± .015 (5.71 ± 0.38)	.285 ± .015 (7.24 ± 0.38)	.170 ± .015 (4.32 ± 0.38)	.042 ± .010 (1.07 ± .25)	.200 ± .005 (5.08 ± .127)
C	.325 ± .015 (8.26 ± 0.38)	.325 ± .015 (8.26 ± 0.38)	.170 ± .015 (4.32 ± 0.38)	.062 ± .010 (1.57 ± 0.25)	.200 ± .005 (5.08 ± .127)
D	.375 ± .015 (9.53 ± 0.38)	.600 ± .015 (15.24 ± 0.38)	.195 ± .015 (4.95 ± 0.38)	.200 ± .010 (5.08 ± 0.25)	.200 ± .005 (5.08 ± .127)

**T330 ORDERING INFORMATION**



For further details consult T330 Series Catalog F-1885

**T330 SERIES  
RATINGS & PART NUMBER REFERENCE  
A CASE**

CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>				
18.0	A	T330A186(1)006AS	1	6
<b>22.0</b>	<b>A</b>	<b>T330A226(1)006AS</b>	<b>1</b>	<b>6</b>
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>				
10.0	A	T330A106(1)010AS	1	6
12.0	A	T330A126(1)010AS	1	6
15.0	A	T330A156(1)010AS	1	6
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>				
8.2	A	T330A825(1)015AS	1	6
<b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b>				
5.6	A	T330A565(1)020AS	1	6
6.8	A	T330A685(1)020AS	1	6
<b>25 VOLT RATING AT 85°C — 17 VOLT RATING AT 125°C</b>				
3.3	A	T330A335(1)025AS	1	4
3.9	A	T330A395(1)025AS	1	4
4.7	A	T330A475(1)025AS	1	4
<b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b>				
0.10	A	T330A104(1)035AS	1	3
0.12	A	T330A124(1)035AS	1	3
0.15	A	T330A154(1)035AS	1	3
0.18	A	T330A184(1)035AS	1	3
0.22	A	T330A224(1)035AS	1	3
0.27	A	T330A274(1)035AS	1	3
0.33	A	T330A334(1)035AS	1	3

CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b>				
0.39	A	T330A394(1)035AS	1	3
<b>0.47</b>	<b>A</b>	<b>T330A474(1)035AS</b>	<b>1</b>	<b>3</b>
0.56	A	T330A564(1)035AS	1	3
0.68	A	T330A684(1)035AS	1	3
0.82	A	T330A824(1)035AS	1	3
<b>1.0</b>	<b>A</b>	<b>T330A105(1)035AS</b>	<b>1</b>	<b>3</b>
1.2	A	T330A125(1)035AS	1	4
1.5	A	T330A155(1)035AS	1	4
1.8	A	T330A185(1)035AS	1	4
2.2	A	T330A225(1)035AS	1	4
2.7	A	T330A275(1)035AS	1	4
<b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b>				
0.10	A	T330A104(1)050AS	1	3
0.12	A	T330A124(1)050AS	1	3
0.15	A	T330A154(1)050AS	1	3
0.18	A	T330A184(1)050AS	1	3
0.22	A	T330A224(1)050AS	1	3
0.27	A	T330A274(1)050AS	1	3
0.33	A	T330A334(1)050AS	1	3
0.39	A	T330A394(1)050AS	1	3
0.47	A	T330A474(1)050AS	1	3
0.56	A	T330A564(1)050AS	1	3
0.68	A	T330A684(1)050AS	1	3
0.82	A	T330A824(1)050AS	1	4
1.0	A	T330A105(1)050AS	1	4
1.2	A	T330A125(1)050AS	1	4
1.5	A	T330A155(1)050AS	1	4

**B, C & D CASES**

CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>				
10.0	B	T330B106(1)006AS	1	6
12.0	B	T330B126(1)006AS	1	6
15.0	B	T330B156(1)006AS	1	6
18.0	B	T330B186(1)006AS	1	6
22.0	B	T330B226(1)006AS	1	6
27.0	C	T330C276(1)006AS	1	6
33.0	C	T330C336(1)006AS	1	6
39.0	C	T330C396(1)006AS	1	6
47.0	C	T330C476(1)006AS	2	6
56.0	C	T330C566(1)006AS	5	6
68.0	C	T330C686(1)006AS	5	6
82.0	D	T330D826(1)006AS	5	6
100.0	D	T330D107(1)006AS	5	6
120.0	D	T330D127(1)006AS	5	6
150.0	D	T330D157(1)006AS	5	6
180.0	D	T330D187(1)006AS	10	6
220.0	D	T330D227(1)006AS	10	8
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>				
5.6	B	T330B565(1)010AS	1	6
6.8	B	T330B685(1)010AS	1	6
8.2	B	T330B825(1)010AS	1	6
10.0	B	T330B106(1)010AS	1	6
12.0	B	T330B126(1)010AS	1	6
15.0	B	T330B156(1)010AS	1	6
18.0	C	T330C186(1)010AS	1	6
22.0	C	T330C226(1)010AS	2	6
27.0	C	T330C276(1)010AS	2	6

CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>				
33.0	C	T330C336(1)010AS	2	6
39.0	C	T330C396(1)010AS	5	6
47.0	D	T330D476(1)010AS	5	6
56.0	D	T330D566(1)010AS	5	6
68.0	D	T330D686(1)010AS	5	6
82.0	D	T330D826(1)010AS	5	6
100.0	D	T330D107(1)010AS	10	6
120.0	D	T330D127(1)010AS	10	6
150.0	D	T330D157(1)010AS	10	6
<b>15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>				
3.9	B	T330B395(1)015AS	1	6
4.7	B	T330B475(1)015AS	1	6
5.6	B	T330B565(1)015AS	1	6
6.8	B	T330B685(1)015AS	1	6
8.2	B	T330B825(1)015AS	1	6
10.0	C	T330C106(1)015AS	1	6
12.0	C	T330C126(1)015AS	1	6
15.0	C	T330C156(1)015AS	2	6
18.0	C	T330C186(1)015AS	5	6
22.0	C	T330C226(1)015AS	5	6
27.0	C	T330C276(1)015AS	5	6
33.0	C	T330C336(1)015AS	5	6
39.0	D	T330D396(1)015AS	10	6
47.0	D	T330D476(1)015AS	10	6
56.0	D	T330D566(1)015AS	10	6
68.0	D	T330D686(1)015AS	10	6
82.0	D	T330D826(1)015AS	10	6

(1) To complete Part Number insert Capacitance Tolerance Symbol in the 9th character, M — ±20%, K — ±10%, J — ±5%.  
**Bold face** lines indicate popular part types and values.

Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

For further details consult T330 Series Catalog F-1885

**T330 SERIES**  
B, C & D CASES (Cont'd)

CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>25 VOLT RATING AT 85°C — 17 VOLT RATING AT 125°C</b>				
2.7	B	T330B275(1)025AS	1	6
3.3	B	T330B335(1)025AS	1	6
3.9	B	T330B395(1)025AS	1	6
4.7	B	T330B475(1)025AS	1	6
5.6	C	T330C565(1)025AS	1	6
6.8	C	T330C685(1)025AS	1	6
8.2	C	T330C825(1)025AS	1	6
10.0	C	T330C106(1)025AS	1	6
12.0	C	T330C126(1)025AS	1	6
15.0	C	T330C156(1)025AS	2	6
18.0	D	T330D186(1)025AS	5	6
22.0	D	T330D226(1)025AS	5	6
27.0	D	T330D276(1)025AS	5	6
33.0	D	T330D336(1)025AS	5	6
39.0	D	T330D396(1)025AS	10	6
47.0	D	T330D476(1)025AS	10	6
<b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b>				
0.10	B	T330B104(1)035AS	1	6
0.12	B	T330B124(1)035AS	1	6
0.15	B	T330B154(1)035AS	1	6
0.18	B	T330B184(1)035AS	1	6
0.22	B	T330B224(1)035AS	1	6
0.27	B	T330B274(1)035AS	1	6
0.33	B	T330B334(1)035AS	1	6
0.39	B	T330B394(1)035AS	1	6
0.47	B	T330B474(1)035AS	1	6
0.56	B	T330B564(1)035AS	1	6
0.68	B	T330B684(1)035AS	1	6
0.82	B	T330B824(1)035AS	1	6
1.0	B	T330B105(1)035AS	1	6
1.2	B	T330B125(1)035AS	1	6
1.5	B	T330B155(1)035AS	1	6
1.8	B	T330B185(1)035AS	1	6
2.2	B	T330B225(1)035AS	1	6
2.7	B	T330B275(1)035AS	1	6
3.3	B	T330B335(1)035AS	1	6
3.9	C	T330C395(1)035AS	1	6
4.7	C	T330C475(1)035AS	1	6
5.6	C	T330C565(1)035AS	1	6

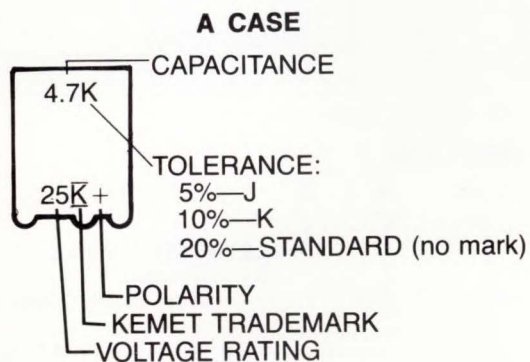
CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C</b>				
6.8	C	T330C685(1)035AS	2	6
8.2	C	T330C825(1)035AS	5	6
10.0	C	<b>T330C106(1)035AS</b>	5	6
12.0	D	T330D126(1)035AS	5	6
15.0	D	T330D156(1)035AS	5	6
18.0	D	T330D186(1)035AS	10	6
22.0	D	T330D226(1)035AS	10	6
27.0	D	<b>T330D276(1)035AS</b>	10	6
33.0	D	T330D336(1)035AS	10	6
<b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b>				
0.10	B	T330B104(1)050AS	1	6
0.12	B	T330B124(1)050AS	1	6
0.15	B	T330B154(1)050AS	1	6
0.18	B	T330B184(1)050AS	1	6
0.22	B	T330B224(1)050AS	1	6
0.27	B	T330B274(1)050AS	1	6
0.33	B	T330B334(1)050AS	1	6
0.39	B	T330B394(1)050AS	1	6
0.47	B	T330B474(1)050AS	1	6
0.56	B	T330B564(1)050AS	1	6
0.68	B	T330B684(1)050AS	1	6
0.82	B	T330B824(1)050AS	1	6
1.0	B	T330B105(1)050AS	1	6
1.2	B	T330B125(1)050AS	1	6
1.5	B	T330B155(1)050AS	1	6
1.8	B	T330B185(1)050AS	1	6
2.2	B	T330B225(1)050AS	1	6
2.7	C	T330C275(1)050AS	1	6
3.3	C	T330C335(1)050AS	2	6
3.9	C	T330C395(1)050AS	5	6
4.7	C	<b>T330C475(1)050AS</b>	5	6
5.6	C	T330C565(1)050AS	5	6
6.8	D	T330D685(1)050AS	5	6
8.2	D	T330D825(1)050AS	5	6
10.0	D	<b>T330D106(1)050AS</b>	5	6
12.0	D	T330D126(1)050AS	5	6
15.0	D	T330D156(1)050AS	10	6
18.0	D	T330D186(1)050AS	10	6

(1) To complete Part Number insert Capacitance Tolerance Symbol in the 9th character, M — ±20%, K — ±10%, J — ±5%.

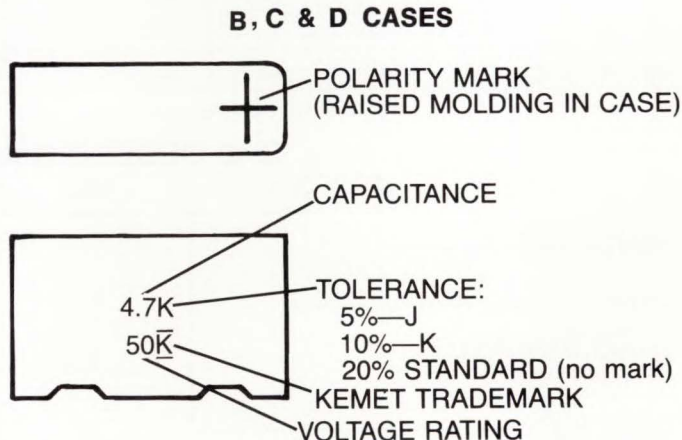
**Bold face** lines indicate popular part types and values.

Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

**CAPACITOR MARKINGS**



**NOTE:**  
ON THE 'B' CASE SIZE  
THE STAND OFF APPEARS  
ONLY BETWEEN THE TWO LEADS.



**T340 SERIES—PRECISION MOLDED—RADIAL LEAD**

The compact space saving T340 Series is transfer molded in precision dies with a high impact resistant plastic having excellent electrical, physical, and moisture resistant properties. The new gold color plastic case utilized permits laser marking with outstanding permanency and legibility.

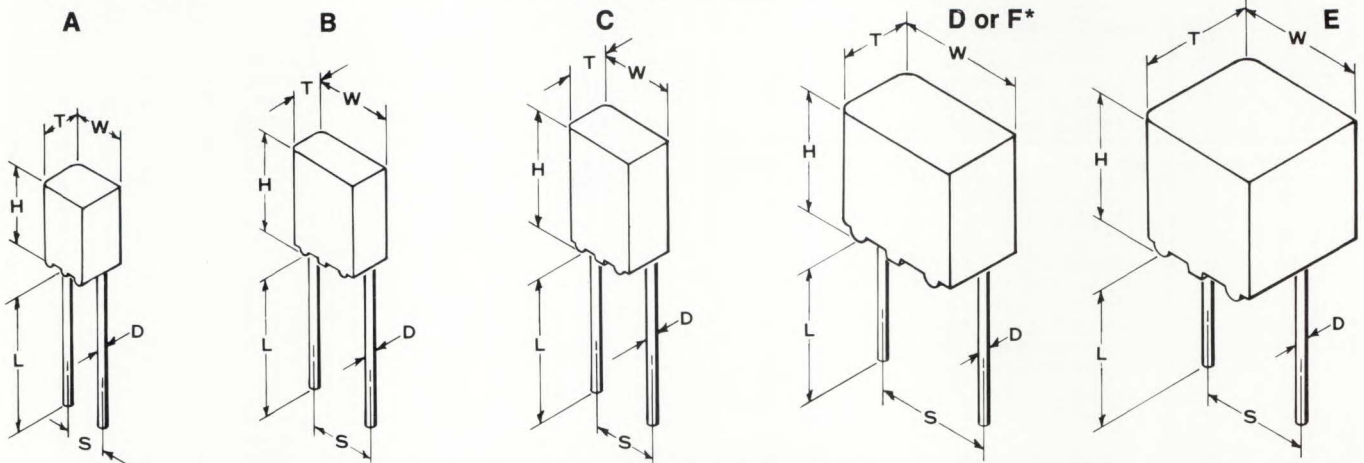
Marking is provided on the top of the case to allow visual inspection for proper polarity and placement after insertion. In addition, positive polarity identification is achieved by an easily recognized molded radius on the positive end of the case. This physical polarity identification is readily observed after capacitor placement as

a further aid to the top marking in prevention of possible reverse insertion.

Standoffs, located in the base of all case sizes, provide vents for air circulation and also allow easy removal of flux residues from leadwire and circuit board solder joints. With very low impedance and ESR values, the T340 Series features exceptionally low DC leakage and DF characteristics.

T340 Series capacitors are highly reliable and exhibit performance characteristics typical of military test standards.

**CAPACITOR OUTLINE DRAWINGS**



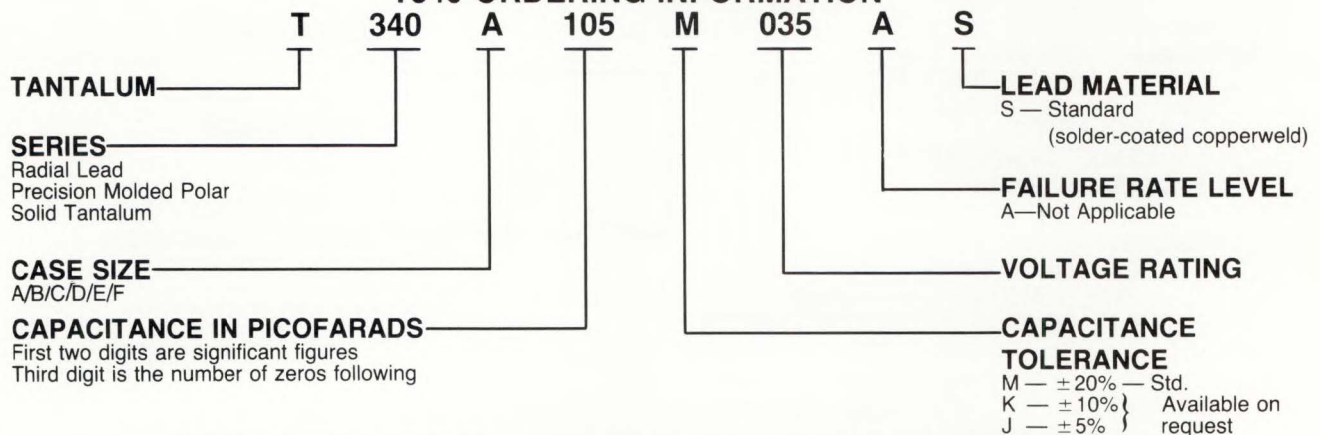
\*'F' case size is same as 'D', but with .200" (5.0 mm) lead spacing. Specify 'T340F' when ordering for this spacing.

**DIMENSIONS—INCHES & MILLIMETERS**

CASE SIZE	MAXIMUM CASE HEIGHT*		MAXIMUM CASE WIDTH		MAXIMUM CASE THICKNESS		LEAD SPACING S		LEAD LENGTH L		LEAD DIAMETER D	
	H		W		T		Inches		mm		Inches	
	Inches	mm	Inches	mm	Inches	mm	±.020	±.5	±.078	±2.0	±.001	±.03
A	.287	7.3	.185	4.7	.165	4.2	.100	2.5	.600	15.0	.020	0.50
B	.327	8.3	.283	7.2	.157	4.0	.200	5.0	.600	15.0	.020	0.50
C	.413	10.5	.287	7.3	.169	4.3	.200	5.0	.600	15.0	.020	0.50
D	.413	10.5	.484	12.3	.287	7.3	.400	10.0	.600	15.0	.025	0.65
E	.413	10.5	.484	12.3	.484	12.3	.400	10.0	.600	15.0	.025	0.65
F	.413	10.5	.484	12.3	.287	7.3	.200	5.0	.600	15.0	.025	0.65

\*Includes Standoff Height of .015 ± .005" (.38 ± .13mm) for All Case Sizes.

**T340 ORDERING INFORMATION**



**T340 SERIES  
RATINGS AND PART NUMBER REFERENCE**

Listings in the left column are for American specifiers while the right column contains listings for European parts per DIN 44352 and NF UTE-C-83112 Standards.

AMERICAN						EUROPEAN		
CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	MAX. DC LEAKAGE μA @ 25°C	MAX. DISSI- PATION FACTOR % @ 25°C 120 Hz	MAX. IMPED- ANCE Ω @ 10 kHz	CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER
NO AMERICAN 3 VOLT						3 VOLT @ 85°C — 2 VOLT @ 125°C		
			1.0	6	6.0	10.0	A	T340A106(Ⓛ) 003AS
			1.0	6	3.2	15.0	A	T340A156(Ⓛ) 003AS
			1.5	6	2.1	33.0	B	T340B336(Ⓛ) 003AS
			3.0	6	1.8	47.0	B	T340B476(Ⓛ) 003AS
			4.0	6	1.5	68.0	C	T340C686(Ⓛ) 003AS
			5.0	6	1.2	100.0	C	T340C107(Ⓛ) 003AS
6 VOLT AT 85°C — 4 VOLT AT 125°C						6/6.3 VOLT @ 85°C — 4 VOLTS @ 125°C		
6.8	A	T340A685(Ⓛ) 006AS	1.0	6	6.0	6.8	A	T340A685(Ⓛ) 006AS
10.0	B	T340B106(Ⓛ) 006AS	1.0	6				
12.0	B	T340B126(Ⓛ) 006AS	1.0	6				
15.0	B	T340B156(Ⓛ) 006AS	1.0	6				
18.0	B	T340B186(Ⓛ) 006AS	1.0	6				
22.0	B	T340B226(Ⓛ) 006AS	2.5	6	2.1	22.0	B	T340B226(Ⓛ) 006AS
27.0	C	T340C276(Ⓛ) 006AS	2.5	6				
33.0	C	T340C336(Ⓛ) 006AS	2.5	6				
39.0	C	T340C396(Ⓛ) 006AS	2.5	6				
<b>47.0</b>	<b>C</b>	<b>T340C476(Ⓛ) 006AS</b>	<b>3.0</b>	<b>6</b>	<b>1.5</b>	<b>47.0</b>	<b>C</b>	<b>T340C476(Ⓛ) 006AS</b>
56.0	C	T340C566(Ⓛ) 006AS	5.0	6				
68.0	C	T340C686(Ⓛ) 006AS	5.0	6				
82.0	D/F	T340(2)826(Ⓛ) 006AS	5.0	6				
100.0	D/F	T340(2)107(Ⓛ) 006AS	5.0	6				
120.0	D/F	T340(2)127(Ⓛ) 006AS	5.0	6				
150.0	D/F	T340(2)157(Ⓛ) 006AS	8.0	6	0.8	150.0	D	T340D157(Ⓛ) 006AS
180.0	D/F	T340(2)187(Ⓛ) 006AS	10.0	6				
220.0	D/F	T340(2)227(Ⓛ) 006AS	10.0	6				
330.0	E	T340E337(Ⓛ) 006AS	10.0	8	0.5	330.0	E	T340E337(Ⓛ) 006AS
10 VOLT AT 85°C — 6 VOLT AT 125°C						10 VOLT @ 85°C — 6 VOLT @ 125°C		
4.7	A	<b>T340A475(Ⓛ) 010AS</b>	1.0	6	7.5	4.7	A	<b>T340A475(Ⓛ) 010AS</b>
5.6	B	T340B565(Ⓛ) 010AS	1.0	6				
6.8	B	T340B685(Ⓛ) 010AS	1.0	6				
8.2	B	T340B825(Ⓛ) 010AS	1.0	6				
10.0	B	T340B106(Ⓛ) 010AS	1.0	6				
12.0	B	T340B126(Ⓛ) 010AS	1.0	6				
15.0	B	T340B156(Ⓛ) 010AS	3.0	6	2.5	15.0	B	T340B156(Ⓛ) 010AS
18.0	C	T340C186(Ⓛ) 010AS	3.0	6				
22.0	C	T340C226(Ⓛ) 010AS	3.0	6				
27.0	C	T340C276(Ⓛ) 010AS	3.0	6				
<b>33.0</b>	<b>C</b>	<b>T340C336(Ⓛ) 010AS</b>	<b>5.0</b>	<b>6</b>	<b>1.7</b>	<b>33.0</b>	<b>C</b>	<b>T340C336(Ⓛ) 010AS</b>
39.0	C	T340C396(Ⓛ) 010AS	5.0	6				
47.0	D/F	T340(2)476(Ⓛ) 010AS	5.0	6				
56.0	D/F	T340(2)566(Ⓛ) 010AS	5.0	6				
68.0	D/F	T340(2)686(Ⓛ) 010AS	5.0	6				
82.0	D/F	T340(2)826(Ⓛ) 010AS	5.0	6				
100.0	D/F	T340(2)107(Ⓛ) 010AS	10.0	6	1.0	100.0	D	T340D107(Ⓛ) 010AS
120.0	D/F	T340(2)127(Ⓛ) 010AS	10.0	6				
150.0	D/F	T340(2)157(Ⓛ) 010AS	10.0	6				
220.0	E	T340E227(Ⓛ) 010AS	10.0	6	0.5	220.0	E	T340E227(Ⓛ) 010AS
15 VOLT AT 85°C — 10 VOLT AT 125°C						16 VOLT @ 85°C — 10 VOLT @ 125°C		
3.3	A	<b>T340A335(Ⓛ) 015AS</b>	1.0	6	9.0	3.3	A	<b>T340A335(Ⓛ) 016AS</b>
3.9	B	T340B395(Ⓛ) 015AS	1.0	6				
4.7	B	T340B475(Ⓛ) 015AS	1.0	6				
5.6	B	T340B565(Ⓛ) 015AS	1.0	6				
6.8	B	T340B685(Ⓛ) 015AS	1.0	6				
8.2	B	T340B825(Ⓛ) 015AS	1.0	6				
10.0	B	T340B106(Ⓛ) 015AS	3.0	6	3.2	10.0	B	T340B106(Ⓛ) 016AS

(1) To complete KEMET Part Number, insert M — ±20%, K — ±10%, or J — ±5% for capacitance tolerance, as shown in T340 ordering information.

(2) To complete KEMET Part Number, insert letter "D" for 10.0 mm (.394) lead spacing or letter "F" for 5.0 mm (.197) lead spacing. See page 48 outline drawings.

**Bold face** lines indicate popular part types and values.

Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

For further details consult T340 Series Catalog F-2950.

**T340 SERIES  
RATINGS AND PART NUMBER REFERENCE**

Listings in the left column are for American specifiers while the right column contains listings for European parts per DIN 44352 and NF UTE-C-83112 Standards.

AMERICAN						EUROPEAN		
CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	MAX. DC LEAKAGE μA @ 25°C	MAX. DISSI- PATION FACTOR % @ 25°C 120 Hz	MAX. IMPED- ANCE Ω @ 10 kHz	CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER
<b>15 VOLT AT 85°C (Cont'd)</b>						<b>16 VOLT @ 85°C — 10 VOLT @ 125°C</b>		
12.0	C	T340C126(⊥) 015AS	3.0	6		15.0	C	T340C156(⊥) 016AS
15.0	C	T340C156(⊥) 015AS	3.5	6	2.5			
18.0	C	T340C186(⊥) 015AS	4.0	6				
<b>22.0</b>	<b>C</b>	<b>T340C226(⊥) 015AS</b>	<b>4.0</b>	<b>6</b>	<b>2.1</b>	<b>22.0</b>	<b>C</b>	<b>T340C226(⊥) 016AS</b>
27.0	C	T340C276(⊥) 015AS	5.0	6				
33.0	C	T340C336(⊥) 015AS	5.0	6				
39.0	D/F	T340(⊥)396(⊥) 015AS	7.0	6				
<b>47.0</b>	<b>D/F</b>	<b>T340(⊥)476(⊥) 015AS</b>	<b>7.0</b>	<b>6</b>	<b>1.3</b>	<b>47.0</b>	<b>D</b>	<b>T340D476(⊥) 016AS</b>
56.0	D/F	T340(⊥)566(⊥) 015AS	8.0	6				
<b>68.0</b>	<b>D/F</b>	<b>T340(⊥)686(⊥) 015AS</b>	<b>9.0</b>	<b>6</b>	<b>1.1</b>	<b>68.0</b>	<b>D</b>	<b>T340D686(⊥) 016AS</b>
82.0	D/F	T340(⊥)826(⊥) 015AS	10.0	6				
100.0	E	T340E107(⊥) 015AS	10.0	6	0.8	100.0	E	T340E107(⊥) 016AS
150.0	E	T340E157(⊥) 015AS	10.0	6	0.6	150.0	E	T340E157(⊥) 016AS
NO AMERICAN 20 VOLT						<b>20 VOLT @ 85°C — 13 VOLT @ 125°C</b>		
			1.0	6	12.0	2.2	A	T340A225(⊥) 020AS
			1.0	6	8.0	3.3	B	T340B335(⊥) 020AS
			1.5	6	5.5	4.7	B	T340B375(⊥) 020AS
			2.5	6	4.2	6.8	B	T340B685(⊥) 020AS
			5.0	6	2.5	15.0	C	T340C156(⊥) 020AS
			9.0	6	1.3	47.0	D	T340D476(⊥) 020AS
10.0	6	0.8	100.0	E	T340E107(⊥) 020AS			
<b>25 VOLT AT 85°C — 16 VOLT AT 125°C</b>						<b>25 VOLT @ 85°C — 16 VOLT @ 125°C</b>		
<b>1.5</b>	<b>A</b>	<b>T340A155(⊥) 025AS</b>	<b>1.0</b>	<b>6</b>	<b>17.0</b>	<b>1.5</b>	<b>A</b>	<b>T340A155(⊥) 025AS</b>
2.7	B	T340B275(⊥) 025AS	1.0	6				
3.3	B	T340B335(⊥) 025AS	1.0	6				
3.9	B	T340B395(⊥) 025AS	1.0	6				
4.7	B	T340B475(⊥) 025AS	2.0	6	5.5	4.7	B	T340B475(⊥) 025AS
5.6	C	T340C565(⊥) 025AS	2.0	6				
6.8	C	T340C685(⊥) 025AS	3.0	6	4.2	6.8	C	T340C685(⊥) 025AS
8.2	C	T340C825(⊥) 025AS	3.0	6				
<b>10.0</b>	<b>C</b>	<b>T340C106(⊥) 025AS</b>	<b>3.5</b>	<b>6</b>	<b>3.0</b>	<b>10.0</b>	<b>C</b>	<b>T340C106(⊥) 025AS</b>
12.0	C	T340C126(⊥) 025AS	3.5	6				
15.0	C	T340C156(⊥) 025AS	4.0	6				
18.0	D/F	T340(⊥)186(⊥) 025AS	5.0	6				
22.0	D/F	T340(⊥)226(⊥) 025AS	5.5	6	2.0	22.0	D	T340D226(⊥) 025AS
27.0	D/F	T340(⊥)276(⊥) 025AS	7.0	6				
<b>33.0</b>	<b>D/F</b>	<b>T340(⊥)336(⊥) 025AS</b>	<b>8.0</b>	<b>6</b>	<b>1.5</b>	<b>33.0</b>	<b>D</b>	<b>T340D336(⊥) 025AS</b>
39.0	D/F	T340(⊥)396(⊥) 025AS	10.0	6				
47.0	D/F	T340(⊥)476(⊥) 025AS	10.0	6	1.3	47.0	E	T340E476(⊥) 025AS
68.0	E	T340E686(⊥) 025AS	10.0	6	0.9	68.0	E	T340E686(⊥) 025AS
<b>35 VOLT AT 85°C — 23 VOLT AT 125°C</b>						<b>35 VOLT @ 85°C — 23 VOLT @ 125°C</b>		
0.1	A	T340A104(⊥) 035AS	1.0	6	220	0.1	A	T340A104(⊥) 035AS
0.15	A	T340A154(⊥) 035AS	1.0	6	150	0.15	A	T340A154(⊥) 035AS
0.22	A	T340A224(⊥) 035AS	1.0	6	100	0.22	A	T340A224(⊥) 035AS
0.33	A	T340A334(⊥) 035AS	1.0	6	75	0.33	A	T340A334(⊥) 035AS
0.47	A	T340A474(⊥) 035AS	1.0	6	50	0.47	A	T340A474(⊥) 035AS
0.68	A	T340A684(⊥) 035AS	1.0	6	36	0.68	A	T340A684(⊥) 035AS
<b>1.0</b>	<b>A</b>	<b>T340A105(⊥) 035AS</b>	<b>1.0</b>	<b>6</b>	<b>25</b>	<b>1.0</b>	<b>A</b>	<b>T340A105(⊥) 035AS</b>
1.2	B	T340B125(⊥) 035AS	1.0	6	15	1.5	B	T340B155(⊥) 035AS
1.5	B	T340B155(⊥) 035AS	1.0	6				
1.8	B	T340B185(⊥) 035AS	1.0	6				
<b>2.2</b>	<b>B</b>	<b>T340B225(⊥) 035AS</b>	<b>1.0</b>	<b>6</b>	<b>11</b>	<b>2.2</b>	<b>B</b>	<b>T340B225(⊥) 035AS</b>
2.7	B	T340B275(⊥) 035AS	1.0	6				
<b>3.3</b>	<b>B</b>	<b>T340B335(⊥) 035AS</b>	<b>1.0</b>	<b>6</b>	<b>7.5</b>	<b>3.3</b>	<b>C</b>	<b>T340C335(⊥) 035AS</b>

(1) To complete KEMET Part Number, insert M — ±20%, K — ±10%, or J — ±5% for capacitance tolerance, as shown in T340 ordering information.

(2) To complete KEMET Part Number, insert letter "D" for 10.0 mm (.394) lead spacing or letter "F" for 5.0 mm (.197) lead spacing. See page 48 outline drawings.

**Bold face** lines indicate popular part types and values.

Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

For further details consult T340 Series Catalog F-2950.

**T340 SERIES  
RATINGS AND PART NUMBER REFERENCE**

Listings in the left column are for American specifiers while the right column contains listings for European parts per DIN 44352 and NF UTE-C-83112 Standards.

AMERICAN						EUROPEAN		
CAPACITANCE μF	CASE SIZE	KEMET PART NUMBER	MAX. DC LEAKAGE μA @ 25°C	MAX. DISSI- PATION FACTOR % @ 25°C 120 Hz	MAX. IMPED- ANCE Ω @ 10 kHz	CAPAC- ITANCE μF	CASE SIZE	KEMET PART NUMBER
<b>35 VOLT AT 85°C (Cont'd)</b>						<b>35 VOLT @ 85°C — 23 VOLT @ 125°C</b>		
3.9	C	T340C395(1) 035AS	1.0	6				
4.7	C	<b>T340C475(1) 035AS</b>	2.5	6	5.5	4.7	C	T340C475(1) 035AS
5.6	C	T340C565(1) 035AS	2.5	6				
6.8	C	<b>T340C685(1) 035AS</b>	3.0	6	4.2	6.8	C	T340C685(1) 035AS
8.2	C	T340C825(1) 035AS	4.0	6				
10.0	C	<b>T340C106(1) 035AS</b>	4.0	6	2.8	10.0	D	T340D106(1) 035AS
12.0	D/F	T340(2)126(1) 035AS	5.0	6				
15.0	D/F	T340(2)156(1) 035AS	5.0	6	2.2	15.0	D	T340D156(1) 035AS
18.0	D/F	T340(2)186(1) 035AS	8.0	6				
22.0	D/F	<b>T340(2)226(1) 035AS</b>	8.0	6	1.9	22.0	D	T340D226(1) 035AS
27.0	D/F	<b>T340(2)276(1) 035AS</b>	10.0	6				
33.0	D/F	T340(2)336(1) 035AS	10.0	6	1.4	33.0	E	T340E336(1) 035AS
47.0	E	<b>T340E476(1) 035AS</b>	10.0	6	1.1	47.0	E	T340E476(1) 035AS
NO AMERICAN 40 VOLT						<b>40 VOLT @ 85°C — 32 VOLT @ 100°C</b>		
			1.0	6	200	0.1	A	T340A104(1) 040AS
			1.0	6	140	0.15	A	T340A154(1) 040AS
			1.0	6	95	0.22	A	T340A224(1) 040AS
			1.0	6	70	0.33	A	T340A334(1) 040AS
			1.0	6	46	0.47	A	T340A474(1) 040AS
			1.0	6	34	0.68	A	T340A684(1) 040AS
			1.0	6	23	1.0	A	T340A105(1) 040AS
			1.0	6	14	1.5	B	T340B155(1) 040AS
			1.7	6	10	2.2	B	T340B225(1) 040AS
			2.3	6	7	3.3	C	T340C335(1) 040AS
			3.0	6	5	4.7	C	T340C475(1) 040AS
			3.5	6	3.9	6.8	C	T340C685(1) 040AS
			4.5	6	2.6	10.0	D	T340D106(1) 040AS
			6.0	6	2.0	15.0	D	T340D156(1) 040AS
			9.0	6	1.7	22.0	D	T340D226(1) 040AS
			10.0	6	1.3	33.0	E	T340E336(1) 040AS
10.0	6	1.0	47.0	E	T340E476(1) 040AS			
<b>50 VOLT AT 85°C — 33 VOLT AT 125°C</b>						<b>50 VOLT @ 85°C — 33 VOLT @ 125°C</b>		
0.1	A	T340A104(1) 050AS	1.0	6	220	0.1	A	T340A104(1) 050AS
0.15	A	T340A154(1) 050AS	1.0	6	150	0.15	A	T340A154(1) 050AS
0.22	A	T340A224(1) 050AS	1.0	6	100	0.22	A	T340A224(1) 050AS
0.33	A	T340A334(1) 050AS	1.0	6	75	0.33	A	T340A334(1) 050AS
0.39	B	T340B394(1) 050AS	1.0	6				
0.47	B	T340B474(1) 050AS	1.0	6	50	0.47	B	T340B474(1) 050AS
0.56	B	T340B564(1) 050AS	1.0	6				
0.68	B	T340B684(1) 050AS	1.0	6	36	0.68	B	T340B684(1) 050AS
0.82	B	T340B824(1) 050AS	1.0	6				
1.0	B	T340B105(1) 050AS	1.0	6	25	1.0	B	T340B105(1) 050AS
1.2	B	T340B125(1) 050AS	1.0	6				
1.5	B	T340B155(1) 050AS	1.1	6	15	1.5	C	T340C155(1) 050AS
1.8	B	T340B185(1) 050AS	1.1	6				
2.2	B	T340B225(1) 050AS	1.5	6	11	2.2	C	T340C225(1) 050AS
2.7	C	T340C275(1) 050AS	1.5	6				
3.3	C	T340C335(1) 050AS	2.5	6	7.5	3.3	D	T340D335(1) 050AS
3.9	C	T340C395(1) 050AS	3.0	6				
4.7	C	T340C475(1) 050AS	3.5	6	5.5	4.7	D	T340D475(1) 050AS
5.6	C	T340C565(1) 050AS	4.0	6				
6.8	D/F	T340(2)685(1) 050AS	5.0	6	4.0	6.8	D	T340D685(1) 050AS
8.2	D/F	T340(2)825(1) 050AS	6.0	6				
10.0	D/F	<b>T340(2)106(1) 050AS</b>	7.0	6	2.8	10.0	D	T340D106(1) 050AS
12.0	D/F	T340(2)126(1) 050AS	8.0	6				
15.0	D/F	T340(2)156(1) 050AS	9.0	6	2.2	15.0	D	T340D156(1) 050AS
18.0	D/F	T340(2)186(1) 050AS	10.0	6				
22.0	E	T340E226(1) 050AS	10.0	6	1.7	22.0	E	T340E226(1) 050AS

(1) To complete KEMET Part Number, insert M — ±20%, K — ±10%, or J — ±5% for capacitance tolerance, as shown in T340 ordering information.

(2) To complete KEMET Part Number, insert letter "D" for 10.0 mm (.394) lead spacing or letter "F" for 5.0 mm (.197) lead spacing. See page 48 outline drawings.

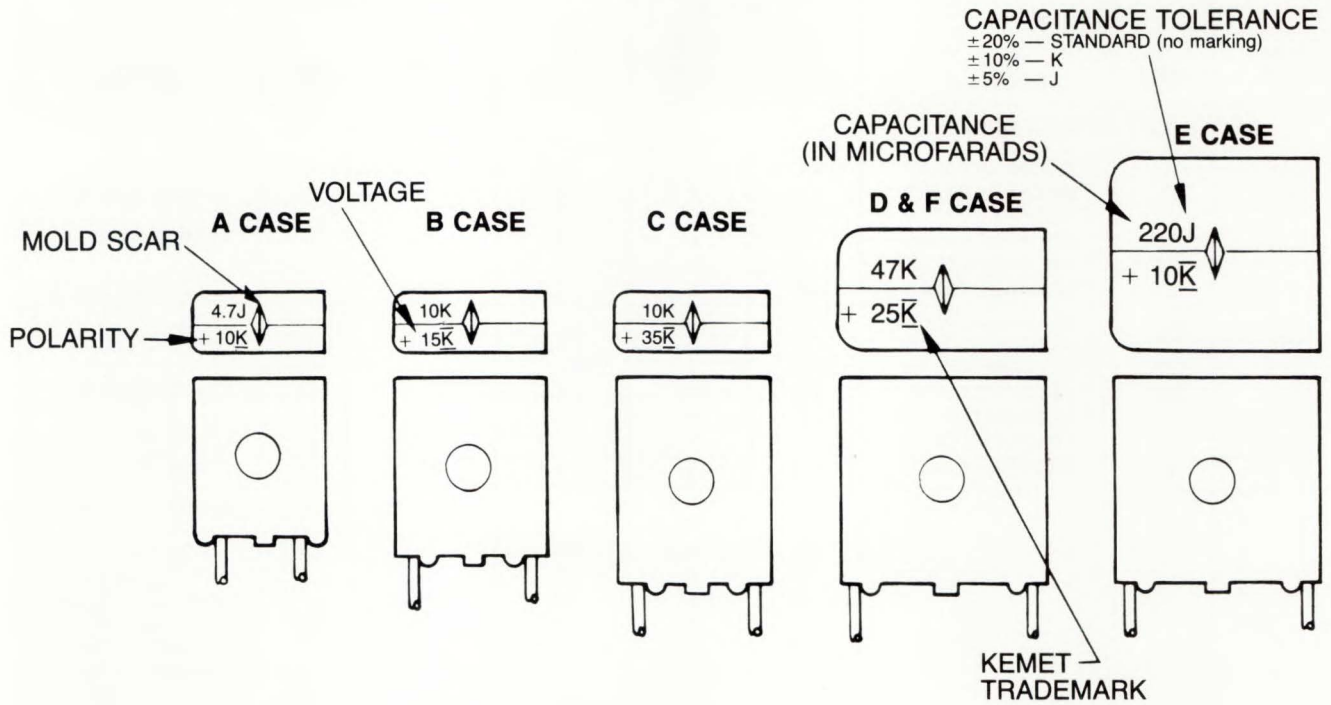
**Bold face** lines indicate popular part types and values.

Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.

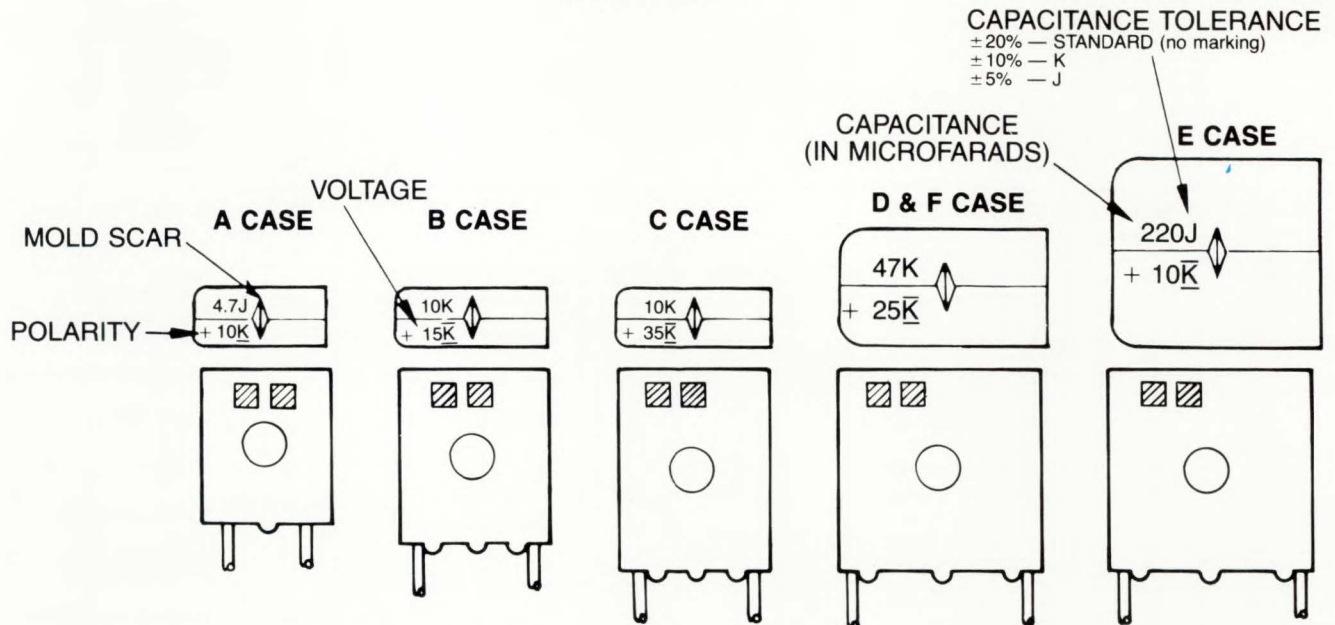
*For further details consult T340 Series Catalog F-2950.*

**T340 CAPACITOR MARKINGS**

**AMERICAN**



**EUROPEAN**



▨ ▨ = DIN. SPECIFICATION DATE CODE

Insert Date Code as follows:

▨ 1st digit—represents year

- K—1978    R—1983
- L—1979    S—1984
- M—1980    T—1985
- N—1981    U—1986
- P—1982

▨ 2nd digit—represents month

- 1-9 for January through September
- O for October
- N for November
- D for December

For further details consult T340 Catalog F-2950



**T350, T351, T352, T353, T354 & T355 SERIES  
FEATURES AND APPLICATIONS**

The new KEMET 'UltraDip II' Capacitors offer the designer of quality instruments and entertainment systems the widely recognized advantages inherent in solid tantalum capacitors at competitive prices.

The T350, T351, T352, T353, T354 and T355 Series are miniature dipped solid tantalum capacitors which provide the designer with the advantage of compactness plus low leakage and low DF performance characteristics for filtering, bypassing, coupling, blocking and RC timing circuits. This series features a capacitance range from 0.1 to 680 microfarads at voltages from 3 to 50 VDC. 'UltraDip II' capacitors utilize the same sophisticated materials and processes which have advanced Union Carbide to the leadership position in solid tantalum capacitors.

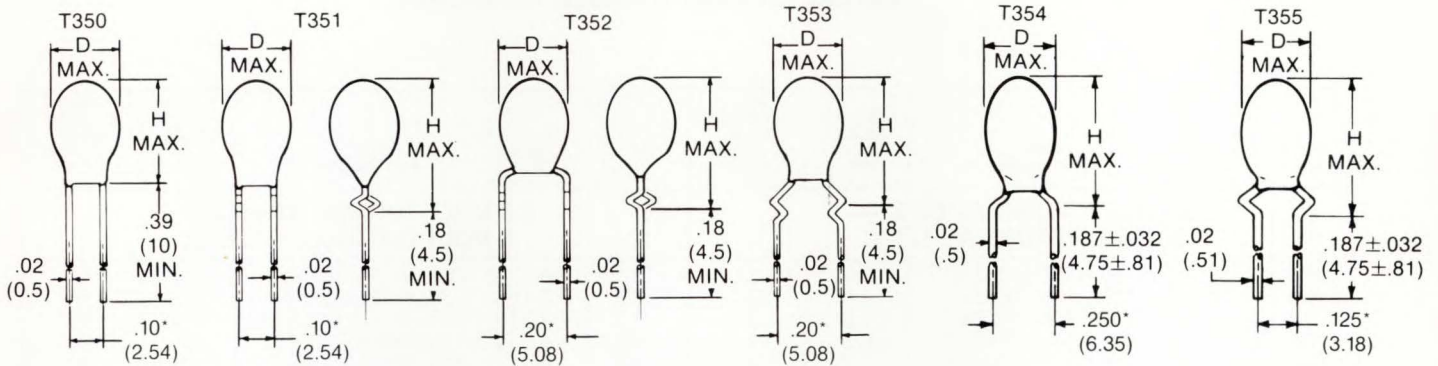
The plastic case provides a tough barrier coating

and maintains precision of lead wire spacing within ±0.015 inch. The new gold color epoxy utilized permits Laser marking with outstanding permanency and legibility. All case sizes are printed with capacitance, voltage, polarity and vendor identification.

Solid tantalum devices exhibit no degradation failure mode during shelf storage and show a constantly decreasing failure rate (i.e., absence of wearout mechanism) during life tests.

The 'UltraDip II' Series provides self-insulating cases which are resistant to shock and vibration. These capacitors exhibit low DCL, ESR and Impedance and have excellent temperature stability.

**CAPACITOR OUTLINE DRAWINGS**



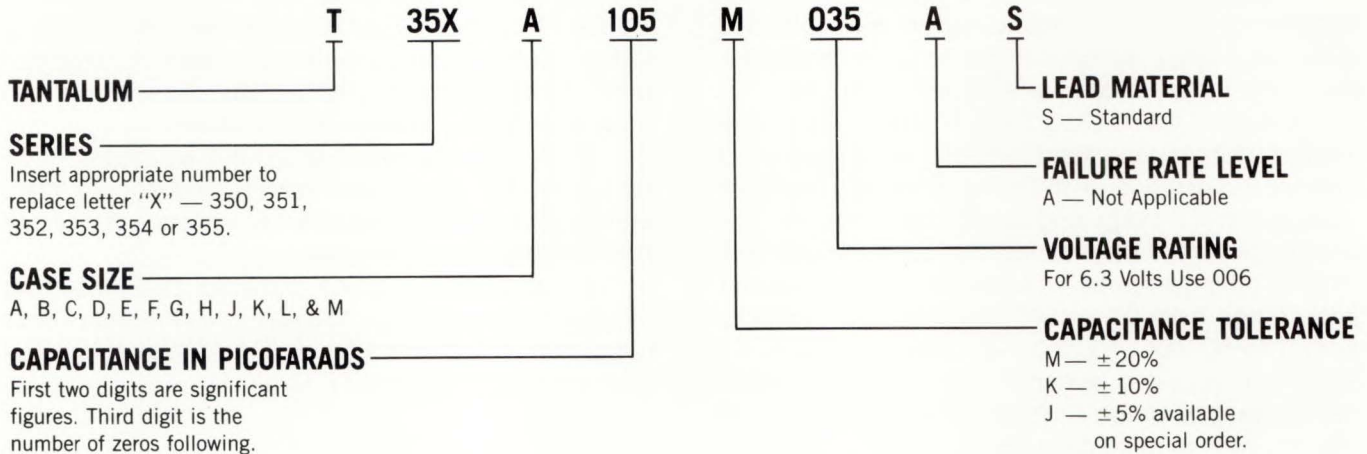
**DIMENSIONS—INCHES (MILLIMETERS)**

Case Size	All	T350	T351	T352	T353	T354	T355
	D Max Diameter	H <sup>(1)</sup> Max Height	H <sup>(1)</sup> Max Height	H <sup>(1)</sup> Max Height	H <sup>(1)</sup> Max Height	H <sup>(1)</sup> Max Height	H <sup>(1)</sup> Max Height
A	.175 (4.5)	.280 (7.1)	.380 (9.6)	.400 (10.2)	.400 (10.2)	.340 (8.6)	.340 (8.6)
B	.175 (4.5)	.300 (7.6)	.390 (9.9)	.410 (10.4)	.410 (10.4)	.350 (8.9)	.350 (8.9)
C	.196 (5.0)	.330 (8.4)	.420 (10.7)	.440 (11.2)	.440 (11.2)	.380 (9.6)	.380 (9.6)
D	.196 (5.0)	.340 (8.6)	.430 (10.9)	.450 (11.4)	.450 (11.4)	.390 (9.9)	.390 (9.9)
E	.216 (5.5)	.350 (8.9)	.440 (11.2)	.460 (11.7)	.460 (11.7)	.400 (10.2)	.400 (10.2)
F	.236 (6.0)	.390 (9.9)	.480 (12.2)	.500 (12.7)	.500 (12.7)	.440 (11.2)	.440 (11.2)
G	.250 (6.3)	.400 (10.2)	.490 (12.4)	.510 (13.0)	.510 (13.0)	.450 (11.4)	.450 (11.4)
H	.300 (7.6)	.400 (10.2)	.500 (12.7)	.520 (13.2)	.520 (13.2)	.470 (11.9)	.470 (11.9)
J <sup>(2)</sup>	.330 (8.4)	.500 (12.7)	Note 3	Note 3	.580 (14.7)	.550 (14.0)	Note 3
K <sup>(2)</sup>	.350 (8.9)	.530 (13.5)			.630 (16.0)	.610 (15.5)	
L <sup>(2)</sup>	.350 (8.9)	.630 (16.0)			.730 (18.5)	.710 (18.1)	
M <sup>(2)</sup>	.400 (10.2)	.670 (17.0)			.760 (19.3)	.740 (18.8)	

NOTES: (1) All "H" Dimensions are from Capacitor seating plane to top of Capacitor.  
 (2) On T350 Series, case sizes J, K, L & M are supplied with .200" (5.08) lead spacing.  
 (3) These case sizes are not available for T351, T352 & T355 capacitors. For T351 & T352 J, K, L & M cases, use T353. For T355 J, K, L & M, use T354.

For further details consult UltraDip Catalog F-2947

**T350, T351, T352, T353, T354 & T355 SERIES  
ORDERING INFORMATION**



**T350, T351, T352, T353, T354 & T355 SERIES  
RATINGS & PART NUMBER REFERENCE**

CAP. $\mu$ F	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A @ 25°C	Max. DISSIPATION FACTOR % @ 25°C, 120Hz	CAP. $\mu$ F	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A @ 25°C	Max. DISSIPATION FACTOR % @ 25°C, 120 Hz
<b>3 VOLT RATING AT 85°C — 2 VOLT RATING AT 125°C</b>					<b>6.3 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C</b>				
4.7	A	T35(1)A475(2)003AS	0.5	5	3.3	A	T35(1)A335(2)006AS	0.5	5
5.6	A	T35(1)A565(2)003AS	0.5	5	3.9	A	T35(1)A395(2)006AS	0.5	5
6.8	A	T35(1)A685(2)003AS	0.5	5	4.7	A	T35(1)A475(2)006AS	0.5	5
8.2	A	T35(1)A825(2)003AS	0.5	6	5.6	A	T35(1)A565(2)006AS	0.5	5
10.0	A	T35(1)A106(2)003AS	0.5	6	6.8	A	T35(1)A685(2)006AS	0.5	5
12.0	B	T35(1)B126(2)003AS	0.5	6	8.2	B	T35(1)B825(2)006AS	0.5	6
15.0	B	T35(1)B156(2)003AS	0.5	6	10.0	B	T35(1)B106(2)006AS	0.5	6
18.0	C	T35(1)C186(2)003AS	0.5	6	12.0	C	T35(1)C126(2)006AS	0.6	6
22.0	C	T35(1)C226(2)003AS	0.5	6	15.0	C	T35(1)C156(2)006AS	0.7	6
27.0	D	T35(1)D276(2)003AS	0.6	6	18.0	D	T35(1)D186(2)006AS	0.9	6
33.0	D	T35(1)D336(2)003AS	0.8	6	22.0	D	T35(1)D226(2)006AS	1.1	6
39.0	E	T35(1)E396(2)003AS	0.9	6	27.0	E	T35(1)E276(2)006AS	1.3	6
47.0	E	T35(1)E476(2)003AS	1.1	6	33.0	E	T35(1)E336(2)006AS	1.6	6
56.0	F	T35(1)F566(2)003AS	1.3	6	39.0	F	T35(1)F396(2)006AS	1.9	6
68.0	F	T35(1)F686(2)003AS	1.6	6	47.0	F	T35(1)F476(2)006AS	2.3	6
82.0	G	T35(1)G826(2)003AS	1.9	8	56.0	G	T35(1)G566(2)006AS	2.7	6
100.0	G	T35(1)G107(2)003AS	2.4	8	68.0	G	T35(1)G686(2)006AS	3.3	6
120.0	H	T35(1)H127(2)003AS	2.8	8	82.0	H	T35(1)H826(2)006AS	3.9	8
150.0	H	T35(1)H157(2)003AS	3.6	8	100.0	H	T35(1)H107(2)006AS	4.8	8
180.0	J	T35(1)J187(2)003AS	4.3	8	120.0	J	T35(1)J127(2)006AS	5.8	8
220.0	J	T35(1)J227(2)003AS	5.3	8	150.0	J	T35(1)J157(2)006AS	7.2	8
270.0	K	T35(1)K277(2)003AS	6.4	8	180.0	K	T35(1)K187(2)006AS	8.6	8
330.0	K	T35(1)K337(2)003AS	7.9	8	220.0	K	T35(1)K227(2)006AS	10.0	8
390.0	L	T35(1)L397(2)003AS	9.3	9	270.0	L	T35(1)L277(2)006AS	10.0	8
470.0	L	T35(1)L477(2)003AS	10.0	9	330.0	L	T35(1)L337(2)006AS	10.0	8
560.0	M	T35(1)M567(2)003AS	10.0	9					
680.0	M	T35(1)M687(2)003AS	10.0	9					

(1) To complete KEMET Part Number, insert Series Designation as follows: "0" = T350, "1" = T351, "2" = T352, "3" = T353, "4" = T354, "5" = T355.  
 (2) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: "M" = ± 20%, "K" = ± 10%.

NOTE: Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.  
 15/16 Volt Capacitors may be shipped interchangeably at KEMET's option.

For further details, consult UltraDip Catalog F-2947.

**T350, T351, T352, T353, T354 & T355 SERIES**

CAP. $\mu$ F	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A @ 25°C	Max. DISSIPATION FACTOR % @ 25°C, 120Hz	CAP. $\mu$ F	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A @ 25°C	Max. DISSIPATION FACTOR % @ 25°C, 120Hz
<b>10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C</b>					<b>20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C</b>				
2.2	A	T35(1)A225(2)010AS	0.5	5	1.0	A	T35(1)A105(2)020AS	0.5	3
2.7	A	T35(1)A275(2)010AS	0.5	5	1.2	A	T35(1)A125(2)020AS	0.5	5
3.3	A	T35(1)A335(2)010AS	0.5	5	1.5	A	T35(1)A155(2)020AS	0.5	5
3.9	A	T35(1)A395(2)010AS	0.5	5	1.8	A	T35(1)A185(2)020AS	0.5	5
4.7	A	T35(1)A475(2)010AS	0.5	5	2.2	A	T35(1)A225(2)020AS	0.5	5
5.6	B	T35(1)B565(2)010AS	0.5	5	2.7	B	T35(1)B275(2)020AS	0.5	5
6.8	B	T35(1)B685(2)010AS	0.5	5	3.3	B	T35(1)B335(2)020AS	0.5	5
8.2	C	T35(1)C825(2)010AS	0.6	6	3.9	C	T35(1)C395(2)020AS	0.6	5
10.0	C	T35(1)C106(2)010AS	0.8	6	4.7	C	T35(1)C475(2)020AS	0.8	5
12.0	E	T35(1)E126(2)010AS	0.9	6	5.6	D	T35(1)D565(2)020AS	0.9	5
15.0	E	T35(1)E156(2)010AS	1.2	6	6.8	D	T35(1)D685(2)020AS	1.1	5
18.0	E	T35(1)E186(2)010AS	1.4	6	8.2	E	T35(1)E825(2)020AS	1.3	6
22.0	E	T35(1)E226(2)010AS	1.8	6	10.0	E	T35(1)E106(2)020AS	1.6	6
27.0	F	T35(1)F276(2)010AS	2.1	6	12.0	F	T35(1)F126(2)020AS	1.9	6
33.0	F	T35(1)F336(2)010AS	2.6	6	15.0	F	T35(1)F156(2)020AS	2.4	6
39.0	G	T35(1)G396(2)010AS	3.1	6	18.0	G	T35(1)G186(2)020AS	2.8	6
47.0	H	T35(1)H476(2)010AS	3.8	6	22.0	G	T35(1)G226(2)020AS	3.5	6
56.0	H	T35(1)H566(2)010AS	4.4	6	27.0	J	T35(1)J276(2)020AS	4.3	6
68.0	H	T35(1)H686(2)010AS	5.4	6	33.0	J	T35(1)J336(2)020AS	5.3	6
82.0	J	T35(1)J826(2)010AS	6.5	8	39.0	K	T35(1)K396(2)020AS	6.2	6
100.0	J	T35(1)J107(2)010AS	8.0	8	47.0	K	T35(1)K476(2)020AS	7.5	6
120.0	K	T35(1)K127(2)010AS	9.6	8	56.0	L	T35(1)L566(2)020AS	8.9	6
150.0	K	T35(1)K157(2)010AS	10.0	8	68.0	L	T35(1)L686(2)020AS	10.0	6
180.0	L	T35(1)L187(2)010AS	10.0	8	82.0	M	T35(1)M826(2)020AS	10.0	8
220.0	L	T35(1)L227(2)010AS	10.0	8	100.0	M	T35(1)M107(2)020AS	10.0	8
<b>16 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C</b>					<b>25 VOLT RATING AT 85°C — 16.5 VOLT RATING AT 125°C</b>				
1.5	A	T35(1)A155(2)016AS	0.5	5	1.0	A	T35(1)A105(2)025AS	0.5	3
1.8	A	T35(1)A185(2)016AS	0.5	5	1.2	A	T35(1)A125(2)025AS	0.5	5
2.2	A	T35(1)A225(2)016AS	0.5	5	1.5	A	T35(1)A155(2)025AS	0.5	5
2.7	A	T35(1)A275(2)016AS	0.5	5	1.8	A	T35(1)A185(2)025AS	0.5	5
3.3	A	T35(1)A335(2)016AS	0.5	5	2.2	B	T35(1)B225(2)025AS	0.5	5
3.9	B	T35(1)B395(2)016AS	0.5	5	2.7	B	T35(1)B275(2)025AS	0.5	5
4.7	B	T35(1)B475(2)016AS	0.6	5	3.3	B	T35(1)B335(2)025AS	0.7	5
5.6	C	T35(1)C565(2)016AS	0.7	5	3.9	C	T35(1)C395(2)025AS	0.7	5
6.8	C	T35(1)C685(2)016AS	0.8	5	4.7	C	T35(1)C475(2)025AS	0.9	5
8.2	E	T35(1)E825(2)016AS	1.0	6	5.6	E	T35(1)E565(2)025AS	1.1	5
10.0	E	T35(1)E106(2)016AS	1.2	6	6.8	E	T35(1)E685(2)025AS	1.4	5
12.0	E	T35(1)E126(2)016AS	1.4	6	8.2	E	T35(1)E825(2)025AS	1.6	6
15.0	E	T35(1)E156(2)016AS	1.8	6	10.0	E	T35(1)E106(2)025AS	2.0	6
18.0	F	T35(1)F186(2)016AS	2.2	6	12.0	G	T35(1)G126(2)025AS	2.4	6
22.0	F	T35(1)F226(2)016AS	2.6	6	15.0	G	T35(1)G156(2)025AS	3.0	6
27.0	H	T35(1)H276(2)016AS	3.2	6	18.0	H	T35(1)H186(2)025AS	3.6	6
33.0	H	T35(1)H336(2)016AS	4.0	6	22.0	H	T35(1)H226(2)025AS	4.4	6
39.0	J	T35(1)J396(2)016AS	4.7	6	27.0	J	T35(1)J276(2)025AS	5.4	6
47.0	J	T35(1)J476(2)016AS	5.6	6	33.0	J	T35(1)J336(2)025AS	6.6	6
56.0	K	T35(1)K566(2)016AS	6.8	6	39.0	K	T35(1)K396(2)025AS	7.8	6
68.0	K	T35(1)K686(2)016AS	8.2	6	47.0	K	T35(1)K476(2)025AS	9.4	6
82.0	L	T35(1)L826(2)016AS	9.8	8	56.0	L	T35(1)L566(2)025AS	10.0	6
100.0	L	T35(1)L107(2)016AS	10.0	8	68.0	L	T35(1)L686(2)025AS	10.0	6
120.0	M	T35(1)M127(2)016AS	10.0	8					
150.0	M	T35(1)M157(2)016AS	10.0	8					

(1) To complete KEMET Part Number, insert Series Designation as follows: "0" = T350, "1" = T351, "2" = T352, "3" = T353, "4" = T354, "5" = T355.  
 (2) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: "M" =  $\pm 20\%$ , "K" =  $\pm 10\%$ .

NOTE: Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.  
 15/16 Volt Capacitors may be shipped interchangeably at KEMET's option.

For further details, consult UltraDip Catalog F-2947.

**T350, T351, T352, T353, T354 & T355 SERIES**

**TABLE 4**

CAP. $\mu$ F	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A @ 25°C	Max. DISSIPATION FACTOR % @ 25°C, 120Hz	CAP. $\mu$ F	CASE SIZE	KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A @ 25°C	Max. DISSIPATION FACTOR % @ 25°C, 120Hz
<b>35 VOLT RATING AT 85° — 23 VOLT RATING AT 125°C</b>					<b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b>				
0.10	A	T35(1)A104(2)035AS	0.5	3	0.10	A	T35(1)A104(2)050AS	0.5	3
0.12	A	T35(1)A124(2)035AS	0.5	3	0.12	A	T35(1)A124(2)050AS	0.5	3
0.15	A	T35(1)A154(2)035AS	0.5	3	0.15	A	T35(1)A154(2)050AS	0.5	3
0.18	A	T35(1)A184(2)035AS	0.5	3	0.18	A	T35(1)A184(2)050AS	0.5	3
0.22	A	T35(1)A224(2)035AS	0.5	3	0.22	A	T35(1)A224(2)050AS	0.5	3
0.27	A	T35(1)A274(2)035AS	0.5	3	0.27	A	T35(1)A274(2)050AS	0.5	3
0.33	A	T35(1)A334(2)035AS	0.5	3	0.33	A	T35(1)A334(2)050AS	0.5	3
0.39	A	T35(1)A394(2)035AS	0.5	3	0.39	B	T35(1)B394(2)050AS	0.5	3
0.47	A	T35(1)A474(2)035AS	0.5	3	0.47	B	T35(1)B474(2)050AS	0.5	3
0.56	A	T35(1)A564(2)035AS	0.5	3	0.56	B	T35(1)B564(2)050AS	0.5	3
0.68	A	T35(1)A684(2)035AS	0.5	3	0.68	B	T35(1)B684(2)050AS	0.5	3
0.82	A	T35(1)A824(2)035AS	0.5	3	0.82	B	T35(1)B824(2)050AS	0.5	3
1.0	A	T35(1)A105(2)035AS	0.5	3	1.0	B	T35(1)B105(2)050AS	0.5	3
1.2	B	T35(1)B125(2)035AS	0.5	5	1.2	D	T35(1)D125(2)050AS	0.5	5
1.5	B	T35(1)B155(2)035AS	0.5	5	1.5	E	T35(1)E155(2)050AS	0.6	5
1.8	C	T35(1)C185(2)035AS	0.5	5	1.8	E	T35(1)E185(2)050AS	0.7	5
2.2	C	T35(1)C225(2)035AS	0.6	5	2.2	E	T35(1)E225(2)050AS	0.9	5
2.7	D	T35(1)D275(2)035AS	0.7	5	2.7	F	T35(1)F275(2)050AS	1.0	5
3.3	D	T35(1)D335(2)035AS	0.9	5	3.3	F	T35(1)F335(2)050AS	1.3	5
3.9	E	T35(1)E395(2)035AS	1.0	5	3.9	G	T35(1)G395(2)050AS	1.5	5
4.7	E	T35(1)E475(2)035AS	1.3	5	4.7	G	T35(1)G475(2)050AS	1.9	5
5.6	F	T35(1)F565(2)035AS	1.5	5	5.6	H	T35(1)H565(2)050AS	2.2	5
6.8	F	T35(1)F685(2)035AS	1.9	5	6.8	J	T35(1)J685(2)050AS	2.7	5
8.2	G	T35(1)G825(2)035AS	2.3	6	8.2	J	T35(1)J825(2)050AS	3.2	6
10.0	G	T35(1)G106(2)035AS	2.8	6	10.0	K	T35(1)K106(2)050AS	4.0	6
12.0	J	T35(1)J126(2)035AS	3.3	6	12.0	K	T35(1)K126(2)050AS	4.8	6
15.0	J	T35(1)J156(2)035AS	4.2	6	15.0	L	T35(1)L156(2)050AS	6.0	6
18.0	K	T35(1)K186(2)035AS	5.0	6	18.0	L	T35(1)L186(2)050AS	7.2	6
22.0	K	T35(1)K226(2)035AS	6.2	6	22.0	M	T35(1)M226(2)050AS	8.8	6
27.0	L	T35(1)L276(2)035AS	7.5	6					
33.0	L	T35(1)L336(2)035AS	9.2	6					
39.0	M	T35(1)M396(2)035AS	10.0	6					
47.0	M	T35(1)M476(2)035AS	10.0	6					

(1) To complete KEMET Part Number, insert Series Designation as follows: "0" = T350, "1" = T351, "2" = T352, "3" = T353, "4" = T354, "5" = T355.

(2) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: "M" =  $\pm 20\%$ , "K" =  $\pm 10\%$ .

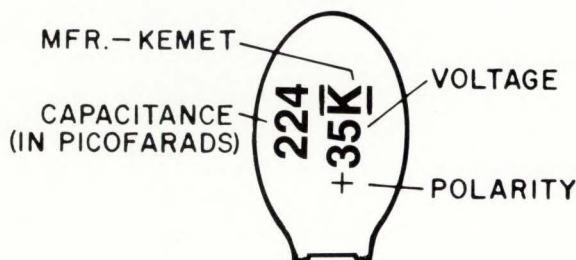
NOTE: Higher voltage and better capacitance tolerance product may be substituted for an order within the same case size at KEMET's option.  
15/16 Volt Capacitors may be shipped interchangeably at KEMET's option.

**CAPACITOR MARKINGS**

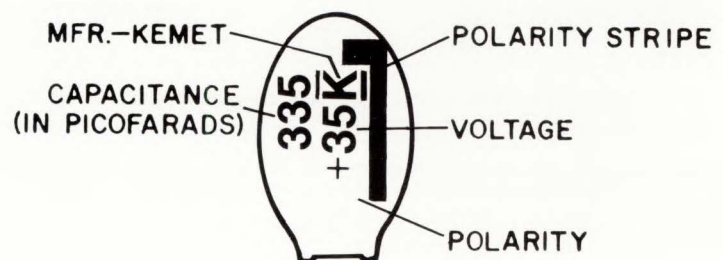
The new gold color epoxy utilized permits Laser marking with outstanding permanency and legibility.

**T350, T351, T352, T353, T354 & T355**

**A CASE**



**B through M CASES**



For further details, consult UltraDip Catalog F-2947.

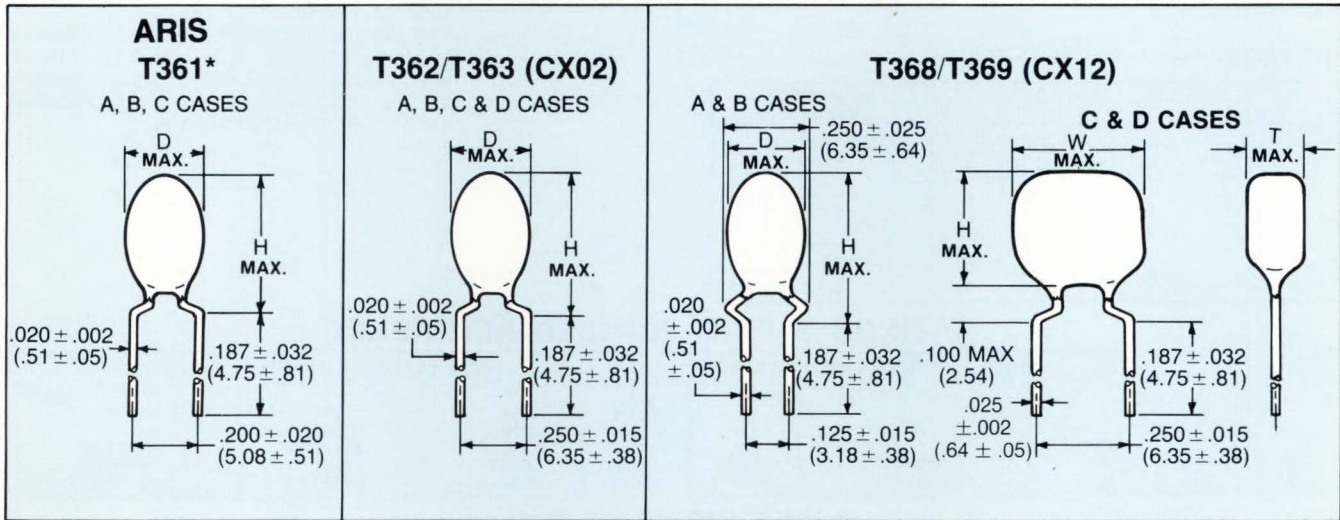
**T361, T362, T363 (CX02), T368 & T369 (CX12) SERIES — DIPPED**  
**ECONOMICAL / .1-330 μF 6-50 VDC / LOW DC LEAKAGE**

KEMET dipped solid tantalum capacitors offer the designer of quality instruments and entertainment systems the widely-recognized advantages inherent in solid tantalum capacitors at prices competitive to conventional electrolytic capacitors. Their concept is the result of the application of KEMET's superior know-how in the production of Military and High Reliability tantalum capacitors coupled with the unique automated assembly methods developed for computer-part production.

The new gold color epoxy utilized permits Laser marking with outstanding permanency and legibility.

These capacitors are also available in certain values per MIL-C-49137/2: T363 (CX02) and T369 (CX12). T369 capacitors are available in A & B cases only.

**CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

**ARIS T361**

Case SIZE	D MAX DIAMETER	H MAX HEIGHT
A	0.175 (4.45)	0.350 (8.89)
B	0.250 (6.35)	0.450 (11.43)
C	0.350 (8.89)	0.610 (15.49)

**T362/T363**

CASE SIZE	D MAX DIAMETER	H MAX HEIGHT
A	0.175 (4.45)	0.350 (8.89)
B	0.250 (6.35)	0.450 (11.43)
C	0.350 (8.89)	0.610 (15.49)
D	0.400 (10.16)	0.740 (18.80)

**T368/T369**

CASE SIZE	D MAX DIAMETER	T MAX THICKNESS	W MAX WIDTH	H MAX HEIGHT
A	0.175 (4.45)	—	—	0.350 (8.89)
B	0.250 (6.35)	—	—	0.450 (11.43)
C	—	0.250 (6.35)	0.400 (10.16)	0.420 (10.67)
D	—	0.250 (6.35)	0.460 (11.68)	0.52 (13.20)

\*T361 style is electrically identical to T362 style, except for lead spacing (available in A, B & C cases only). T361 capacitors are also available in KEMET's ARIS (Automatic Radial Insertion System) for automatic insertion machines. Specify part number and C-7301. For further information, see page 73.

**T361, T362, T363 (CX02), T368 & T369 (CX12) ORDERING INFORMATION**

**TANTALUM SERIES** — T 36X B 155 M 050 A S

Insert appropriate number to replace letter "X"—361, 362, 363 (CX02), 368 or 369 (CX12). Higher Voltage product may be substituted for a lower voltage order within the same case size at KEMET's option for T361, T362, and T368 capacitors.

**CASE SIZE** — A, B, C or D, T369 capacitors available only in A & B cases.

**CAPACITANCE IN PICOFARADS** — First two digits are significant figures. Third digit is the number of zeros following.

**LEAD MATERIAL** — S — Standard

**FAILURE RATE LEVEL** — A — Not Applicable

**VOLTAGE RATING** —

**CAPACITANCE TOLERANCE** — M — ±20%\*  
K — ±10%\*  
J — ±5%

\* T363 & T369 capacitors available only at M & K tolerances

For further details consult T361, T362, T363, T368 & T369 Catalog F-2638

**T361, T362, T363 (CX02), T368 & T369 (CX12) SERIES  
MIL-C-49137/2 MILITARY ORDERING INFORMATION**

**CX 02 D 225 K**

**TYPE**

Capacitors, Fixed, Solid Tantalum, Conformal Coated, Non-hermetically Sealed.

**STYLE**

02 (T363) A, B, C & D Cases  
12 (T369) A & B Cases Only

**VOLTAGE**

Symbol	Rated (85°C) Volts, dc	Surge (85°C) Volts, dc
D	6	8.0
F	10	13.0
H	15	20.0
J	20	26.0
K	25	32.0
M	35	46.0
N	50	65.0

**CAPACITANCE TOLERANCE**

Symbol	Capacitance Tolerance
K	Percent (±) 10
M	20

**CAPACITANCE**

The nominal capacitance value, expressed in picofarads (pF), is identified by a three-digit number; the first two digits represent significant figures and the last digit specifies the number of zeros to follow.

**RATINGS & PART NUMBER REFERENCE**

CAP. $\mu$ F	CASE SIZE	CAP. TOL. $\pm$ %	T361, T362, T368 SERIES			CX02, CX12 CAPACITORS PER MIL-C-49137/2		
			KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A@25°C	MAX. DISSIPATION FACTOR %@25°C, 120 Hz	CX02 (T363) MILITARY PART NUMBER	CX12 (T369) MILITARY PART NUMBER	T363, T369 KEMET PART NUMBER
<b>6 VOLT RATING AT 85°C</b>								
3.3	A	5,10,20	T36(1)A335(2)006AS	0.5	5			
3.9	A	5,10,20	T36(1)A395(2)006AS	0.5	5			
4.7	A	5,10,20	T36(1)A475(2)006AS	0.5	5			
5.6	A	5,10,20	T36(1)A565(2)006AS	0.5	5			
6.8	A	5	T36(1)A685J 006AS	0.5	5			
6.8	A	10	T36(1)A685K 006AS	0.5	5	CX02D685K	CX12D685K	T36(3)A685K 006AS
6.8	A	20	T36(1)A685M006AS	0.5	5	CX02D685M	CX12D685M	T36(3)A685M006AS
8.2	B	5,10,20	T36(1)B825(2)006AS	0.5	6			
10.0	B	5,10,20	T36(1)B106(2)006AS	0.5	6			
12.0	B	5,10,20	T36(1)B126(2)006AS	0.6	6			
15.0	B	5,10,20	T36(1)B156(2)006AS	0.7	6			
18.0	B	5,10,20	T36(1)B186(2)006AS	0.9	6			
22.0	B	5,10,20	T36(1)B226(2)006AS	1.1	6			
27.0	B	5,10,20	T36(1)B276(2)006AS	1.3	6			
33.0	B	5,10,20	T36(1)B336(2)006AS	1.6	6			
39.0	B	5,10,20	T36(1)B396(2)006AS	1.9	6			
47.0	B	5	T36(1)B476J 006AS	2.3	6			
47.0	B	10	T36(1)B476K006AS	2.3	6	CX02D476K	CX12D476K	T36(3)B476K 006AS
47.0	B	20	T36(1)B476M006AS	2.3	6	CX02D476M	CX12D476M	T36(3)B476M006AS
56.0	B	5,10,20	T36(1)B566(2)006AS	2.7	6			
68.0	B	5	T36(1)B686J 006AS	3.3	6			
68.0	B	10	T36(1)B686K 006AS	3.3	6	CX02D686K	CX12D686K	T36(3)B686K 006AS
68.0	B	20	T36(1)B686M006AS	3.3	6	CX02D686M	CX12D686M	T36(3)B686M006AS
82.0	C	5,10,20	T36(1)C826(2)006AS	3.9	8			
100.0	C	5,10,20	T36(1)C107(2)006AS	4.8	8			
120.0	C	5,10,20	T36(1)C127(2)006AS	5.8	8			
150.0	C	5	T36(1)C157J 006AS	7.2	8			
150.0	C	10	T36(1)C157K 006AS	7.2	8	CX02D157K		T363C157K 006AS
150.0	C	20	T36(1)C157M006AS	7.2	8	CX02D157M		T363C157M006AS
180.0	D	5,10,20	T36(1)D187(2)006AS	8.6	8			
220.0	D	5,10,20	T36(1)D227(2)006AS	10.0	8			
270.0	D	5,10,20	T36(1)D277(2)006AS	10.0	8			
330.0	D	5	T36(1)D337J 006AS	10.0	8			
330.0	D	10	T36(1)D337K 006AS	10.0	8	CX02D337K		T363D337K 006AS
330.0	D	20	T36(1)D337M006AS	10.0	8	CX02D337M		T363D337M006AS

(1) To complete KEMET Part Number, insert Series Designation as follows: 1 — T361 (Available only in A, B & C case sizes), 2 — T362, 8 — T368.  
 (2) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M —  $\pm$ 20%, K —  $\pm$ 10%, J —  $\pm$ 5%.  
 (3) To complete KEMET Part Number, insert Series Designation as follows: 3 — T363 (CX02), 9 — T369 (CX12) (Available only in A & B case sizes).  
 Higher voltage and better capacitance tolerance product may be substituted for a lower voltage order within the same case size, at KEMET's option for T361, T362 & T368 capacitors. 15/16 Volt Capacitors may be shipped interchangeably at KEMET's option.

For further details consult T361, T362, T363, T368 & T369 Catalog F-2638

**T361, T362, T363 (CX02), T368 & T369 (CX12) SERIES**

CAP. $\mu$ F	CASE SIZE	CAP. TOL. $\pm$ %	T361, T362, T368 SERIES			CX02, CX12 CAPACITORS PER MIL-C-49137/2		
			KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A@25°C	MAX. DISSIPATION FACTOR % @25°C, 120 Hz	CX02 (T363) MILITARY PART NUMBER	CX12 (T369) MILITARY PART NUMBER	T363, T369 KEMET PART NUMBER
<b>10 VOLT RATING AT 85°C</b>								
2.2	A	5,10,20	T361A2252010AS	0.5	5			
2.7	A	5,10,20	T361A2752010AS	0.5	5			
3.3	A	5,10,20	T361A3352010AS	0.5	5			
3.9	A	5,10,20	T361A3952010AS	0.5	5			
4.7	A	5	T361A475J 010AS	0.5	5			
4.7	A	10	T361A475K 010AS	0.5	5	CX02F475K	CX12F475K	T363A475K 010AS
4.7	A	20	T361A475M 010AS	0.5	5	CX02F475M	CX12F475M	T363A475M 010AS
5.6	B	5,10,20	T361B5652010AS	0.5	5			
6.8	B	5,10,20	T361B6852010AS	0.5	5			
8.2	B	5,10,20	T361B8252010AS	0.6	6			
10.0	B	5,10,20	T361B1062010AS	0.8	6			
12.0	B	5,10,20	T361B1262010AS	0.9	6			
15.0	B	5,10,20	T361B1562010AS	1.2	6			
18.0	B	5,10,20	T361B1862010AS	1.4	6			
22.0	B	5,10,20	T361B2262010AS	1.8	6			
27.0	B	5,10,20	T361B2762010AS	2.1	6			
33.0	B	5	T361B336J 010AS	2.6	6			
33.0	B	10	T361B336K 010AS	2.6	6	CX02F336K	CX12F336K	T363B336K 010AS
33.0	B	20	T361B336M 010AS	2.6	6	CX02F336M	CX12F336M	T363B336M 010AS
39.0	B	5,10,20	T361B3962010AS	3.1	6			
47.0	C	5,10,20	T361C4762010AS	3.8	6			
56.0	C	5,10,20	T361C5662010AS	4.4	6			
68.0	C	5,10,20	T361C6862010AS	5.4	6			
82.0	C	5,10,20	T361C8262010AS	6.5	8			
100.0	C	5	T361C107J 010AS	8.0	8			
100.0	C	10	T361C107K 010AS	8.0	8	CX02F107K		T363C107K 010AS
100.0	C	20	T361C107M 010AS	8.0	8	CX02F107M		T363C107M 010AS
120.0	D	5,10,20	T361D1272010AS	9.6	8			
150.0	D	5,10,20	T361D1572010AS	10.0	8			
180.0	D	5,10,20	T361D1872010AS	10.0	8			
220.0	D	5	T361D227J 010AS	10.0	8			
220.0	D	10	T361D227K 010AS	10.0	8	CX02F227K		T363D227K 010AS
220.0	D	20	T361D227M 010AS	10.0	8	CX02F227M		T363D227M 010AS
<b>15 VOLT RATING AT 85°C</b>								
1.5	A	5,10,20	T361A1552015AS	0.5	5			
1.8	A	5,10,20	T361A1852015AS	0.5	5			
2.2	A	5,10,20	T361A2252015AS	0.5	5			
2.7	A	5,10,20	T361A2752015AS	0.5	5			
3.3	A	5	T361A335J 015AS	0.5	5			
3.3	A	10	T361A335K 015AS	0.5	5	CX02H335K	CX12H335K	T363A335K 015AS
3.3	A	20	T361A335M 015AS	0.5	5	CX02H335M	CX12H335M	T363A335M 015AS
3.9	B	5,10,20	T361B3952015AS	0.5	5			
4.7	B	5,10,20	T361B4752015AS	0.6	5			
5.6	B	5,10,20	T361B5652015AS	0.7	5			
6.8	B	5,10,20	T361B6852015AS	0.8	5			
8.2	B	5,10,20	T361B8252015AS	1.0	6			
10.0	B	5,10,20	T361B1062015AS	1.2	6			
12.0	B	5,10,20	T361B1262015AS	1.4	6			
15.0	B	5,10,20	T361B1562015AS	1.8	6			
18.0	B	5,10,20	T361B1862015AS	2.2	6			
22.0	B	5	T361B226J 015AS	2.6	6			
22.0	B	10	T361B226K 015AS	2.6	6	CX02H226K	CX12H226K	T363B226K 015AS
22.0	B	20	T361B226M 015AS	2.6	6	CX02H226M	CX12H226M	T363B226M 015AS
27.0	C	5,10,20	T361C2762015AS	3.2	6			
33.0	C	5,10,20	T361C3362015AS	4.0	6			
39.0	C	5,10,20	T361C3962015AS	4.7	6			
47.0	C	5,10,20	T361C4762015AS	5.6	6			
56.0	C	5,10,20	T361C5662015AS	6.8	6			
68.0	C	5	T361C686J 015AS	8.2	6			
68.0	C	10	T361C686K 015AS	8.2	6	CX02H686K		T363C686K 015AS
68.0	C	20	T361C686M 015AS	8.2	6	CX02H686M		T363C686M 015AS
82.0	D	5,10,20	T361D8262015AS	9.8	8			
100.0	D	5,10,20	T361D1072015AS	10.0	8			
120.0	D	5,10,20	T361D1272015AS	10.0	8			
150.0	D	5	T361D157J 015AS	10.0	8			
150.0	D	10	T361D157K 015AS	10.0	8	CX02H157K		T363D157K 015AS
150.0	D	20	T361D157M 015AS	10.0	8	CX02H157M		T363D157M 015AS

(1) To complete KEMET Part Number, insert Series Designation as follows: 1 — T361 (Available only in A, B & C case sizes), 2 — T362, 8 — T368.

(2) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M —  $\pm$ 20%, K —  $\pm$ 10%, J —  $\pm$ 5%.

(3) To complete KEMET Part Number, insert Series Designation as follows: 3 — T363 (CX02), 9 — T369 (CX12) (Available only in A & B case sizes).

**Bold face** line indicate popular part types and values.

Higher voltage and better capacitance tolerance product may be substituted for a lower voltage order within the same case size, at KEMET's option for T361, T362 & T368 capacitors. 15/16 Volt Capacitors may be shipped interchangeably at KEMET's option.

For further details consult T361, T362, T363, T368 & T369 Catalog F-2638

**T361, T362, T363 (CX02), T368 & T369 (CX12) SERIES**

CAP. $\mu$ F	CASE SIZE	CAP. TOL. $\pm$ %	T361, T362, T368 SERIES			CX02, CX12 CAPACITORS PER MIL-C-49137/2		
			KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A@25°C	MAX. DISSIPATION FACTOR %@25°C, 120 Hz	CX02 (T363) MILITARY PART NUMBER	CX12 (T369) MILITARY PART NUMBER	T363, T369 KEMET PART NUMBER
<b>20 VOLT RATING AT 85°C</b>								
1.0	A	5,10,20	T361A1052020AS	0.5	3			
1.2	A	5,10,20	T361A1252020AS	0.5	5			
1.5	A	5,10,20	T361A1552020AS	0.5	5			
1.8	A	5,10,20	T361A1852020AS	0.5	5			
2.2	A	5	T361A225J 020AS	0.5	5			
2.2	A	10	T361A225K 020AS	0.5	5	CX02J225K	CX12J225K	T363A225K020AS
2.2	A	20	T361A225M020AS	0.5	5	CX02J225M	CX12J225M	T363A225M020AS
2.7	B	5,10,20	T361B2752020AS	0.5	5			
3.3	B	5,10,20	T361B3352020AS	0.5	5			
3.9	B	5,10,20	T361B3952020AS	0.6	5			
4.7	B	5,10,20	T361B4752020AS	0.8	5			
5.6	B	5,10,20	T361B5652020AS	0.9	5			
6.8	B	5,10,20	T361B6852020AS	1.1	5			
8.2	B	5,10,20	T361B8252020AS	1.3	6			
10.0	B	5,10,20	T361B1062020AS	1.6	6			
12.0	B	5,10,20	T361B1262020AS	1.9	6			
15.0	B	5	T361B156J 020AS	2.4	6			
15.0	B	10	T361B156K 020AS	2.4	6	CX02J156K	CX12J156K	T363B156K 020AS
15.0	B	20	T361B156M020AS	2.4	6	CX02J156M	CX12J156M	T363B156M020AS
18.0	C	5,10,20	T361C1862020AS	2.8	6			
22.0	C	5,10,20	T361C2262020AS	3.5	6			
27.0	C	5,10,20	T361C2762020AS	4.3	6			
33.0	C	5,10,20	T361C3362020AS	5.3	6			
39.0	C	5,10,20	T361C3962020AS	6.2	6			
47.0	C	5	T361C476J 020AS	7.5	6			
47.0	C	10	T361C476K 020AS	7.5	6	CX02J476K		T363C476K 020AS
47.0	C	20	T361C476M020AS	7.5	6	CX02J476M		T363C476M020AS
56.0	D	5,10,20	T361D5662020AS	8.9	6			
68.0	D	5,10,20	T361D6862020AS	10.0	6			
82.0	D	5,10,20	T361D8262020AS	10.0	8			
100.0	D	5	T361D107J 020AS	10.0	8			
100.0	D	10	T361D107K 020AS	10.0	8	CX02J107K		T363D107K 020AS
100.0	D	20	T361D107M020AS	10.0	8	CX02J107M		T363D107M020AS
<b>25 VOLT RATING AT 85°C</b>								
1.0	A	5,10,20	T361A1052025AS	0.5	3			
1.2	A	5,10,20	T361A1252025AS	0.5	5			
1.5	A	5	T361A155J 025AS	0.5	5			
1.5	A	10	T361A155K 025AS	0.5	5	CX02K155K	CX12K155K	T363A155K 025AS
1.5	A	20	T361A155M025AS	0.5	5	CX02K155M	CX12K155M	T363A155M025AS
1.8	B	5,10,20	T361B1852025AS	0.5	5			
2.2	B	5,10,20	T361B2252025AS	0.5	5			
2.7	B	5,10,20	T361B2752025AS	0.5	5			
3.3	B	5,10,20	T361B3352025AS	0.7	5			
3.9	B	5,10,20	T361B3952025AS	0.7	5			
4.7	B	5,10,20	T361B4752025AS	0.9	5			
5.6	B	5,10,20	T361B5652025AS	1.1	5			
6.8	B	5,10,20	T361B6852025AS	1.4	5			
8.2	B	5,10,20	T361B8252025AS	1.6	6			
10.0	B	5	T361B106J 025AS	2.0	6			
10.0	B	10	T361B106K 025AS	2.0	6	CX02K106K	CX12K106K	T363B106K 025AS
10.0	B	20	T361B106M025AS	2.0	6	CX02K106M	CX12K106M	T363B106M025AS
12.0	C	5,10,20	T361C1262025AS	2.4	6			
15.0	C	5,10,20	T361C1562025AS	3.0	6			
18.0	C	5,10,20	T361C1862025AS	3.6	6			
22.0	C	5,10,20	T361C2262025AS	4.4	6			
27.0	C	5,10,20	T361C2762025AS	5.4	6			
33.0	C	5	T361C336J 025AS	6.6	6			
33.0	C	10	T361C336K 025AS	6.6	6	CX02K336K		T363C336K 025AS
33.0	C	20	T361C336M025AS	6.6	6	CX02K336M		T363C336M025AS
39.0	D	5,10,20	T361D3962025AS	7.8	6			
47.0	D	5,10,20	T361D4762025AS	9.4	6			
56.0	D	5,10,20	T361D5662025AS	10.0	6			
68.0	D	5	T361D686J 025AS	10.0	6			
68.0	D	10	T361D686K 025AS	10.0	6	CX02K686K		T363D686K 025AS
68.0	D	20	T361D686M025AS	10.0	6	CX02K686M		T363D686M025AS

(1) To complete KEMET Part Number, insert Series Designation as follows: 1 — T361 (Available only in A, B & C case sizes), 2 — T362, 8 — T368.

(2) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M —  $\pm$ 20%, K —  $\pm$ 10%, J —  $\pm$ 5%.

(3) To complete KEMET Part Number, insert Series Designation as follows: 3 — T363 (CX02), 9 — T369 (CX12) (Available only in A & B case sizes).

**Bold face** line indicate popular part types and values.

Higher voltage and better capacitance tolerance product may be substituted for a lower voltage order within the same case size, at KEMET's option for T361, T362 & T368 capacitors. 15/16 Volt Capacitors may be shipped interchangeably at KEMET's option.



**T361, T362, T363 (CX02), T368 & T369 (CX12) SERIES**

CAP. $\mu$ F	CASE SIZE	CAP. TOL. $\pm$ %	T361, T362, T368 SERIES			CX02, CX12 CAPACITORS PER MIL-C-49137/2		
			KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A@25°C	MAX. DISSIPATION FACTOR %@25°C, 120 Hz	CX02 (T363) MILITARY PART NUMBER	CX12 (T369) MILITARY PART NUMBER	T363, T369 KEMET PART NUMBER
<b>35 VOLT RATING AT 85°C</b>								
0.1	A	5,10,20	T36(1)A104(2)035AS	0.5	3			
0.12	A	5,10,20	T36(1)A124(2)035AS	0.5	3			
0.15	A	5,10,20	T36(1)A154(2)035AS	0.5	3			
0.18	A	5,10,20	T36(1)A184(2)035AS	0.5	3			
0.22	A	5,10,20	T36(1)A224(2)035AS	0.5	3			
0.27	A	5,10,20	T36(1)A274(2)035AS	0.5	3			
<b>0.33</b>	<b>A</b>	<b>5,10,20</b>	<b>T36(1)A334(2)035AS</b>	0.5	3			
0.39	A	5,10,20	T36(1)A394(2)035AS	0.5	3			
<b>0.47</b>	<b>A</b>	<b>5,10,20</b>	<b>T36(1)A474(2)035AS</b>	0.5	3			
0.56	A	5,10,20	T36(1)A564(2)035AS	0.5	3			
<b>0.68</b>	<b>A</b>	<b>5,10,20</b>	<b>T36(1)A684(2)035AS</b>	0.5	3			
0.82	A	5,10,20	T36(1)A824(2)035AS	0.5	3			
<b>1.0</b>	<b>A</b>	<b>5,10,20</b>	<b>T36(1)A105(2)035AS</b>	0.5	3			
1.2	B	5,10,20	T36(1)B125(2)035AS	0.5	5			
1.5	B	5,10,20	T36(1)B155(2)035AS	0.5	5			
1.8	B	5,10,20	T36(1)B185(2)035AS	0.5	5			
<b>2.2</b>	<b>B</b>	<b>5,10,20</b>	<b>T36(1)B225(2)035AS</b>	0.6	5			
2.7	B	5,10,20	T36(1)B275(2)035AS	0.7	5			
3.3	B	5,10,20	T36(1)B335(2)035AS	0.9	5			
3.9	B	5,10,20	T36(1)B395(2)035AS	1.0	5			
<b>4.7</b>	<b>B</b>	<b>5,10,20</b>	<b>T36(1)B475(2)035AS</b>	1.3	5			
5.6	B	5,10,20	T36(1)B565(2)035AS	1.5	5			
<b>6.8</b>	<b>B</b>	<b>5</b>	<b>T36(1)B685J 035AS</b>	1.9	5			
<b>6.8</b>	<b>B</b>	<b>10</b>	<b>T36(1)B685K035AS</b>	1.9	5	<b>CX02M685K</b>	<b>CX12M685K</b>	<b>T36(3)B685K 035AS</b>
<b>6.8</b>	<b>B</b>	<b>20</b>	<b>T36(1)B685M035AS</b>	1.9	5	<b>CX02M685M</b>	<b>CX12M685M</b>	<b>T36(3)B685M035AS</b>
8.2	C	5,10,20	T36(1)C825(2)035AS	2.3	6			
10.0	C	5,10,20	T36(1)C106(2)035AS	2.8	6			
12.0	C	5,10,20	T36(1)C126(2)035AS	3.3	6			
15.0	C	5,10,20	T36(1)C156(2)035AS	4.2	6			
18.0	C	5,10,20	T36(1)C186(2)035AS	5.0	6			
22.0	C	5	T36(1)C226J 035AS	6.2	6			
22.0	C	10	T36(1)C226K 035AS	6.2	6	<b>CX02M226K</b>		<b>T363C226K 035AS</b>
22.0	C	20	T36(1)C226M035AS	6.2	6	<b>CX02M226M</b>		<b>T363C226M035AS</b>
27.0	D	5,10,20	T36(1)D276(2)035AS	7.5	6			
33.0	D	5	T36(1)D336J 035AS	9.2	6			
33.0	D	10	T36(1)D336K 035AS	9.2	6	<b>CX02M336K</b>		<b>T363D336K 035AS</b>
33.0	D	20	T36(1)D336M035AS	9.2	6	<b>CX02M336M</b>		<b>T363D336M035AS</b>
39.0	D	5,10,20	T36(1)D396(2)035AS	10.0	6			
<b>47.0</b>	<b>D</b>	<b>5</b>	<b>T36(1)D476J 035AS</b>	10.0	6			
<b>47.0</b>	<b>D</b>	<b>10</b>	<b>T36(1)D476K 035AS</b>	10.0	6	<b>CX02M476K</b>		<b>T363D476K 035AS</b>
<b>47.0</b>	<b>D</b>	<b>20</b>	<b>T36(1)D476M035AS</b>	10.0	6	<b>CX02M476M</b>		<b>T363D476M035AS</b>
<b>50 VOLT RATING AT 85°C</b>								
0.1	A	5	T36(1)A104J 050AS	0.5	3			
0.1	A	10	T36(1)A104K 050AS	0.5	3	<b>CX02N104K</b>	<b>CX12N104K</b>	<b>T36(3)A104K 050AS</b>
0.1	A	20	T36(1)A104M050AS	0.5	3	<b>CX02N104M</b>	<b>CX12N104M</b>	<b>T36(3)A104M050AS</b>
0.12	A	5,10,20	T36(1)A124(2)050AS	0.5	3			
0.15	A	5	T36(1)A154J 050AS	0.5	3			
0.15	A	10	T36(1)A154K 050AS	0.5	3	<b>CX02N154K</b>	<b>CX12N154K</b>	<b>T36(3)A154K 050AS</b>
0.15	A	20	T36(1)A154M050AS	0.5	3	<b>CX02N154M</b>	<b>CX12N154M</b>	<b>T36(3)A154M050AS</b>
0.18	A	5,10,20	T36(1)A184(2)050AS	0.5	3			
0.22	A	5	T36(1)A224J 050AS	0.5	3			
0.22	A	10	T36(1)A224K 050AS	0.5	3	<b>CX02N224K</b>	<b>CX12N224K</b>	<b>T36(3)A224K 050AS</b>
0.22	A	20	T36(1)A224M050AS	0.5	3	<b>CX02N224M</b>	<b>CX12N224M</b>	<b>T36(3)A224M050AS</b>
0.27	A	5,10,20	T36(1)A274(2)050AS	0.5	3			
0.33	A	5	T36(1)A334J 050AS	0.5	3			
0.33	A	10	T36(1)A334K 050AS	0.5	3	<b>CX02N334K</b>	<b>CX12N334K</b>	<b>T36(3)A334K 050AS</b>
0.33	A	20	T36(1)A334M050AS	0.5	3	<b>CX02N334M</b>	<b>CX12N334M</b>	<b>T36(3)A334M050AS</b>
0.39	A	5,10,20	T36(1)A394(2)050AS	0.5	3			
<b>0.47</b>	<b>A</b>	<b>5</b>	<b>T36(1)A474J 050AS</b>	0.5	3			
<b>0.47</b>	<b>A</b>	<b>10</b>	<b>T36(1)A474K 050AS</b>	0.5	3	<b>CX02N474K</b>	<b>CX12N474K</b>	<b>T36(3)A474K 050AS</b>
<b>0.47</b>	<b>A</b>	<b>20</b>	<b>T36(1)A474M050AS</b>	0.5	3	<b>CX02N474M</b>	<b>CX12N474M</b>	<b>T36(3)A474M050AS</b>
0.56	A	5,10,20	T36(1)A564(2)050AS	0.5	3			
0.68	A	5	T36(1)A684J 050AS	0.5	3			
0.68	A	10	T36(1)A684K 050AS	0.5	3	<b>CX02N684K</b>	<b>CX12N684K</b>	<b>T36(3)A684K 050AS</b>
0.68	A	20	T36(1)A684M050AS	0.5	3	<b>CX02N684M</b>	<b>CX12N684M</b>	<b>T36(3)A684M050AS</b>
0.82	A	5,10,20	T36(1)A824(2)050AS	0.5	3			
<b>1.0</b>	<b>A</b>	<b>5</b>	<b>T36(1)A105J 050AS</b>	0.5	3			

(1) To complete KEMET Part Number, insert Series Designation as follows: 1 - T361 (Available only in A, B & C case sizes), 2 - T362, 8 - T368.  
 (2) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M -  $\pm$ 20%, K -  $\pm$ 10%, J -  $\pm$ 5%.  
 (3) To complete KEMET Part Number, insert Series Designation as follows: 3 - T363 (CX02), 9 - T369 (CX12) (Available only in A & B case sizes).  
**Bold face** line indicate popular part types and values.  
 Higher voltage and better capacitance tolerance product may be substituted for a lower voltage order within the same case size, at KEMET's option for T361, T362 & T368 capacitors. 15/16 Volt Capacitors may be shipped interchangeably at KEMET's option.

**T361, T362, T363 (CX02), T368 & T369 (CX12) SERIES**

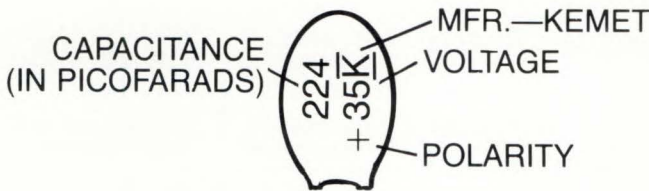
CAP. $\mu$ F	CASE SIZE	CAP. TOL. $\pm$ %	T361, T362, T368 SERIES			CX02, CX12 CAPACITORS PER MIL-C-49137/2		
			KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A@25°C	MAX. DISSIPATION FACTOR %@25°C, 120 Hz	CX02 (T363) MILITARY PART NUMBER	CX12 (T369) MILITARY PART NUMBER	T363, T369 KEMET PART NUMBER
<b>50 VOLT RATING AT 85°C (Cont'd)</b>								
1.0	A	10	<b>T361A105K050AS</b>	0.5	3	<b>CX02N105K</b>	<b>CX12N105K</b>	<b>T363A105K050AS</b>
1.0	A	20	<b>T361A105M050AS</b>	0.5	3	<b>CX02N105M</b>	<b>CX12N105M</b>	<b>T363A105M050AS</b>
1.2	B	5,10,20	T361B125050AS	0.5	5			
1.5	B	5	T361B155J050AS	0.6	5			
1.5	B	10	T361B155K050AS	0.6	5	CX02N155K	CX12N155K	T363B155K050AS
1.5	B	20	T361B155M050AS	0.6	5	CX02N155M	CX12N155M	T363B155M050AS
1.8	B	5,10,20	T361B185050AS	0.7	5			
2.2	B	5	<b>T361B225J050AS</b>	0.9	5			
2.2	B	10	<b>T361B225K050AS</b>	0.9	5	<b>CX02N225K</b>	<b>CX12N225K</b>	<b>T363B225K050AS</b>
2.2	B	20	<b>T361B225M050AS</b>	0.9	5	<b>CX02N225M</b>	<b>CX12N225M</b>	<b>T363B225M050AS</b>
2.7	B	5,10,20	T361B275050AS	1.0	5			
3.3	B	5	T361B335J050AS	1.3	5			
3.3	B	10	T361B335K050AS	1.3	5	CX02N335K	CX12N335K	T363B335K050AS
3.3	B	20	T361B335M050AS	1.3	5	CX02N335M	CX12N335M	T363B335M050AS
3.9	B	5,10,20	T361B395050AS	1.5	5			
4.7	B	5	<b>T361B475J050AS</b>	1.9	5			
4.7	B	10	<b>T361B475K050AS</b>	1.9	5	<b>CX02N475K</b>	<b>CX12N475K</b>	<b>T363B475K050AS</b>
4.7	B	20	<b>T361B475M050AS</b>	1.9	5	<b>CX02N475M</b>	<b>CX12N475M</b>	<b>T363B475M050AS</b>
5.6	C	5,10,20	T361C565050AS	2.2	5			
6.8	C	5	T361C685J050AS	2.7	5			
6.8	C	10	T361C685K050AS	2.7	5	CX02N685K		T363C685K050AS
6.8	C	20	T361C685M050AS	2.7	5	CX02N685M		T363C685M050AS
8.2	C	5,10,20	T361C825050AS	3.2	6			
10.0	C	5	<b>T361C106J050AS</b>	4.0	6			
10.0	C	10	<b>T361C106K050AS</b>	4.0	6	<b>CX02N106K</b>		<b>T363C106K050AS</b>
10.0	C	20	<b>T361C106M050AS</b>	4.0	6	<b>CX02N106M</b>		<b>T363C106M050AS</b>
*12.0	C	5,10,20	T361C126050AS	4.8	6			
*15.0	C	5	T361C156J050AS	6.0	6			
*15.0	C	10	T361C156K050AS	6.0	6	CX02N156K		T363C156K050AS
*15.0	C	20	T361C156M050AS	6.0	6	CX02N156M		T363C156M050AS
18.0	D	5,10,20	T361D186050AS	7.2	6			
22.0	D	5	<b>T361D226J050AS</b>	8.8	6			
22.0	D	10	<b>T361D226K050AS</b>	8.8	6	<b>CX02N226K</b>		<b>T363D226K050AS</b>
22.0	D	20	<b>T361D226M050AS</b>	8.8	6	<b>CX02N226M</b>		<b>T363D226M050AS</b>

(1) To complete KEMET Part Number, insert Series Designation as follows: 1 — T361 (Available only in A, B & C case sizes), 2 — T362, 8 — T368.  
 (2) To complete KEMET Part Number, insert Capacitance Tolerance Symbol as follows: M —  $\pm$ 20%, K —  $\pm$ 10%, J —  $\pm$ 5%.  
 (3) To complete KEMET Part Number, insert Series Designation as follows: 3 — T363 (CX02), 9 — T369 (CX12) (Available only in A & B case sizes).  
**Bold face** line indicate popular part types and values.  
 Higher voltage and better capacitance tolerance product may be substituted for a lower voltage order within the same case size, at KEMET's option for T361, T362 & T368 capacitors. 15/16 Volt Capacitors may be shipped interchangeably at KEMET's option.  
 \*These values are not available in T361 style capacitors.

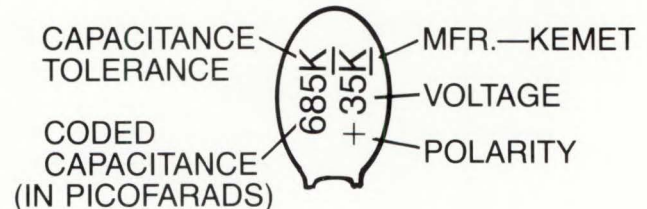
**CAPACITOR MARKINGS**

The new gold color epoxy utilized permits Laser marking with outstanding permanency and legibility.

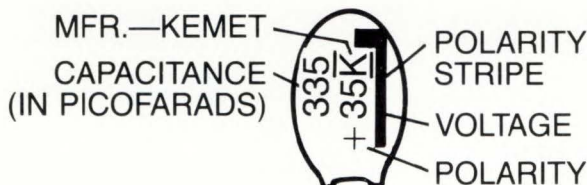
**T361, T362 & T368  
A CASE**



**MIL-C-49137 MARKING  
T363 (CX02) & T369 (CX12)**



**T361, T362 & T368  
B, C & D CASES**



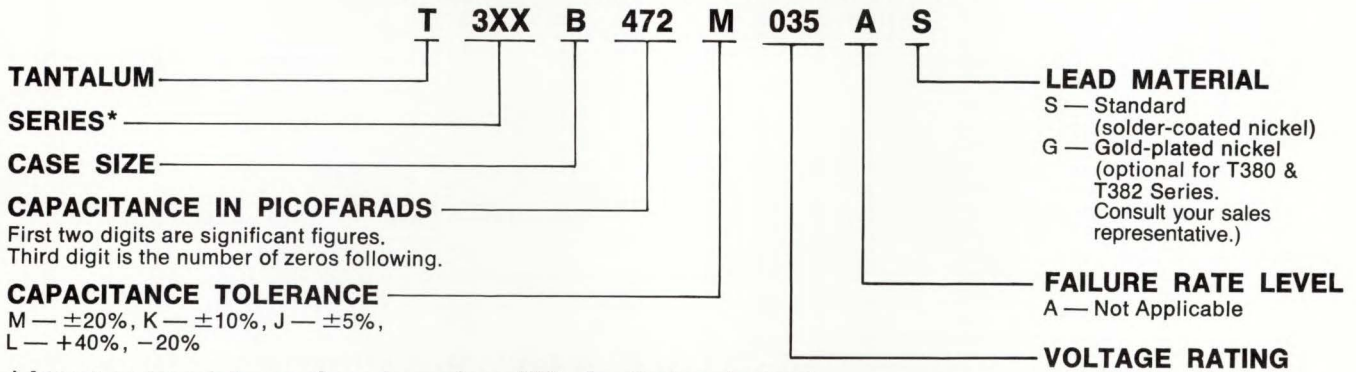
For further details consult T361, T362, T363, T368 & T369 Catalog F-2638

**MICRON SERIES**

The KEMET Micron Series is a complete line of microminiature solid tantalum capacitors designed to provide maximum electrical performance and capacitance-to-volume ratio for micro-miniaturized, high density, and integrated circuits. The capacitors consist of

ultra-small anode assemblies encapsulated in epoxy. The CV range is .0047-220  $\mu$ F, 2-50 volts. Capacitance values are identified by color codes. For additional information, including non-polar styles, refer to KEMET Micron Series Product Catalog (Form F-2710).

**MICRON ORDERING INFORMATION**



\* Insert appropriate numbers to replace XX's for Series desired.

T370, T371, T372, T373, T374, T376, T380, T382, T384 or T386

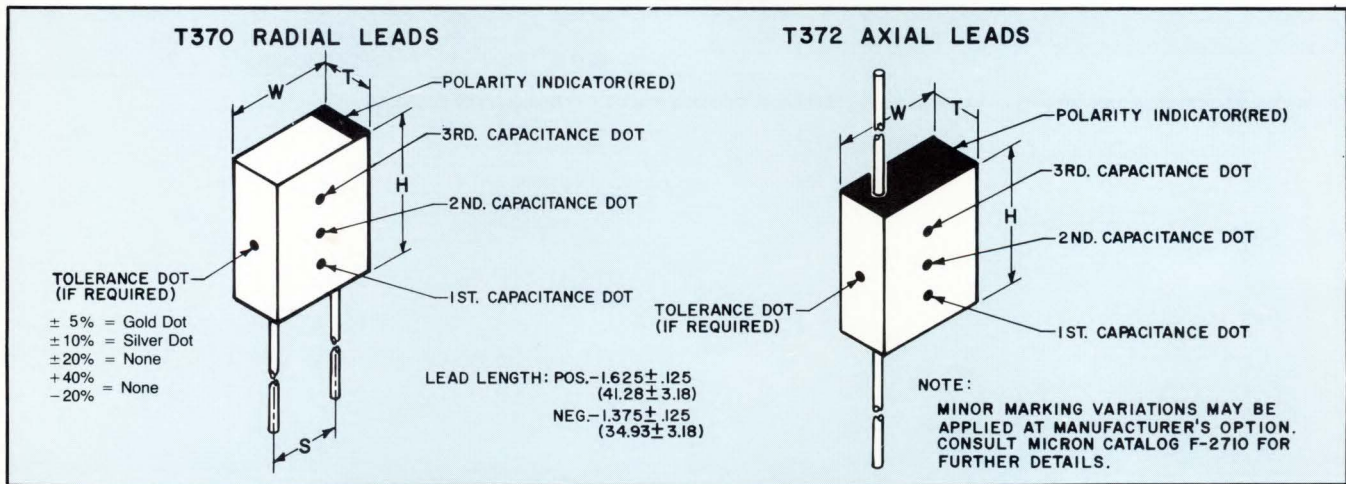
**CAPACITANCE COLOR CODING**  
T370, T371, T372, T373, T374, T376, T380, T382, T384, T386

Code for Capacitance in Picofarads			Code for Capacitance in Picofarads			Code for Capacitance in Picofarads			Code for Capacitance in Picofarads		
Color	1st & 2nd Dot	3rd Dot Decimal Multiplier	Color	1st & 2nd Dot	3rd Dot Decimal Multiplier	Color	1st & 2nd Dot	3rd Dot Decimal Multiplier	Color	1st & 2nd Dot	3rd Dot Decimal Multiplier
Black *	0	1	Orange	3	1,000	Blue	6	1,000,000	Grey	8	
Brown	1	10	Yellow	4	10,000	Violet	7	10,000,000	White	9	
Red	2	100	Green	5	100,000						

\*Black dot is not marked on black case.

Capacitance Tolerance: Silver Dot =  $\pm 10\%$   
Gold Dot =  $\pm 5\%$

**CAPACITOR OUTLINE DRAWINGS**  
T370 & T372



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	H MAXIMUM	W MAXIMUM	T MAXIMUM	S LEAD SPACING	LEAD DIAMETER $\pm .001 (.03)$
A	.125 (3.18)	.070 (1.78)	.040 (1.02)	.050 $\pm$ .015 (1.27 $\pm$ .38)	.010 (.25)
B	.165 (4.19)	.120 (3.05)	.070 (1.78)	.100 $\pm$ .020 (2.54 $\pm$ .51)	.010 (.25)
C	.225 (5.72)	.185 (4.70)	.075 (1.91)	.150 $\pm$ .020 (3.81 $\pm$ .51)	.010 (.25)
D	.290 (7.37)	.220 (5.59)	.110 (2.79)	.180 $\pm$ .025 (4.57 $\pm$ .64)	.016 (.41)
E	.310 (7.87)	.230 (5.84)	.130 (3.30)	.200 $\pm$ .025 (5.08 $\pm$ .64)	.016 (.41)
F	.475 (12.07)	.375 (9.53)	.150 (3.81)	.300 $\pm$ .025 (7.62 $\pm$ .64)	.016 (.41)

For further details consult T370 (Micron) Catalog F-2710

**MICRON SERIES — T370 & T372  
RATINGS & PART NUMBER REFERENCE**

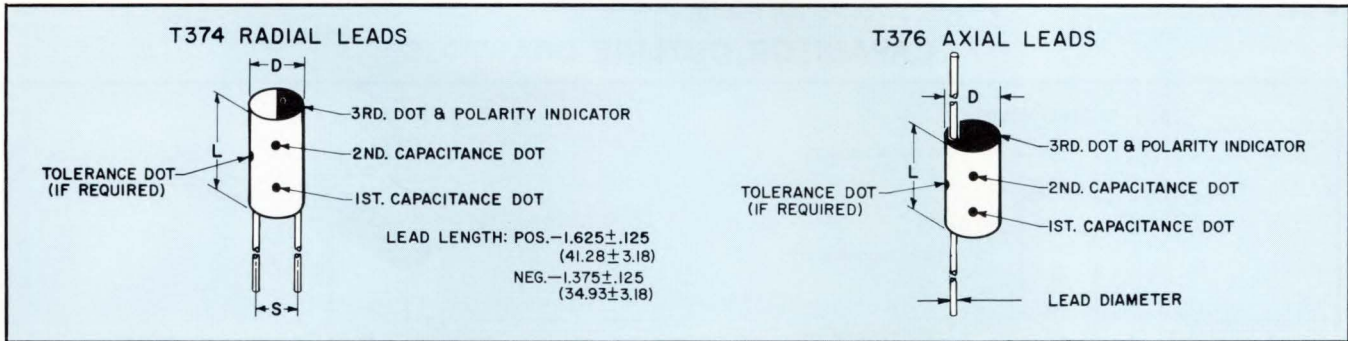
CAPACITANCE μF	VOLTAGE RATING 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C, MAX.	MAX. DISSIPATION FACTOR, % @ 25°C, 120 Hz
<b>T370 &amp; T372 A CASE +40% -20% TOLERANCE STANDARD</b>				
.0047	20	(1)A472L020AS	.5	10
.0068	20	(1)A682L020AS	.5	10
.010	20	(1)A103L020AS	.5	10
.015	20	(1)A153L020AS	.5	10
.022	20	(1)A223L020AS	.5	10
.033	20	(1)A333L020AS	.5	10
.047	20	(1)A473L020AS	.5	10
.068	20	(1)A683L020AS	.5	10
.10	20	(1)A104L020AS	.5	10
.15	20	(1)A154L020AS	.5	10
.22	20	(1)A224L020AS	.5	10
.33	15	(1)A334L015AS	.5	10
.47	10	(1)A474L010AS	.5	10
.68	6	(1)A684L006AS	.5	10
1.0	4	(1)A105L004AS	.5	10
1.5	3	(1)A155L003AS	.5	10
2.2	2	(1)A225L002AS	.5	15
<b>T370 &amp; T372 B CASE ±20% TOLERANCE STANDARD</b>				
.0047	35	(1)B472M035AS	1.0	8
.0068	35	(1)B682M035AS	1.0	8
.010	35	(1)B103M035AS	1.0	8
.015	35	(1)B153M035AS	1.0	8
.022	35	(1)B223M035AS	1.0	8
.033	35	(1)B333M035AS	1.0	8
.047	35	(1)B473M035AS	1.0	8
.068	35	(1)B683M035AS	1.0	8
.10	35	(1)B104M035AS	1.0	8
.15	35	(1)B154M035AS	1.0	8
.22	35	(1)B224M035AS	1.0	8
.33	35	(1)B334M035AS	1.0	8
.47	35	(1)B474M035AS	1.0	8
.68	25	(1)B684M025AS	1.0	6
1.0	20	(1)B105M020AS	1.0	6
1.5	15	(1)B155M015AS	1.0	6
2.2	10	(1)B225M010AS	1.0	6
3.3	6	(1)B335M006AS	1.0	6
4.7	4	(1)B475M004AS	1.0	10
6.8	3	(1)B685M003AS	1.0	10
10.0	2	(1)B106M002AS	1.0	15

CAPACITANCE μF	VOLTAGE RATING 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C, MAX.	MAX. DISSIPATION FACTOR, % @ 25°C, 120 Hz
<b>T370 &amp; T372 C CASE ±20% TOLERANCE STANDARD</b>				
.68	35	(1)C684M035AS	1.0	8
1.0	35	(1)C105M035AS	1.0	8
1.5	35	(1)C155M035AS	1.0	8
2.2	25	(1)C225M025AS	1.0	6
3.3	20	(1)C335M020AS	1.0	6
4.7	20	(1)C475M020AS	1.0	6
6.8	10	(1)C685M010AS	1.0	6
10.0	6	(1)C106M006AS	1.0	6
15.0	4	(1)C156M004AS	1.0	10
22.0	3	(1)C226M003AS	1.0	15
<b>T370 &amp; T372 D CASE ±20% TOLERANCE STANDARD</b>				
2.2	35	(1)D225M035AS	2.0	8
3.3	35	(1)D335M035AS	2.0	8
4.7	35	(1)D475M035AS	2.0	8
6.8	25	(1)D685M025AS	2.0	6
10.0	20	(1)D106M020AS	2.0	6
15.0	15	(1)D156M015AS	2.0	6
22.0	10	(1)D226M010AS	2.0	6
33.0	6	(1)D336M006AS	2.0	10
47.0	4	(1)D476M004AS	2.0	10
<b>T370 &amp; T372 E CASE ±20% TOLERANCE STANDARD</b>				
6.8	35	(1)E685M035AS	3.0	8
10.0	25	(1)E106M025AS	3.0	6
15.0	20	(1)E156M020AS	3.0	6
22.0	15	(1)E226M015AS	3.0	6
33.0	10	(1)E336M010AS	3.0	6
47.0	6	(1)E476M006AS	3.0	10
68.0	4	(1)E686M004AS	3.0	10
<b>T370 &amp; T372 F CASE ±20% TOLERANCE STANDARD</b>				
10.0	35	(1)F106M035AS	9.0	8
15.0	35	(1)F156M035AS	9.0	8
22.0	35	(1)F226M035AS	9.0	8
33.0	25	(1)F336M025AS	9.0	8
47.0	20	(1)F476M020AS	9.0	8
68.0	15	(1)F686M015AS	9.0	8
100.0	10	(1)F107M010AS	9.0	8
150.0	6	(1)F157M006AS	9.0	10
220.0	3	(1)F227M003AS	9.0	15

(1) To complete KEMET Part Number add prefix to indicate Series, i.e., T370 Radial: T370A472L020AS — T372 Axial: T372A472L020AS.

For further details consult T370 (Micron) Catalog F-2710

**MICRON SERIES — POLAR-CYLINDRICAL CASE  
T374 & T376  
CAPACITOR OUTLINE DRAWINGS**



Refer to page 63 for Capacitance Color Coding.

**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	L MAXIMUM	D MAXIMUM	S LEAD SPACING	LEAD DIAMETER ±.001 (.03)
A	.125 (3.18)	.070 (1.78)	.050 ±.015 (1.27 ±.38)	.010 (.25)
B	.160 (4.06)	.070 (1.78)	.050 ±.015 (1.27 ±.38)	.010 (.25)
C	.200 (5.08)	.080 (2.03)	.050 ±.015 (1.27 ±.38)	.010 (.25)
D	.225 (5.72)	.100 (2.54)	.070 ±.020 (1.78 ±.51)	.010 (.25)
E	.250 (6.35)	.150 (3.81)	.120 ±.025 (3.05 ±.64)	.016 (.41)

**TABLE 3B**

**RATINGS & PART NUMBER REFERENCE**

CAPACITANCE μF	VOLTAGE RATING 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C, MAX.	MAX. DISSIPATION FACTOR, % @ 25°C, 120 Hz
<b>T374 &amp; T376 A CASE +40% -20% TOLERANCE STANDARD</b>				
.0047	20	(1)A472L020AS	.5	10
.0068	20	(1)A682L020AS	.5	10
.010	20	(1)A103L020AS	.5	10
.015	20	(1)A153L020AS	.5	10
.022	20	(1)A223L020AS	.5	10
.033	20	(1)A333L020AS	.5	10
.047	20	(1)A473L020AS	.5	10
.068	20	(1)A683L020AS	.5	10
.10	20	(1)A104L020AS	.5	10
.15	20	(1)A154L020AS	.5	10
.22	20	(1)A224L020AS	.5	6
.33	15	(1)A334L015AS	.5	6
.47	10	(1)A474L010AS	.5	6
.68	6	(1)A684L006AS	.5	6
1.0	4	(1)A105L004AS	.5	10
1.5	3	(1)A155L003AS	.5	10
2.2	2	(1)A225L002AS	.5	15
<b>T374 &amp; T376 B CASE +40% -20% TOLERANCE STANDARD</b>				
.0047	50	(1)B472L050AS	1.0	8
.0068	50	(1)B682L050AS	1.0	8
.010	50	(1)B103L050AS	1.0	8
.015	35	(1)B153L035AS	1.0	8
.022	35	(1)B223L035AS	1.0	8
.033	35	(1)B333L035AS	1.0	8
.047	35	(1)B473L035AS	1.0	8
.068	35	(1)B683L035AS	1.0	8
.10	35	(1)B104L035AS	1.0	8
.15	35	(1)B154L035AS	1.0	8
.22	35	(1)B224L035AS	1.0	8
.33	20	(1)B334L020AS	1.0	6
.47	20	(1)B474L020AS	1.0	6
.68	15	(1)B684L015AS	1.0	6
1.0	10	(1)B105L010AS	1.0	6
1.5	6	(1)B155L006AS	1.0	6
2.2	4	(1)B225L004AS	1.0	10
3.3	3	(1)B335L003AS	1.0	10
4.7	2	(1)B475L002AS	1.0	15

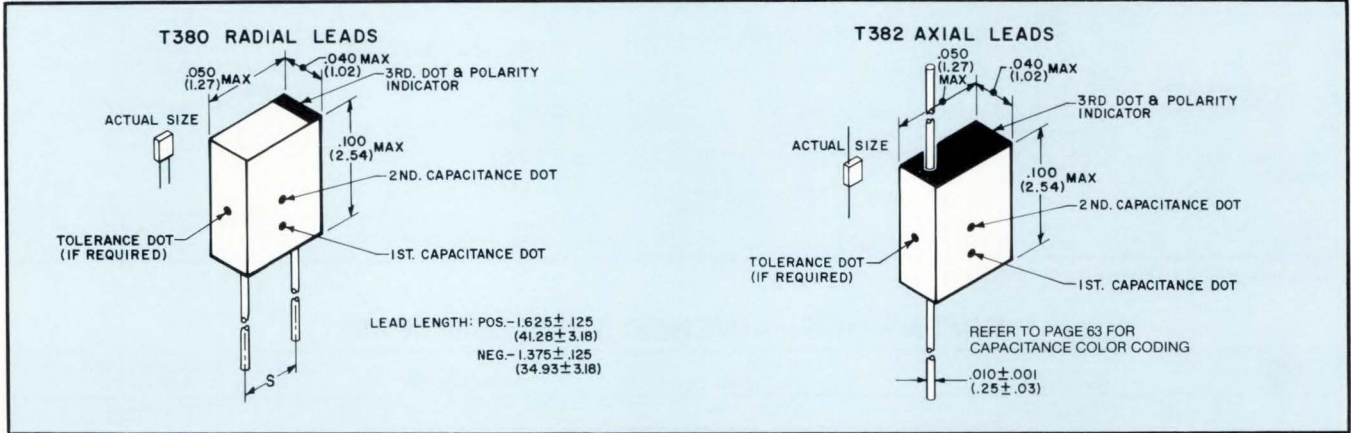
CAPACITANCE μF	VOLTAGE RATING 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C, MAX.	MAX. DISSIPATION FACTOR, % @ 25°C, 120 Hz
<b>T374 &amp; T376 C CASE ±20% TOLERANCE STANDARD</b>				
.33	35	(1)C334M035AS	1.0	8
.47	35	(1)C474M035AS	1.0	8
.68	20	(1)C684M020AS	1.0	6
1.0	20	(1)C105M020AS	1.0	6
1.5	15	(1)C155M015AS	1.0	6
2.2	10	(1)C225M010AS	1.0	6
3.3	6	(1)C335M006AS	1.0	6
4.7	4	(1)C475M004AS	1.0	10
6.8	3	(1)C685M003AS	1.0	10
10.0	2	(1)C106M002AS	1.0	15
<b>T374 &amp; T376 D CASE ±20% TOLERANCE STANDARD</b>				
.68	35	(1)D684M035AS	1.0	8
1.0	35	(1)D105M035AS	1.0	8
1.5	20	(1)D155M020AS	1.0	6
2.2	20	(1)D225M020AS	1.0	6
3.3	15	(1)D335M015AS	1.0	6
4.7	10	(1)D475M010AS	1.0	6
6.8	6	(1)D685M006AS	1.0	6
10.0	4	(1)D106M004AS	1.0	10
15.0	3	(1)D156M003AS	1.0	10
22.0	2	(1)D226M002AS	1.0	15
<b>T374 &amp; T376 E CASE ±20% TOLERANCE STANDARD</b>				
1.5	35	(1)E155M035AS	1.5	8
2.2	35	(1)E225M035AS	1.5	8
3.3	20	(1)E335M020AS	1.5	6
4.7	20	(1)E475M020AS	1.5	6
6.8	20	(1)E685M020AS	1.5	6
10.0	15	(1)E106M015AS	1.5	6
15.0	10	(1)E156M010AS	1.5	6
22.0	6	(1)E226M006AS	1.5	6
33.0	4	(1)E336M004AS	1.5	10
47.0	3	(1)E476M003AS	1.5	10

(1) To complete Kemet Part Number add prefix to indicate Series, i.e., T374 Radial: T374A103L020AS — T376 Axial: T376A103L020AS.

**MICRON SERIES — T380 & T382**  
**(SMALLEST LEADED ENCAPSULATED SOLID TANTALUM CAPACITORS AVAILABLE)**  
**POLAR-EPOXY ENCAPSULATED — RECTANGULAR SHAPE — RADIAL OR AXIAL LEADS**

- 0.0047 to 0.47  $\mu$ F
- -55°C to +125°C
- $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  Tolerances also Available
- 2 to 20 VDC
- 130% Surge Voltage Rating

**CAPACITOR OUTLINE DRAWINGS**



**RATINGS & PART NUMBER REFERENCE**

CAPACITANCE $\mu$ F	VOLTAGE RATING 85°C	KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A @ 25°C, MAX.	MAX. DISSIPATION FACTOR, % @ 25°C, 120 Hz
<b>T380 &amp; T382 A CASE +40% -20% TOLERANCE STANDARD</b>				
.0047	20	(1)A472L020AS	.5	10
.0068	20	(1)A682L020AS	.5	10
.010	20	(1)A103L020AS	.5	10
.015	20	(1)A153L020AS	.5	10
.022	20	(1)A223L020AS	.5	10
.033	20	(1)A333L020AS	.5	10
.047	20	(1)A473L020AS	.5	10

CAPACITANCE $\mu$ F	VOLTAGE RATING 85°C	KEMET PART NUMBER	D.C. LEAKAGE $\mu$ A @ 25°C, MAX.	MAX. DISSIPATION FACTOR, % @ 25°C, 120 Hz
<b>T380 &amp; T382 A CASE +40% -20% TOLERANCE STANDARD</b>				
.068	20	(1)A683L020AS	.5	10
.10	15	(1)A104L015AS	.5	10
.15	10	(1)A154L010AS	.5	10
.22	6	(1)A224L006AS	.5	10
.33	4	(1)A334L004AS	.5	10
.47	2	(1)A474L002AS	.5	10

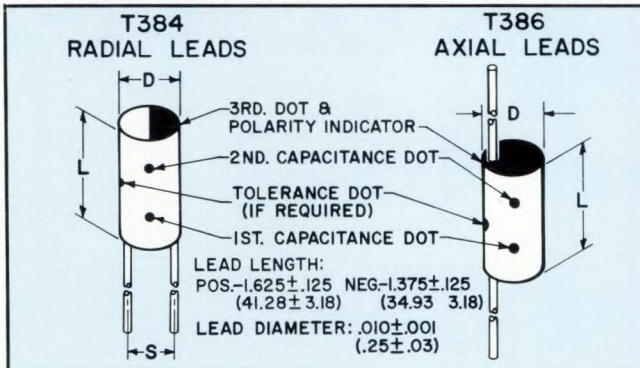
(1) To complete KEMET Part Number add prefix to indicate Series, i.e., T380 Radial: T380A472L020AS — T382 Axial: T382A472L020AS.

**MICRON SERIES — T384 & T386**

**POLAR / EPOXY ENCAPSULATED / HIGH EFFICIENCY / CYLINDRICAL SHAPE**

- .0047-22  $\mu$ F
- -55°C to +125°C
- High Charge (CV) Efficiency
- 2 to 20 VDC
- Solder-Coated Nickel Leads
- $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  Tolerances also Available

**CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS - INCHES & (MILLIMETERS)**

CASE SIZE	L CASE LENGTH MAXIMUM	D CASE DIAMETER MAXIMUM	S LEAD SPACING $\pm .015$ ( $\pm .38$ )
A	.110 (2.79)	.067 (1.70)	.050 (1.27)
B	.125 (3.18)	.067 (1.70)	.050 (1.27)
C	.145 (3.68)	.067 (1.70)	.050 (1.27)
D	.160 (4.06)	.077 (1.96)	.050 (1.27)
E	.190 (4.83)	.077 (1.96)	.050 (1.27)
F	.200 (5.08)	.080 (2.03)	.050 (1.27)
G	.215 (5.46)	.098 (2.49)	.070 (1.78)

Refer to page 63 for Capacitance Color Coding.

**ACTUAL SIZE — RADIAL**



For further details consult T370 (Micron) Catalog F-2710

**MICRON SERIES — T384 & T386  
RATINGS & PART NUMBER REFERENCE**

**TABLE 3D**

CAPACITANCE μF	VOLTAGE RATING 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C, MAX.	MAX. DISSIPATION FACTOR, % @ 25°C, 120 Hz
<b>T384 &amp; T386 A CASE +40% -20% TOLERANCE STANDARD</b>				
.0047	20	(1)A472L020AS	0.5	10
.0068	20	(1)A682L020AS	0.5	10
.010	20	(1)A103L020AS	0.5	10
.015	20	(1)A153L020AS	0.5	10
.022	20	(1)A223L020AS	0.5	10
.033	20	(1)A333L020AS	0.5	10
.047	20	(1)A473L020AS	0.5	10
.068	20	(1)A683L020AS	0.5	10
.10	20	(1)A104L020AS	0.5	10
.15	20	(1)A154L020AS	0.5	6
.22	15	(1)A224L015AS	0.5	6
.33	10	(1)A334L010AS	0.5	6
.47	6	(1)A474L006AS	0.5	6
.68	4	(1)A684L004AS	0.5	10
1.0	3	(1)A105L003AS	0.5	10
1.5	2	(1)A155L002AS	0.5	15
<b>T384 &amp; T386 B CASE +40% -20% TOLERANCE STANDARD</b>				
.0047	20	(1)B472L020AS	0.5	10
.0068	20	(1)B682L020AS	0.5	10
.010	20	(1)B103L020AS	0.5	10
.22	20	(1)B224L020AS	0.5	6
.33	15	(1)B334L015AS	0.5	6
.47	10	(1)B474L010AS	0.5	6
.68	6	(1)B684L006AS	0.5	6
1.0	4	(1)B105L004AS	0.5	10
1.5	3	(1)B155L003AS	0.5	10
2.2	2	(1)B225L002AS	0.5	15
<b>T384 &amp; T386 C CASE ±20% TOLERANCE STANDARD</b>				
.33	20	(1)C334M020AS	1.0	6
.47	15	(1)C474M015AS	1.0	6
.68	10	(1)C684M010AS	1.0	6
1.0	6	(1)C105M006AS	1.0	6
1.5	4	(1)C155M004AS	1.0	10
2.2	3	(1)C225M003AS	1.0	10
3.3	2	(1)C335M002AS	1.0	15

CAPACITANCE μF	VOLTAGE RATING 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA @ 25°C, MAX.	MAX. DISSIPATION FACTOR, % @ 25°C, 120 Hz
<b>T384 &amp; T386 D CASE ±20% TOLERANCE STANDARD</b>				
.68	20	(1)D684M020AS	1.0	6
1.0	15	(1)D105M015AS	1.0	6
1.5	10	(1)D155M010AS	1.0	6
2.2	6	(1)D225M006AS	1.0	6
3.3	4	(1)D335M004AS	1.0	10
4.7	3	(1)D475M003AS	1.0	10
6.8	2	(1)D685M002AS	1.0	15
<b>T384 &amp; T386 E CASE ±20% TOLERANCE STANDARD</b>				
1.0	20	(1)E105M020AS	1.0	6
1.5	15	(1)E155M015AS	1.0	6
2.2	10	(1)E225M010AS	1.0	6
3.3	6	(1)E335M006AS	1.0	6
4.7	4	(1)E475M004AS	1.0	10
6.8	3	(1)E685M003AS	1.0	10
10.0	2	(1)E106M002AS	1.0	15
<b>T384 &amp; T386 F CASE ±20% TOLERANCE STANDARD</b>				
1.5	20	(1)F155M020AS	1.0	6
2.2	15	(1)F225M015AS	1.0	6
3.3	10	(1)F335M010AS	1.0	6
4.7	6	(1)F475M006AS	1.0	6
6.8	4	(1)F685M004AS	1.0	10
10.0	3	(1)F106M003AS	1.0	10
15.0	2	(1)F156M002AS	1.0	15
<b>T384 &amp; T386 G CASE ±20% TOLERANCE STANDARD</b>				
2.2	20	(1)G225M020AS	1.0	6
3.3	15	(1)G335M015AS	1.0	6
4.7	10	(1)G475M010AS	1.0	6
6.8	6	(1)G685M006AS	1.0	6
10.0	4	(1)G106M004AS	1.0	10
15.0	3	(1)G156M003AS	1.0	10
22.0	2	(1)G226M002AS	1.0	15

(1) To complete KEMET Part Number add prefix to indicate Series, i.e., T384 Radial: T384A472L020AS — T386 Axial: T386A472L020AS

**MICRON SERIES — T371 & T373**

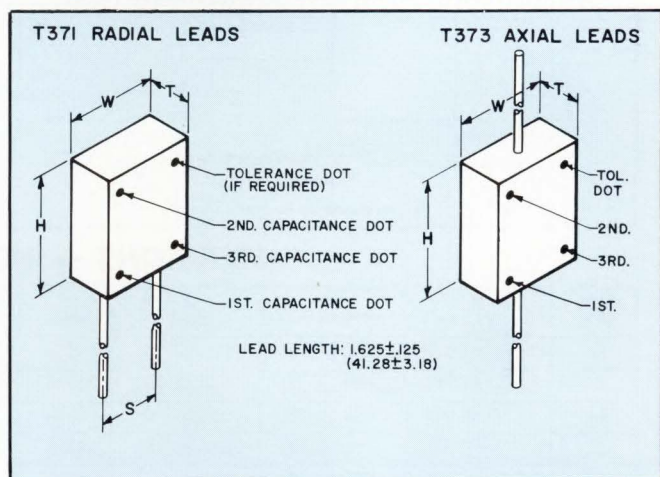
**THE FOLLOWING ADDITIONAL MICRON SERIES ARE ALSO AVAILABLE: NON-POLAR, AXIAL OR RADIAL LEADS, RECTANGULAR SHAPE, EPOXY ENCAPSULATED**

- .0022 to 33 μF • -55°C to +125°C
  - 2 to 50 VDC
- Refer to page 63 for Capacitance Color Coding.

Case Size	H Case Height MAX. Radial	H Case Height MAX. Axial	W Case Width MAX.	T Thickness MAX.	S *Lead Spacing	Lead Diameter ±.001 (±.03)
A	.135 (3.43)	.175 (4.45)	.120 (3.05)	.070 (1.78)	.100 (2.54)	.010 (.25)
B	.160 (4.06)	.210 (5.33)	.120 (3.05)	.070 (1.78)	.100 (2.54)	.010 (.25)
C	.200 (5.08)	.240 (6.10)	.140 (3.56)	.080 (2.03)	.100 (2.54)	.010 (.25)
D	.180 (4.57)	.220 (5.59)	.125 (3.18)	.125 (3.18)	.100 (2.54)	.010 (.25)
E	.235 (5.97)	.275 (6.99)	.190 (4.83)	.105 (2.67)	.125 (3.18)	.010 (.25)
F	.240 (6.10)	.280 (7.11)	.140 (3.56)	.180 (4.57)	.100 (2.54)	.010 (.25)
G	.270 (6.86)	.310 (7.87)	.290 (7.37)	.155 (3.94)	.200 (5.08)	.016 (.41)
H	.315 (8.00)	.370 (9.40)	.180 (4.57)	.220 (5.59)	.150 (3.81)	.016 (.41)
J	.335 (8.51)	.390 (9.91)	.230 (5.84)	.230 (5.84)	.200 (5.08)	.016 (.41)

\* A, B, C, D, E, F Cases: ±.020 (±.51)  
G, H, J Cases: ±.025 (±.64)

**CAPACITOR OUTLINE DRAWINGS**



For further details consult T370 (Micron) Catalog F-2710

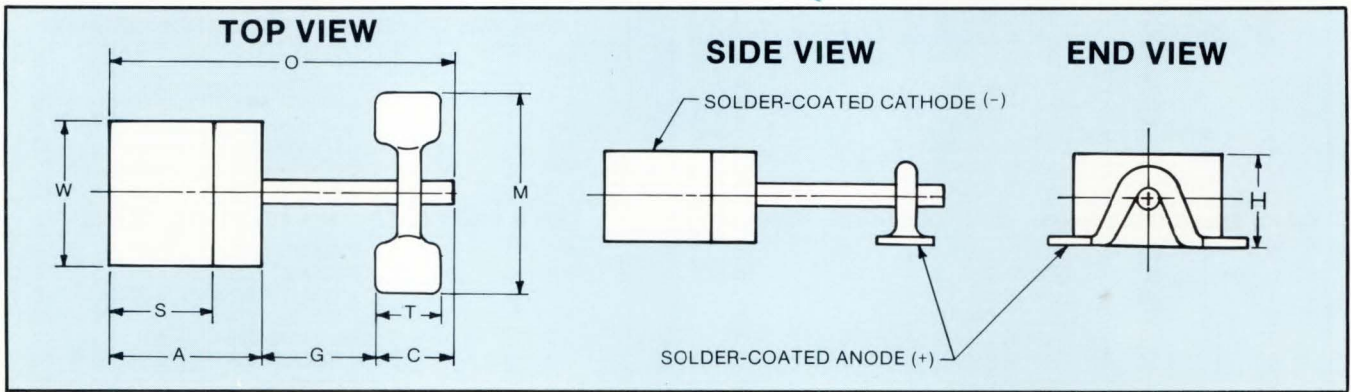
**T411, T412 (CWR01), T421 & T422 (CWR02) SERIES — TANTALUM CHIP CAPACITORS**

KEMET Tantalum Chip Capacitors present, at an economical price, maximum volumetric efficiency and high temperature capability. They are manufactured using a Union Carbide developed copper coating process that permits assembly temperatures up to 300°C for a short duration and continuous operating temperatures to 175°C when derated linearly to 25% of the 85°C voltage rating. T412 (CWR01) and T422 (CWR02) per MIL-C-55365 are KEMET's military equivalent capacitors of the T411 and T421. They are spe-

cially designed for use in hybrid circuit and PC board applications using solder reflow bonding techniques. The anode connection consists of a solder coated nickel tab. Cathode connection is made to the solder coating surrounding the body of the chip. Standard capacitance values are from 0.1 to 100 μF with unlisted values available on special order. Voltage range is 4 to 50 VDC. For information on chips that are suitable for other bonding techniques (including epoxy), contact your KEMET representative.

**CAPACITOR OUTLINE DRAWINGS**

**T411 SERIES — STANDARD RECTANGULAR CHIP CAPACITORS**

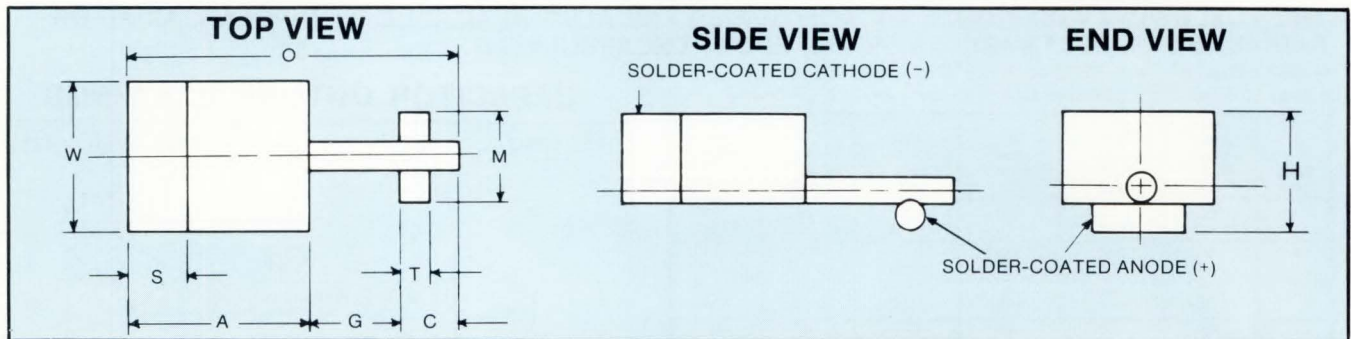


**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	O MAX.	W MAX.	A MAX.	S' MIN.	G MIN.	T MAX.	C MAX.	M MAX.	H MAX.
A	.185 (4.70)	.100 (2.54)	.080 (2.03)	30%	.055 (1.40)	.045 (1.14)	.050 (1.27)	.100 (2.54)	.070 (1.78)
B	.230 (5.84)	.130 (3.30)	.125 (3.18)	40%	.040 (1.02)	.055 (1.40)	.065 (1.65)	.150 (3.81)	.070 (1.78)
C	.270 (6.86)	.160 (4.06)	.165 (4.19)	40%	.040 (1.02)	.055 (1.40)	.065 (1.65)	.150 (3.81)	.070 (1.78)
D	.335 (8.51)	.170 (4.32)	.215 (5.46)	40%	.040 (1.02)	.065 (1.65)	.080 (2.03)	.150 (3.81)	.100 (2.54)
E	.340 (8.64)	.180 (4.57)	.220 (5.59)	40%	.040 (1.02)	.065 (1.65)	.080 (2.03)	.150 (3.81)	.150 (3.81)

\* S — Solderable area expressed as percentage of Dimension A.

**T421 SERIES — MINIATURE RECTANGULAR CHIP CAPACITORS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	O MAX.	W MAX.	A MAX.	S' MIN.	G MIN.	T MAX.	C MAX.	M MAX.	H MAX.
A	.190 (4.83)	.070 (1.78)	.100 (2.54)	40%	.025 (.63)	.055 (1.40)	.065 (1.65)	.070 (1.78)	.060 (1.52)
B	.205 (5.21)	.120 (3.05)	.120 (3.05)	40%	.025 (.63)	.050 (1.27)	.060 (1.52)	.070 (1.78)	.060 (1.52)
C	.250 (6.35)	.160 (4.06)	.165 (4.19)	40%	.025 (.63)	.050 (1.27)	.060 (1.52)	.090 (2.29)	.080 (2.03)
D	.305 (7.75)	.170 (4.32)	.215 (5.46)	40%	.025 (.63)	.055 (1.40)	.065 (1.65)	.090 (2.29)	.110 (2.79)
E	.315 (8.00)	.175 (4.45)	.220 (5.59)	40%	.025 (.63)	.060 (1.52)	.070 (1.78)	.090 (2.29)	.150 (3.81)

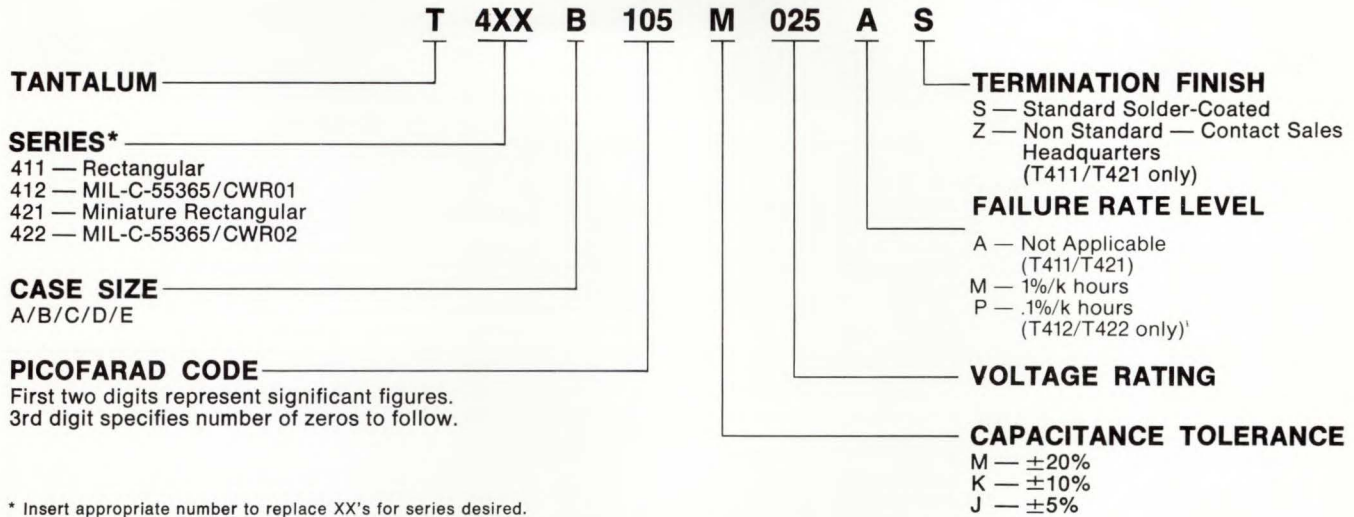
\* S — Solderable area expressed as percentage of Dimension A.

For further details consult T411, T412, T421 & T422 Catalog F2715



**T411, T412 (CWR01), T421 & T422 (CWR02) SERIES**

**TANTALUM CHIP ORDERING INFORMATION**



\* Insert appropriate number to replace XX's for series desired.

**T411 SERIES**

**RATINGS & PART NUMBER REFERENCE**

CAPACITANCE μF	RATED VOLTAGE 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C, MAX.	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>A CASE</b>				
.10	50	T411A104(1)050AS	.5	4.0
.15	50	T411A154(1)050AS	.5	4.0
.22	35	T411A224(1)035AS	.5	4.0
.33	35	T411A334(1)035AS	.5	4.0
.47	25	T411A474(1)025AS	.5	4.0
.68	20	T411A684(1)020AS	.5	4.0
1.0	15	T411A105(1)015AS	.5	4.0
1.5	10	T411A155(1)010AS	.5	6.0
2.2	6	T411A225(1)006AS	.5	6.0
3.3	4	T411A335(1)004AS	.5	6.0
<b>B CASE</b>				
.10	50	T411B104(1)050AS	1.0	4.0
.15	50	T411B154(1)050AS	1.0	4.0
.22	50	T411B224(1)050AS	1.0	4.0
.33	50	T411B334(1)050AS	1.0	4.0
.47	35	T411B474(1)035AS	1.0	4.0
.68	30	T411B684(1)030AS	1.0	4.0
1.0	25	T411B105(1)025AS	1.0	4.0
1.5	20	T411B155(1)020AS	1.0	6.0
2.2	15	T411B225(1)015AS	1.0	6.0
3.3	10	T411B335(1)010AS	1.0	6.0
4.7	6	T411B475(1)006AS	1.0	6.0
6.8	4	T411B685(1)004AS	1.0	6.0
<b>C CASE</b>				
.47	50	T411C474(1)050AS	1.0	4.0
.68	50	T411C684(1)050AS	1.0	4.0
1.0	35	T411C105(1)035AS	1.0	4.0
1.5	30	T411C155(1)030AS	1.0	6.0

CAPACITANCE μF	RATED VOLTAGE 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C, MAX.	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>C CASE</b>				
2.2	25	T411C225(1)025AS	1.0	6.0
3.3	20	T411C335(1)020AS	1.0	6.0
4.7	15	T411C475(1)015AS	1.0	6.0
6.8	10	T411C685(1)010AS	1.0	6.0
10.0	6	T411C106(1)006AS	1.0	6.0
15.0	4	T411C156(1)004AS	1.0	6.0
<b>D CASE</b>				
1.0	50	T411D105(1)050AS	2.0	4.0
1.5	50	T411D155(1)050AS	2.0	6.0
2.2	35	T411D225(1)035AS	2.0	6.0
3.3	30	T411D335(1)030AS	2.0	6.0
4.7	25	T411D475(1)025AS	2.0	6.0
6.8	20	T411D685(1)020AS	2.0	6.0
10.0	15	T411D106(1)015AS	2.0	6.0
15.0	10	T411D156(1)010AS	2.0	6.0
22.0	6	T411D226(1)006AS	2.0	6.0
33.0	4	T411D336(1)004AS	2.0	6.0
<b>E CASE</b>				
2.2	50	T411E225(1)050AS	3.0	6.0
3.3	50	T411E335(1)050AS	3.0	6.0
4.7	35	T411E475(1)035AS	3.0	6.0
6.8	30	T411E685(1)030AS	3.0	6.0
10.0	25	T411E106(1)025AS	3.0	6.0
15.0	20	T411E156(1)020AS	3.0	6.0
22.0	15	T411E226(1)015AS	3.0	6.0
33.0	10	T411E336(1)010AS	3.0	6.0
47.0	6	T411E476(1)006AS	3.0	6.0
68.0	4	T411E686(1)004AS	3.0	6.0

(1) To complete KEMET Part Number insert Capacitance Tolerance Symbol M — ±20%, K — ±10%, J — ±5% in the 9th character.

For further details consult T411, T412, T421 & T422 Catalog F2715

**T421 SERIES  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE μF	RATED VOLTAGE 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C, MAX.	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>A CASE</b>				
.10	50	T421A104(1)050AS	.5	4.0
.15	50	T421A154(1)050AS	.5	4.0
.22	50	T421A224(1)050AS	.5	4.0
.33	35	T421A334(1)035AS	.5	4.0
.47	25	T421A474(1)025AS	.5	4.0
.68	25	T421A684(1)025AS	.5	4.0
1.0	20	T421A105(1)020AS	.5	4.0
1.5	15	T421A155(1)015AS	.5	6.0
2.2	10	T421A225(1)010AS	.5	6.0
3.3	6	T421A335(1)006AS	.5	6.0
4.7	4	T421A475(1)004AS	.5	6.0
<b>B CASE</b>				
.33	50	T421B334(1)050AS	1.0	4.0
.47	50	T421B474(1)050AS	1.0	4.0
.68	35	T421B684(1)035AS	1.0	4.0
1.0	25	T421B105(1)025AS	1.0	4.0
1.5	25	T421B155(1)025AS	1.0	6.0
2.2	20	T421B225(1)020AS	1.0	6.0
3.3	15	T421B335(1)015AS	1.0	6.0
4.7	10	T421B475(1)010AS	1.0	6.0
6.8	6	T421B685(1)006AS	1.0	6.0
10.0	4	T421B106(1)004AS	1.0	6.0
<b>C CASE</b>				
.68	50	T421C684(1)050AS	2.0	4.0
1.0	50	T421C105(1)050AS	2.0	4.0
1.5	50	T421C155(1)050AS	2.0	6.0
2.2	35	T421C225(1)035AS	2.0	6.0

CAPACITANCE μF	RATED VOLTAGE 85°C	KEMET PART NUMBER	D.C. LEAKAGE μA@25°C, MAX.	MAX. DISSIPATION FACTOR, %@25°C, 120 Hz
<b>C CASE</b>				
3.3	25	T421C335(1)025AS	2.0	6.0
4.7	25	T421C475(1)025AS	2.0	6.0
6.8	20	T421C685(1)020AS	2.0	6.0
10.0	15	T421C106(1)015AS	2.0	6.0
15.0	10	T421C156(1)010AS	2.0	6.0
22.0	6	T421C226(1)006AS	2.0	6.0
33.0	4	T421C336(1)004AS	2.0	6.0
<b>D CASE</b>				
2.2	50	T421D225(1)050AS	3.0	6.0
3.3	50	T421D335(1)050AS	3.0	6.0
4.7	35	T421D475(1)035AS	3.0	6.0
6.8	25	T421D685(1)025AS	3.0	6.0
10.0	20	T421D106(1)020AS	3.0	6.0
15.0	20	T421D156(1)020AS	3.0	6.0
22.0	15	T421D226(1)015AS	3.0	6.0
33.0	10	T421D336(1)010AS	3.0	6.0
47.0	6	T421D476(1)006AS	3.0	6.0
68.0	4	T421D686(1)004AS	3.0	6.0
<b>E CASE</b>				
4.7	50	T421E475(1)050AS	3.0	6.0
6.8	35	T421E685(1)035AS	3.0	6.0
10.0	25	T421E106(1)025AS	3.0	6.0
22.0	20	T421E226(1)020AS	3.0	6.0
33.0	15	T421E336(1)015AS	3.0	6.0
47.0	10	T421E476(1)010AS	3.0	6.0
68.0	6	T421E686(1)006AS	3.0	6.0
100.0	4	T421E107(1)004AS	3.0	6.0

(1) To complete KEMET Part Number insert Capacitance Tolerance Symbol M — ±20%, K — ±10%, J — ±5% in the 9th character.

**MIL-C-55365/1  
MILITARY TYPE DESIGNATIONS & PART NUMBERING**

**CWR 02 J A 105 K M**

**TYPE** \_\_\_\_\_  
Capacitors, Chip, Fixed, Tantalum,  
Established Reliability

**STYLE** \_\_\_\_\_  
01 — T-bar; Rectangular  
02 — T-bar; Miniature Rectangular

**VOLTAGE** \_\_\_\_\_

Symbol	VDC Working		VDC Surge
	85°C	125°C	85°C
B	3	2	4
C	4	2.7	5
D	6	4	8
F	10	7	13
H	15	10	20
J	20	13	26
K	25	17	32
L	30	20	39
M	35	23	46
N	50	33	65

**FAILURE RATE IN  
% PER 1000 HOURS**  
M — 1.0%  
P — 0.1%

**CAPACITANCE TOLERANCE**  
M — ±20%  
K — ±10%  
J — ±5%

**CAPACITANCE**  
In picofarads; first two digits repre-  
sent significant figures. Last digit spe-  
cifies number of digits to follow.

**TERMINATION FINISH**  
A — Solder-coated

For further details consult T411, T412, T421 & T422 Catalog F2715

**T412 (CWR01) & T422 (CWR02)  
RATINGS & PART NUMBER REFERENCE**

CAP. μF	CASE SIZE		KEMET PART NUMBER		D.C. LEAKAGE μA@25°C	MAX. D.F. % @25°C, 120 Hz	MIL-C-55365/1 MILITARY PART NUMBER
	CWR01	CWR02	STYLE CWR01	STYLE CWR02			
<b>3 VOLTS DC AT 85°C</b>							
2.2	A	A	T412A225(1)003MS	T422A225(1)003MS	1.0	4	CWR0(2)BA225(3)M
4.7	B	A	T412B475(1)003MS	T422A475(1)003MS	1.0	4	CWR0(2)BA475(3)M
15.0	C	C	T412C156(1)003MS	T422C156(1)003MS	1.0	6	CWR0(2)BA156(3)M
47.0	E	D	T412E476(1)003MS	T422D476(1)003MS	2.8	6	CWR0(2)BA476(3)M
<b>4 VOLTS DC AT 85°C</b>							
3.3	A	A	T412A335(1)004MS	T422A335(1)004MS	0.5	6	CWR0(2)CA335(3)M
4.7	B	A	T412B475(1)004MS	T422A475(1)004MS	0.5	6	CWR0(2)CA475(3)M
6.8	B	B	T412B685(1)004MS	T422B685(1)004MS	1.0	6	CWR0(2)CA685(3)M
10.0	C	B	T412C106(1)004MS	T422B106(1)004MS	1.0	6	CWR0(2)CA106(3)M
15.0	C	C	T412C156(1)004MS	T422C156(1)004MS	1.0	6	CWR0(2)CA156(3)M
33.0	D	C	T412D336(1)004MS	T422C336(1)004MS	2.0	6	CWR0(2)CA336(3)M
68.0	E	D	T412E686(1)004MS	T422D686(1)004MS	3.0	6	CWR0(2)CA686(3)M
100.0	N/A	E	Not Available	T422E107(1)004MS	3.0	6	CWR02 CA107(3)M
<b>6 VOLTS DC AT 85°C</b>							
1.5	A	A	T412A155(1)006MS	T422A155(1)006MS	0.5	4	CWR0(2)DA155(3)M
2.2	A	A	T412A225(1)006MS	T422A225(1)006MS	0.5	6	CWR0(2)DA225(3)M
3.3	B	A	T412B335(1)006MS	T422A335(1)006MS	1.0	4	CWR0(2)DA335(3)M
4.7	B	B	T412B475(1)006MS	T422B475(1)006MS	1.0	6	CWR0(2)DA475(3)M
6.8	C	B	T412C685(1)006MS	T422B685(1)006MS	1.0	6	CWR0(2)DA685(3)M
10.0	C	C	T412C106(1)006MS	T422C106(1)006MS	1.0	6	CWR0(2)DA106(3)M
22.0	D	C	T412D226(1)006MS	T422C226(1)006MS	2.0	6	CWR0(2)DA226(3)M
33.0	E	D	T412E336(1)006MS	T422D336(1)006MS	3.0	6	CWR0(2)DA336(3)M
47.0	E	D	T412E476(1)006MS	T422D476(1)006MS	3.0	6	CWR0(2)DA476(3)M
68.0	N/A	E	Not Available	T422E686(1)006MS	3.0	6	CWR02 DA686(3)M
<b>10 VOLTS DC AT 85°C</b>							
1.0	A	A	T412A105(1)010MS	T422A105(1)010MS	0.5	4	CWR0(2)FA105(3)M
1.5	A	A	T412A155(1)010MS	T422A155(1)010MS	0.5	6	CWR0(2)FA155(3)M
2.2	B	A	T412B225(1)010MS	T422A225(1)010MS	1.0	4	CWR0(2)FA225(3)M
3.3	B	B	T412B335(1)010MS	T422B335(1)010MS	1.0	6	CWR0(2)FA335(3)M
4.7	C	B	T412C475(1)010MS	T422B475(1)010MS	1.0	6	CWR0(2)FA475(3)M
6.8	C	C	T412C685(1)010MS	T422C685(1)010MS	1.0	6	CWR0(2)FA685(3)M
15.0	D	C	T412D156(1)010MS	T422C156(1)010MS	2.0	6	CWR0(2)FA156(3)M
20.0	E	D	T412E206(1)010MS	T422D206(1)010MS	3.0	6	CWR0(2)FA206(3)M
22.0	E	D	T412E226(1)010MS	T422D226(1)010MS	3.0	6	CWR0(2)FA226(3)M
33.0	E	D	T412E336(1)010MS	T422D336(1)010MS	3.0	6	CWR0(2)FA336(3)M
47.0	N/A	E	Not Available	T422E476(1)010MS	9.4	6	CWR02 FA476(3)M
<b>15 VOLTS DC AT 85°C</b>							
0.68	A	A	T412A684(1)015MS	T422A684(1)015MS	0.5	4	CWR0(2)HA684(3)M
1.0	A	A	T412A105(1)015MS	T422A105(1)015MS	0.5	4	CWR0(2)HA105(3)M
1.5	B	A	T412B155(1)015MS	T422A155(1)015MS	0.5	6	CWR0(2)HA155(3)M
2.2	B	B	T412B225(1)015MS	T422B225(1)015MS	1.0	6	CWR0(2)HA225(3)M
3.3	C	B	T412C335(1)015MS	T422B335(1)015MS	1.0	6	CWR0(2)HA335(3)M
4.7	C	C	T412C475(1)015MS	T422C475(1)015MS	1.0	6	CWR0(2)HA475(3)M
10.0	D	C	T412D106(1)015MS	T422C106(1)015MS	2.0	6	CWR0(2)HA106(3)M
22.0	E	D	T412E226(1)015MS	T422D226(1)015MS	3.0	6	CWR0(2)HA226(3)M
33.0	N/A	E	Not Available	T422E336(1)015MS	3.0	6	CWR02 HA336(3)M
<b>20 VOLTS DC AT 85°C</b>							
0.33	A	A	T412A334(1)020MS	T422A334(1)020MS	0.5	4	CWR0(2)JA334(3)M
0.47	A	A	T412A474(1)020MS	T422A474(1)020MS	0.5	4	CWR0(2)JA474(3)M
0.68	A	A	T412A684(1)020MS	T422A684(1)020MS	0.5	4	CWR0(2)JA684(3)M
1.0	B	A	T412B105(1)020MS	T422A105(1)020MS	1.0	4	CWR0(2)JA105(3)M
1.5	B	B	T412B155(1)020MS	T422B155(1)020MS	1.0	6	CWR0(2)JA155(3)M
2.2	C	B	T412C225(1)020MS	T422B225(1)020MS	1.0	4	CWR0(2)JA225(3)M
3.3	C	C	T412C335(1)020MS	T422C335(1)020MS	1.0	6	CWR0(2)JA335(3)M
4.7	D	C	T412D475(1)020MS	T422C475(1)020MS	1.9	4	CWR0(2)JA475(3)M
6.8	D	C	T412D685(1)020MS	T422C685(1)020MS	2.0	6	CWR0(2)JA685(3)M
10.0	E	D	T412E106(1)020MS	T422D106(1)020MS	3.0	6	CWR0(2)JA106(3)M
15.0	E	D	T412E156(1)020MS	T422D156(1)020MS	3.0	6	CWR0(2)JA156(3)M
22.0	N/A	E	Not Available	T422E226(1)020MS	3.0	6	CWR02 JA226(3)M

(1) To complete KEMET Part Number, insert M for ±20% tolerance, K for ±10% tolerance or J for ±5% tolerance as the 9th character.

(2) To complete Military Part Number, insert "1" for CWR01 Style or "2" for CWR02 Style as the 5th character.

(3) To complete Military Part Number, insert M for ±20% tolerance, K for ±10% tolerance or J for ±5% tolerance as the 11th character.

For further details consult T411, T412, T421 & T422 Catalog F2715

**T412 (CWR01) & T422 (CWR02)**

CAP. μF	CASE SIZE		KEMET PART NUMBER		D.C. LEAKAGE μA@25°C	MAX. D.F. %@25°C, 120 Hz	MIL-C-55365/1 MILITARY PART NUMBER
	CWR01	CWR02	STYLE CWR01	STYLE CWR02			
<b>25 VOLTS DC AT 85°C</b>							
0.47	A	A	T412A474(1)025MS	T422A474(1)025MS	0.5	4	CWR0(2)KA474(3)M
0.68	B	A	T412B684(1)025MS	T422A684(1)025MS	0.5	4	CWR0(2)KA684(3)M
1.0	B	B	T412B105(1)025MS	T422B105(1)025MS	1.0	4	CWR0(2)KA105(3)M
1.5	C	B	T412C155(1)025MS	T422B155(1)025MS	1.0	6	CWR0(2)KA155(3)M
2.2	C	C	T412C225(1)025MS	T422C225(1)025MS	1.0	6	CWR0(2)KA225(3)M
3.3	D	C	T412D335(1)025MS	T422C335(1)025MS	2.0	6	CWR0(2)KA335(3)M
4.7	D	C	T412D475(1)025MS	T422C475(1)025MS	2.0	6	CWR0(2)KA475(3)M
6.8	E	D	T412E685(1)025MS	T422D685(1)025MS	3.0	6	CWR0(2)KA685(3)M
10.0	E	E	T412E106(1)025MS	T422E106(1)025MS	3.0	6	CWR0(2)KA106(3)M
<b>30 VOLTS DC AT 85°C</b>							
0.47	B	B	T412B474(1)030MS	T422B474(1)030MS	1.0	4	CWR0(2)LA474(3)M
0.68	B	B	T412B684(1)030MS	T422B684(1)030MS	1.0	4	CWR0(2)LA684(3)M
1.5	C	C	T412C155(1)030MS	T422C155(1)030MS	1.0	6	CWR0(2)LA155(3)M
3.3	D	D	T412D335(1)030MS	T422D335(1)030MS	2.0	6	CWR0(2)LA335(3)M
6.8	E	E	T412E685(1)030MS	T422E685(1)030MS	3.0	6	CWR0(2)LA685(3)M
<b>35 VOLTS DC AT 85°C</b>							
0.1	A	A	T412A104(1)035MS	T422A104(1)035MS	0.5	4	CWR0(2)MA104(3)M
0.22	A	A	T412A224(1)035MS	T422A224(1)035MS	0.5	4	CWR0(2)MA224(3)M
0.33	A	A	T412A334(1)035MS	T422A334(1)035MS	0.5	4	CWR0(2)MA334(3)M
0.47	B	B	T412B474(1)035MS	T422B474(1)035MS	1.0	4	CWR0(2)MA474(3)M
0.68	C	B	T412C684(1)035MS	T422B684(1)035MS	1.0	4	CWR0(2)MA684(3)M
1.0	C	C	T412C105(1)035MS	T422C105(1)035MS	1.0	4	CWR0(2)MA105(3)M
1.5	D	C	T412D155(1)035MS	T422C155(1)035MS	1.1	4	CWR0(2)MA155(3)M
2.2	D	C	T412D225(1)035MS	T422C225(1)035MS	2.0	6	CWR0(2)MA225(3)M
3.3	E	D	T412E335(1)035MS	T422D335(1)035MS	2.3	4	CWR0(2)MA335(3)M
4.7	E	D	T412E475(1)035MS	T422D475(1)035MS	3.0	6	CWR0(2)MA475(3)M
6.8	N/A	E	Not Available	T422E685(1)035MS	4.8	6	CWR02 MA685(3)M
<b>50 VOLTS DC AT 85°C</b>							
0.1	A	A	T412A104(1)050MS	T422A104(1)050MS	0.5	4	CWR0(2)NA104(3)M
0.15	A	A	T412A154(1)050MS	T422A154(1)050MS	0.5	4	CWR0(2)NA154(3)M
0.22	B	A	T412B224(1)050MS	T422A224(1)050MS	1.0	4	CWR0(2)NA224(3)M
0.33	B	B	T412B334(1)050MS	T422B334(1)050MS	1.0	4	CWR0(2)NA334(3)M
0.47	C	B	T412C474(1)050MS	T422B474(1)050MS	1.0	4	CWR0(2)NA474(3)M
0.68	C	C	T412C684(1)050MS	T422C684(1)050MS	2.0	4	CWR0(2)NA684(3)M
1.0	D	C	T412D105(1)050MS	T422C105(1)050MS	2.0	4	CWR0(2)NA105(3)M
1.5	D	C	T412D155(1)050MS	T422C155(1)050MS	2.0	6	CWR0(2)NA155(3)M
2.2	E	D	T412E225(1)050MS	T422D225(1)050MS	3.0	6	CWR0(2)NA225(3)M
3.3	E	D	T412E335(1)050MS	T422D335(1)050MS	3.0	6	CWR0(2)NA335(3)M
4.7	N/A	E	Not Available	T422E475(1)050MS	3.0	6	CWR02 NA475(3)M

(1) To complete KEMET Part Number, insert M for ±20% tolerance, K for ±10% tolerance or J for ±5% tolerance as the 9th character.  
 (2) To complete Military Part Number, insert "1" for CWR01 Style or "2" for CWR02 Style as the 5th character.  
 (3) To complete Military Part Number, insert M for ±20% tolerance, K for ±10% tolerance or J for ±5% tolerance as the 11th character.

For further details consult T411, T412, T421 & T422 Catalog F2715

# ARIS SPECIFICATIONS

KEMET now offers American-made multilayer ceramic and solid tantalum capacitors fully compatible for use with the new automatic insertion machines for radial-lead components.

As shown in Figure 1, KEMET capacitors are wound on a precision-made ARIS Reel Package. ARIS Ammo Package is also available. Consult address below for further details.

Figure 2 shows the parts positioned between sprocket holes, located at a very accurate  $12.7 \text{ mm} \pm 0.3 \text{ mm}$  spacing. Center-to-center component pitch is also 12.7 mm. This carrier consists of tape adhesive-bonded to a base of jute liner. Interleaving separator material (Fig. 1) provides snag-free unreeling operation.

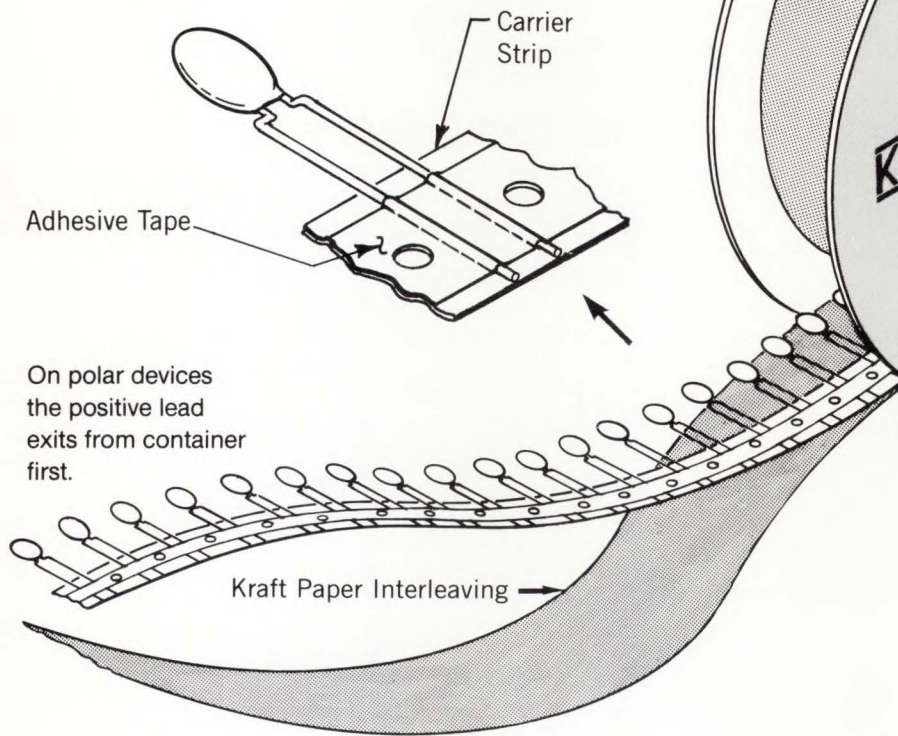
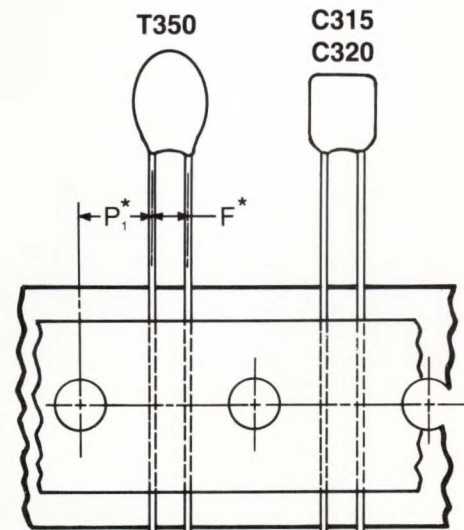


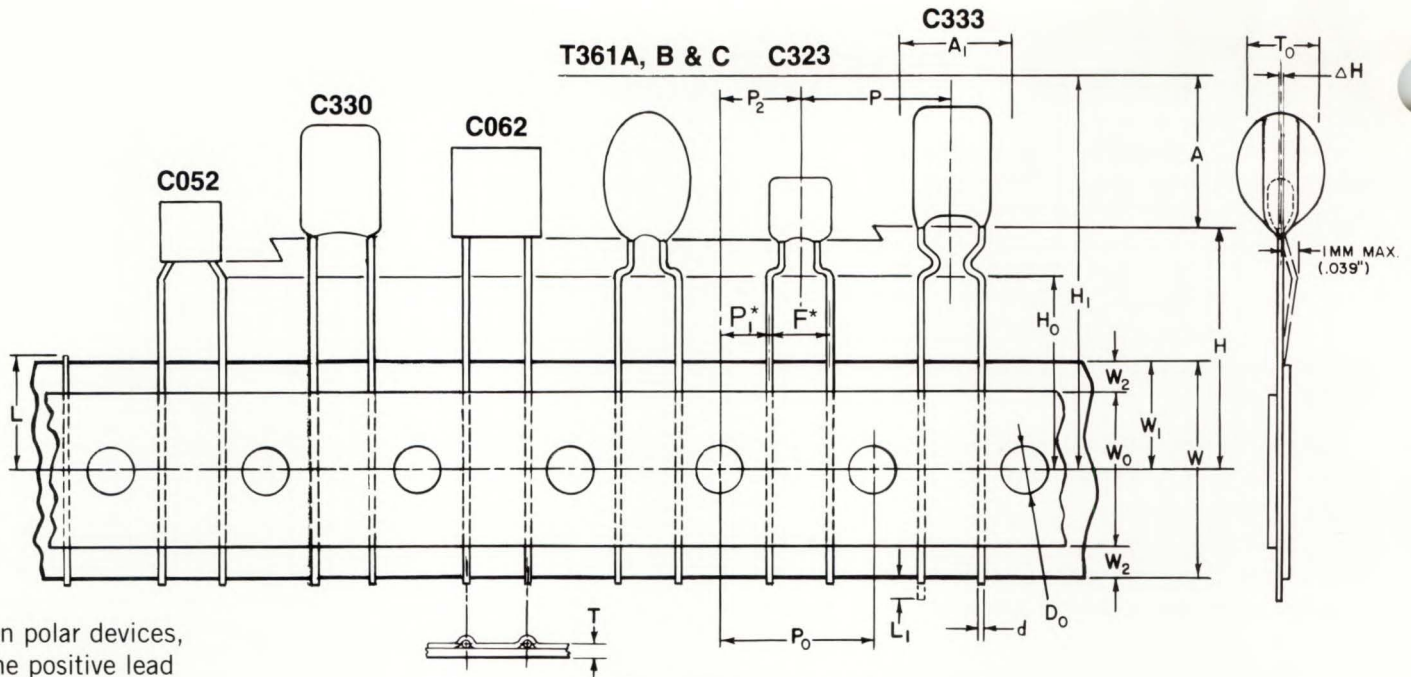
Figure 1 — ARIS Reel Package. Specify Part Number and C-7301.

Lead spacings are 5.0 mm (.197") center-to-center for Figure 3 capacitors (page 74) and 2.5 mm (.098") for Figure 2 capacitors. This dimension is held to within  $+0.8 \text{ mm}/-0.2 \text{ mm}$  tolerance to assure accurate placement of the KEMET capacitor on your printed circuit boards every time. The maximum part height is 32.25 mm (1.27") from the sprocket hole center line.

For further information on products offered on ARIS reels. see page 76 for C052/C062; page 53 for T350; page 57 for T361; and page 92 for C315, C320, C323, C330 and C333.



\*See table on page 74 for these dimensions  
Figure 2—ARIS Finished Product Envelope



On polar devices, the positive lead exits from container first.

Figure 3 — ARIS Finished Product Envelope

\*All dimensions in Figure 3 apply to Figure 2 on page 73, except P<sub>1</sub> & F (see table below).

**DIMENSIONS IN MILLIMETERS & (INCHES)**

DIMENSION	SYMBOL	NOMINAL mm (Inch)	TOLERANCE mm (Inch)	DIMENSION	SYMBOL	NOMINAL mm (Inch)	TOLERANCE mm (Inch)
BODY HEIGHT (1)	A	12.25 (.482)	MAX	LEAD PROTRUSION	L <sub>1</sub>	2.0 (.079)	MAX
BODY WIDTH	A <sub>1</sub>	12.25 (.482)	MAX	COMPONENT PITCH (6)	P	12.7 (.500)	± 1.0 (± .039)
SPROCKET HOLE DIAMETER	D <sub>0</sub>	4.0 (.157)	± 0.3 (± .012)	SPROCKET HOLE PITCH (3)	P <sub>0</sub>	12.7 (.500)	± 0.3 (± .012)
LEAD DIAMETER	d	0.5 or 0.6 (.020) (.024)	± 0.05 (± .002)	SPROCKET HOLE CENTER TO LEAD CENTER (4) & (5)	P <sub>1</sub>	FIG. 3 3.85 (.152)   FIG. 2 5.1 (.201)	± 0.7 (± .028)
LEAD CENTER (5)	F	FIG. 3 5.0 (.197)   FIG. 2 2.5 (.098)	+0.8/-0.2 (+.032/- .008)	SPROCKET HOLE CENTER TO COMPONENT CENTER (6)	P <sub>2</sub>	6.35 (.250)	± 1.3 (± .051)
COMPONENT BASE TO TAPE CENTER (2)	H	18.0 (.709)	REF ONLY	BODY THICKNESS	T <sub>0</sub>	6.35 (.250)	MAX
LEAD STANDOFF HEIGHT	H <sub>0</sub>	16.0 (.630)	± 0.5 (± .020)	TOTAL TAPE THICKNESS	T	0.7 (.028)	± .02 (± .008)
COMPONENT HEIGHT ABOVE TAPE CENTER	H <sub>1</sub>	32.25 (1.270)	MAX	CARRIER TAPE WIDTH	W	18.0 (.709)	+ 1.0/- 0.5 (+ .039/- .020)
COMPONENT ALIGNMENT, FRONT TO REAR	ΔH	0	± 2.0 (± .079)	HOLD-DOWN TAPE WIDTH	W <sub>0</sub>	12.5 (.492)	MIN
CUT OUT LENGTH	L	11.0 (.433)	MAX	SPROCKET HOLE LOCATION	W <sub>1</sub>	9.0 (.354)	+ 0.75/- 0.5 (+ .030/- .020)
				HOLD-DOWN TAPE LOCATION	W <sub>2</sub>	3.0 (.118)	MAX

NOTES:

- (1) See individual product catalogs or page numbers listed at bottom of page 73 for other dimensions.
- (2) Ref. only
- (3) Cumulative pitch error = 1.0mm (.039) maximum in 20 consecutive sprocket hole locations.
- (4) Measured at bottom of standoff.
- (5) P<sub>1</sub> and F measured at egress from carrier tape.
- (6) P and P<sub>2</sub> measured at H<sub>0</sub>

**MULTILAYER CERAMIC CAPACITORS**

The basic capacitor element is called a chip and consists of formulated ceramic dielectric materials in layers interspersed with metal electrode layers. The entire structure is fired together at high temperature, after which conductive terminations are applied on opposite ends to contact protruding electrode edges. Chips may be terminated with materials suitable for hybrid-circuit substrate assembly. More usually, chips are furnished with protecting encapsulation and leadwires.

KEMET multilayer ceramic capacitors are produced in a plant designed specifically for capacitor manufacture. The process features a high degree of mechanization as well as precise controls over raw materials and process conditions. Manufacturing is supplemented by extensive Technology, Engineering, and Quality Assurance programs. Extensive application in aerospace and military programs attests to the

reliability of KEMET capacitors. No capacitors exceed the failure rate qualifications held by KEMET capacitors under military specification.

KEMET ceramic capacitors are offered in the three most popular temperature characteristics. These are designated by the Electronics Industry Association (EIA) as the ultra-stable C0G (known in the vernacular as NP0), the stable X7R (military BX or BR), and the general purpose Z5U. A wide range of sizes and lead arrangements are available to provide capacitance from 1 picofarad through 6.8 microfarads in 50, 100, and 200 volt ratings. KEMET C052 and C062 size Molded Multilayer Ceramic Capacitors are also available in KEMET's ARIS (Automatic Radial Insertion System) for automatic insertion machines. For further information, see page 73.

**TEMPERATURE CHARACTERISTICS**

Specified electrical limits for the three principal temperature characteristics are shown below. Electrical stability with respect to temperature and voltage is ranked inversely to the packaging efficiency (capacitance × voltage in a given case size). C0G is made from ceramic materials which are not ferroelectric, yielding superior stability but low packaging efficiency. Both X7R and Z5U capacitors are made from materials which are ferroelectric, principally barium titanate. This material changes crystalline form at its Curie point of approximately 120°C. The change in structure causes a radical change in the inherent dielectric constant, directly affecting the exhibited capacitance. Other materials in the ceramic formulations modify this effect to different degrees in producing the X7R and Z5U characteristics.

**AGING**

The change in dielectric constant above the curie point is reversible but the reversal does not occur instantaneously. In the phenomenon called aging, capacitance declines progressively with time along a typical curve. The slope of this curve for X7R characteristic amounts to a loss of approximately 1.5% in capacitance for every decade of hours at 25°C following the last excursion above the Curie point. The typical slope for Z5U characteristic is approximately 3-5% per hour decade.

Aging rates are utilized in testing KEMET capacitors prior to shipment. Capacitance test limits are designed to bring capacitors within the specified tolerance at 1,000 hours, allowing a nominal six weeks for receipt and use by the customer. This is a matter of convenience for the

customers' incoming inspection, for the capacitance will continue to decline with time.

**VOLTAGE EFFECTS**

Ferroelectric materials are also affected by applied voltage, both alternating and direct. Low values of voltage produce a slight increase in capacitance and dissipation factor. Higher voltages cause a decrease in capacitance which may become quite large. Typically, capacitors with BX or X7R characteristic decrease in capacitance by approximately 10% when rated DC voltage is applied. Other formulations with very high dielectric constants may exhibit a capacitance decrease of 50%.

This partial polarization of the ferroelectric formulations by DC voltage persists for some time after the voltage is removed. This residual effect can be removed by "de-aging," or raising the capacitors above the Curie point for a period of time. Two hours at 150°C is a satisfactory treatment. Upon returning to room temperature, the capacitors will once more age according to the previous discussion.

**CUSTOMER TESTING**

Because of the temperature and voltage effects, caution must be used in establishing a testing sequence. Dielectric strength and insulation resistance tests both apply high DC voltage and depress capacitance, so capacitance should be measured prior to these tests. Alternatively, the de-aging described above may be performed, followed by a stabilizing storage at room temperature, ambient conditions for about 24 hours.

**SPECIFIED ELECTRICAL LIMITS**

PARAMETER	TEMPERATURE CHARACTERISTICS		
	C0G	X7R	Z5U
Dissipation Factor: Measured at following conditions: C0G — 1 kHz and 1 vrms if capacitance > 1000 pF 1 MHz and 1 vrms if capacitance ≤ 1000 pF X7R — 1 kHz and 1 vrms if capacitance > 100 pF 1 MHz and 1 vrms if capacitance ≤ 100 pF Z5U — 1 kHz and 0.5 vrms	0.15%	2.5%	3.0%
Dielectric Strength: At 2.5 times rated DC voltage.	Pass Subsequent IR Test		
Insulation Resistance (IR): At rated DC voltage, whichever of the two is smaller.	1,000 MΩ-μF or 100 GΩ	1,000 MΩ-μF or 100 GΩ	1,000 MΩ-μF or 10 GΩ
Temperature Characteristic: Range, °C. Capacitance Change without DC voltage	-55 to 125 0 ± 30 ppm/°C*	-55 to 125 ± 15%	+10 to 85 + 22%, -56%

\* ±60 ppm/°C below 10 pF nominal.  
-53 ppm -30 ppm/°C from +25°C to -55°C comparable to MIL-C-20.

**ORDERING INFORMATION**

**CERAMIC** — C

**\*CASE SIZE** (See table below) — 052

**SPECIFICATION** — K

**CAPACITANCE** — 102

**CAPACITANCE TOLERANCE** — K

**WORKING VOLTAGE** — 2

**INTERNAL CONSTRUCTION** — 5

**LEAD MATERIAL** — X

**FAILURE RATE** — C

**LEAD MATERIAL** — C

**INTERNAL CONSTRUCTION** — 5

**FAILURE RATE** — A

A — Not Applicable (Std.)  
 M — 1.0%  
 P — 0.1%  
 R — 0.01%  
 S — 0.001%

C — Standard

5. Standard

**CERAMIC**

**\*CASE SIZE**  
(See table below)

**SPECIFICATION**  
**Standard & Military**  
 A — GR900 High Reliability (Chips)  
 B — GR900 High Reliability (Leaded Devices)  
 C — Standard  
 E — KEMET Military Equivalent  
 T — MIL-C-39014C Slash Sheets 1, 2 & 5  
 K — MIL-C-11015D  
 G — and MIL-C-20

**CAPACITANCE**  
 In picofarad code: First two digits are significant figures and third is number of zeroes following (except 9 indicates division by 10). Examples: 0.1  $\mu$ F = 100,000 pF = 104 and 9.1 pF = 919. See tables for Standard Values.

**CAPACITANCE TOLERANCE**  
**Standard**  
 M —  $\pm 20\%$   
 K —  $\pm 10\%$   
 J —  $\pm 5\%$   
 Z —  $+80\%$   
 -20%  
 P — GMV (Guar. Min. Value)  
 X — Special  
**Others**  
 H —  $\pm 3\%$   
 G —  $\pm 2\%$   
 F —  $\pm 1\%$   
 B —  $\pm 0.1$  pF  
 C —  $\pm 0.25$  pF  
 D —  $\pm 0.5$  pF

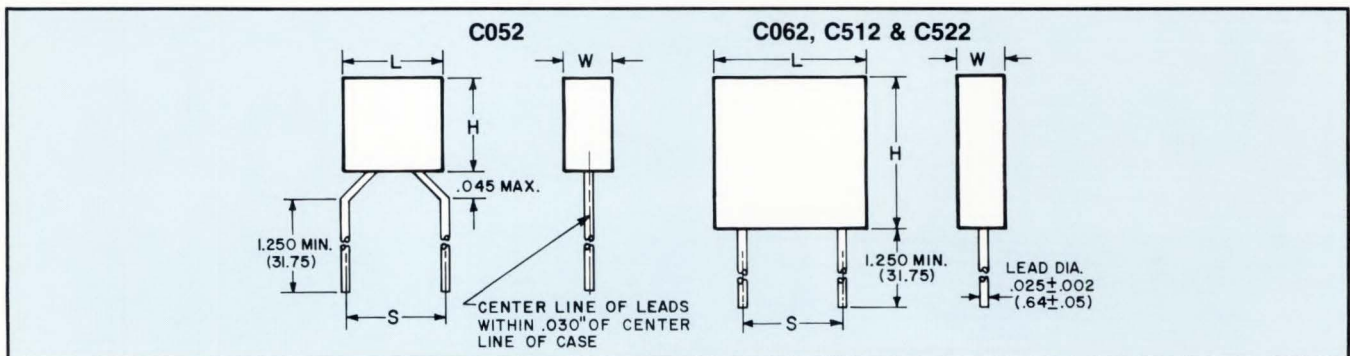
**WORKING VOLTAGE**  
 1 — 100  
 2 — 200  
 5 — 50  
 0 — Other

Standard tolerances for each Series are shown in the repetitive parts lists.

*CASE SIZES	
RADIAL	AXIAL
C052	C114
C062	C124
C512	C192
C522	C202
C315	C222
C320	C410
C322	C420
C323	C430
C330	C440
C333	
C340	
C350	

TEMPERATURE CHARACTERISTIC					
KEMET Designator	Military Equivalent	EIA Equivalent	Capacitance Change With Temp.		
			Temp. Range, °C	Measured Without DC Bias Voltage	Measured With Bias (Rated Voltage)
G (Ultra Stable)	CG, BP	C0G (NP0)	-55 to +125	$\pm 30$ ppm/°C	$\pm 30$ ppm/°C
X (Stable)	BX	X7R	-55 to +125	$\pm 15\%$	+15% -25%
R (Stable)	BR	X7R	-55 to +125	$\pm 15\%$	+15% -40%
U (General Purpose)	—	Z5U	+10 to +85	+22% -56%	N/A

**MOLDED CASES WITH RADIAL LEADS CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	MILITARY EQUIVALENT STYLES	H HEIGHT	L LENGTH	W WIDTH	S LEAD SPACING
C052	CC05, CCR05, CK05, CKR05	.190 $\pm$ .010 (4.83 $\pm$ .25)	.190 $\pm$ .010 (4.83 $\pm$ .25)	.090 $\pm$ .010 (2.29 $\pm$ .25)	.200 $\pm$ .015 (5.08 $\pm$ .38)
C062	CC06, CCR06, CK06, CKR06	.290 $\pm$ .010 (7.37 $\pm$ .25)	.290 $\pm$ .010 (7.37 $\pm$ .25)	.090 $\pm$ .010 (2.29 $\pm$ .25)	.200 $\pm$ .015 (5.08 $\pm$ .38)
C512	N/A	.480 $\pm$ .020 (12.19 $\pm$ .51)	.480 $\pm$ .020 (12.19 $\pm$ .51)	.140 $\pm$ .010 (3.56 $\pm$ .25)	.400 $\pm$ .020 (10.16 $\pm$ .51)
C522	N/A	.480 $\pm$ .020 (12.19 $\pm$ .51)	.480 $\pm$ .020 (12.19 $\pm$ .51)	.240 $\pm$ .010 (6.10 $\pm$ .25)	.400 $\pm$ .020 (10.16 $\pm$ .51)



**MOLDED CASES WITH RADIAL LEADS  
KEMET STANDARD ULTRA-STABLE TEMPERATURE CHARACTERISTIC — C0G  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER
<b>C052 SIZE C0G</b>		
1.0	200	C052C109(1)2G5CA
1.5	200	C052C159(1)2G5CA
2.2	200	C052C229(1)2G5CA
2.7	200	C052C279(1)2G5CA
3.3	200	C052C339(1)2G5CA
3.9	200	C052C399(1)2G5CA
4.7	200	C052C479(1)2G5CA
5.6	200	C052C569(1)2G5CA
6.8	200	C052C689(1)2G5CA
8.2	200	C052C829(1)2G5CA
10.0	200	C052C100(1)2G5CA
12.0	200	C052C120(1)2G5CA
15.0	200	C052C150(1)2G5CA
18.0	200	C052C180(1)2G5CA
22.0	200	C052C220(1)2G5CA
27.0	200	C052C270(1)2G5CA
33.0	200	C052C330(1)2G5CA
39.0	200	C052C390(1)2G5CA
47.0	200	C052C470(1)2G5CA
56.0	200	C052C560(1)2G5CA
68.0	200	C052C680(1)2G5CA
82.0	200	C052C820(1)2G5CA
100.0	200	C052C101(1)2G5CA
120.0	200	C052C121(1)2G5CA
150.0	200	C052C151(1)2G5CA
180.0	200	C052C181(1)2G5CA
220.0	200	C052C221(1)2G5CA
270.0	200	C052C271(1)2G5CA
330.0	200	C052C331(1)2G5CA
390.0	200	C052C391(1)2G5CA
470.0	200	C052C471(1)2G5CA
560.0	200	C052C561(1)2G5CA
680.0	200	C052C681(1)2G5CA
820.0	200	C052C821(1)2G5CA
1,000.0	200	C052C102(1)2G5CA
1,200.0	200	C052C122(1)2G5CA
1,500.0	200	C052C152(1)2G5CA
1,800.0	200	C052C182(1)2G5CA
2,200.0	200	C052C222(1)2G5CA
2,700.0	200	C052C272(1)2G5CA
390.0	100	C052C391(1)1G5CA
470.0	100	C052C471(1)1G5CA
560.0	100	C052C561(1)1G5CA
680.0	100	C052C681(1)1G5CA
820.0	100	C052C821(1)1G5CA
1,000.0	100	C052C102(1)1G5CA
1,200.0	100	C052C122(1)1G5CA
1,500.0	100	C052C152(1)1G5CA
1,800.0	100	C052C182(1)1G5CA
2,200.0	100	C052C222(1)1G5CA
2,700.0	100	C052C272(1)1G5CA
3,300.0	100	C052C332(1)1G5CA
3,900.0	100	C052C392(1)1G5CA
4,700.0	100	C052C472(1)1G5CA

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER
<b>C062 SIZE C0G</b>		
3,300.0	200	C062C332(1)2G5CA
3,900.0	200	C062C392(1)2G5CA
4,700.0	200	C062C472(1)2G5CA
5,600.0	200	C062C562(1)2G5CA
6,800.0	200	C062C682(1)2G5CA
8,200.0	200	C062C822(1)2G5CA
10,000.0	200	C062C103(1)2G5CA
5,600.0	100	C062C562(1)1G5CA
6,800.0	100	C062C682(1)1G5CA
8,200.0	100	C062C822(1)1G5CA
10,000.0	100	C062C103(1)1G5CA
12,000.0	100	C062C123(1)1G5CA
15,000.0	100	C062C153(1)1G5CA
18,000.0	100	C062C183(1)1G5CA
22,000.0	100	C062C223(1)1G5CA
<b>C512 SIZE C0G</b>		
12,000.0	200	C512C123(1)2G5CA
15,000.0	200	C512C153(1)2G5CA
18,000.0	200	C512C183(1)2G5CA
22,000.0	200	C512C223(1)2G5CA
27,000.0	200	C512C273(1)2G5CA
33,000.0	200	C512C333(1)2G5CA
39,000.0	200	C512C393(1)2G5CA
47,000.0	200	C512C473(1)2G5CA
56,000.0	200	C512C563(1)2G5CA
68,000.0	200	C512C683(1)2G5CA
27,000.0	100	C512C273(1)1G5CA
33,000.0	100	C512C333(1)1G5CA
39,000.0	100	C512C393(1)1G5CA
47,000.0	100	C512C473(1)1G5CA
56,000.0	100	C512C563(1)1G5CA
68,000.0	100	C512C683(1)1G5CA
82,000.0	100	C512C823(1)1G5CA
100,000.0	100	C512C104(1)1G5CA
<b>C522 SIZE C0G</b>		
82,000.0	200	C522C823(1)2G5CA
100,000.0	200	C522C104(1)2G5CA
120,000.0	200	C522C124(1)2G5CA
120,000.0	100	C522C124(1)1G5CA
150,000.0	100	C522C154(1)1G5CA
180,000.0	100	C522C184(1)1G5CA

**Note 1:** Insert proper symbol for capacitance tolerance as follows:

- 1.0 pF — 8.2 pF: D — ±.5 pF
- 10.0 pF — 22 pF: J — ±5%, K ± 10%
- 27 pF — 47pF: G — ±2%, J — ±5%, K — ±10%
- 56 pF up: F — ±1%, G — ±2%, J — ±5%, K — ±10%

**MOLDED CASES WITH RADIAL LEADS  
MIL-C-20 ULTRA-STABLE TEMPERATURE CHARACTERISTIC CAPACITORS — CG  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C052 SIZE (CC(R)05 PER MIL-C-20/35E)</b>			
1.0	200	C052G109(1)2G5CA	CC05CH1R0(1)
1.0	200	C052G109(1)2G5C(3)	CCR05CH1R0(1)(3)
1.1	200	C052G119(1)2G5CA	CC05CH1R1(1)
1.1	200	C052G119(1)2G5C(3)	CCR05CH1R1(1)(3)
1.2	200	C052G129(1)2G5CA	CC05CH1R2(1)
1.2	200	C052G129(1)2G5C(3)	CCR05CH1R2(1)(3)
1.3	200	C052G139(1)2G5CA	CC05CH1R3(1)
1.3	200	C052G139(1)2G5C(3)	CCR05CH1R3(1)(3)
1.5	200	C052G159(1)2G5CA	CC05CH1R5(1)
1.5	200	C052G159(1)2G5C(3)	CCR05CH1R5(1)(3)
1.6	200	C052G169(1)2G5CA	CC05CH1R6(1)
1.6	200	C052G169(1)2G5C(3)	CCR05CH1R6(1)(3)
1.8	200	C052G189(1)2G5CA	CC05CH1R8(1)
1.8	200	C052G189(1)2G5C(3)	CCR05CH1R8(1)(3)
2.0	200	C052G209(1)2G5CA	CC05CH2R0(1)
2.0	200	C052G209(1)2G5C(3)	CCR05CH2R0(1)(3)
2.2	200	C052G229(1)2G5CA	CC05CH2R2(1)
2.2	200	C052G229(1)2G5C(3)	CCR05CH2R2(1)(3)
2.4	200	C052G249(1)2G5CA	CC05CH2R4(1)
2.4	200	C052G249(1)2G5C(3)	CCR05CH2R4(1)(3)
2.7	200	C052G279(2)2G5CA	CC05CH2R7(2)
2.7	200	C052G279(2)2G5C(3)	CCR05CH2R7(2)(3)
3.0	200	C052G309(2)2G5CA	CC05CH3R0(2)
3.0	200	C052G309(2)2G5C(3)	CCR05CH3R0(2)(3)
3.3	200	C052G339(2)2G5CA	CC05CH3R3(2)
3.3	200	C052G339(2)2G5C(3)	CCR05CH3R3(2)(3)
3.6	200	C052G369(2)2G5CA	CC05CH3R6(2)
3.6	200	C052G369(2)2G5C(3)	CCR05CH3R6(2)(3)
3.9	200	C052G399(2)2G5CA	CC05CH3R9(2)
3.9	200	C052G399(2)2G5C(3)	CCR05CH3R9(2)(3)
4.3	200	C052G439(2)2G5CA	CC05CH4R3(2)
4.3	200	C052G439(2)2G5C(3)	CCR05CH4R3(2)(3)
4.7	200	C052G479(2)2G5CA	CC05CH4R7(2)
4.7	200	C052G479(2)2G5C(3)	CCR05CH4R7(2)(3)
5.1	200	C052G519(2)2G5CA	CC05CH5R1(2)
5.1	200	C052G519(2)2G5C(3)	CCR05CH5R1(2)(3)
5.6	200	C052G569(2)2G5CA	CC05CH5R6(2)
5.6	200	C052G569(2)2G5C(3)	CCR05CH5R6(2)(3)
6.2	200	C052G629(2)2G5CA	CC05CH6R2(2)
6.2	200	C052G629(2)2G5C(3)	CCR05CH6R2(2)(3)
6.8	200	C052G689(2)2G5CA	CC05CH6R8(2)
6.8	200	C052G689(2)2G5C(3)	CCR05CH6R8(2)(3)
7.5	200	C052G759(2)2G5CA	CC05CH7R5(2)
7.5	200	C052G759(2)2G5C(3)	CCR05CH7R5(2)(3)
8.2	200	C052G829(2)2G5CA	CC05CH8R2(2)
8.2	200	C052G829(2)2G5C(3)	CCR05CH8R2(2)(3)
9.1	200	C052G919(2)2G5CA	CC05CH9R1(2)
9.1	200	C052G919(2)2G5C(3)	CCR05CH9R1(2)(3)
10.0	200	C052G100(4)2G5CA	CC05CH100(4)
10.0	200	C052G100(4)2G5C(3)	CCR05CH100(4)(3)
11.0	200	C052G110(4)2G5CA	CC05CG110(4)
11.0	200	C052G110(4)2G5C(3)	CCR05CG110(4)(3)
12.0	200	C052G120(4)2G5CA	CC05CG120(4)
12.0	200	C052G120(4)2G5C(3)	CCR05CG120(4)(3)
13.0	200	C052G130(4)2G5CA	CC05CG130(4)
13.0	200	C052G130(4)2G5C(3)	CCR05CG130(4)(3)
15.0	200	C052G150(4)2G5CA	CC05CG150(4)
15.0	200	C052G150(4)2G5C(3)	CCR05CG150(4)(3)

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C052 SIZE (CC(R)05 PER MIL-C-20/35E)</b>			
16.0	200	C052G160(4)2G5CA	CC05CG160(4)
16.0	200	C052G160(4)2G5C(3)	CCR05CG160(4)(3)
18.0	200	C052G180(4)2G5CA	CC05CG180(4)
18.0	200	C052G180(4)2G5C(3)	CCR05CG180(4)(3)
20.0	200	C052G200(4)2G5CA	CC05CG200(4)
20.0	200	C052G200(4)2G5C(3)	CCR05CG200(4)(3)
22.0	200	C052G220(4)2G5CA	CC05CG220(4)
22.0	200	C052G220(4)2G5C(3)	CCR05CG220(4)(3)
24.0	200	C052G240(4)2G5CA	CC05CG240(4)
24.0	200	C052G240(4)2G5C(3)	CCR05CG240(4)(3)
27.0	200	C052G270(4)2G5CA	CC05CG270(4)
27.0	200	C052G270(4)2G5C(3)	CCR05CG270(4)(3)
30.0	200	C052G300(4)2G5CA	CC05CG300(4)
30.0	200	C052G300(4)2G5C(3)	CCR05CG300(4)(3)
33.0	200	C052G330(4)2G5CA	CC05CG330(4)
33.0	200	C052G330(4)2G5C(3)	CCR05CG330(4)(3)
36.0	200	C052G360(4)2G5CA	CC05CG360(4)
36.0	200	C052G360(4)2G5C(3)	CCR05CG360(4)(3)
39.0	200	C052G390(4)2G5CA	CC05CG390(4)
39.0	200	C052G390(4)2G5C(3)	CCR05CG390(4)(3)
43.0	200	C052G430(4)2G5CA	CC05CG430(4)
43.0	200	C052G430(4)2G5C(3)	CCR05CG430(4)(3)
47.0	200	C052G470(4)2G5CA	CC05CG470(4)
47.0	200	C052G470(4)2G5C(3)	CCR05CG470(4)(3)
51.0	200	C052G510(4)2G5CA	CC05CG510(4)
51.0	200	C052G510(4)2G5C(3)	CCR05CG510(4)(3)
56.0	200	C052G560(4)2G5CA	CC05CG560(4)
56.0	200	C052G560(4)2G5C(3)	CCR05CG560(4)(3)
62.0	200	C052G620(4)2G5CA	CC05CG620(4)
62.0	200	C052G620(4)2G5C(3)	CCR05CG620(4)(3)
68.0	200	C052G680(4)2G5CA	CC05CG680(4)
68.0	200	C052G680(4)2G5C(3)	CCR05CG680(4)(3)
75.0	200	C052G750(4)2G5CA	CC05CG750(4)
75.0	200	C052G750(4)2G5C(3)	CCR05CG750(4)(3)
82.0	200	C052G820(4)2G5CA	CC05CG820(4)
82.0	200	C052G820(4)2G5C(3)	CCR05CG820(4)(3)
91.0	200	C052G910(4)2G5CA	CC05CG910(4)
91.0	200	C052G910(4)2G5C(3)	CCR05CG910(4)(3)
100.0	200	C052G101(4)2G5CA	CC05CG101(4)
100.0	200	C052G101(4)2G5C(3)	CCR05CG101(4)(3)
110.0	200	C052G111(4)2G5CA	CC05CG111(4)
110.0	200	C052G111(4)2G5C(3)	CCR05CG111(4)(3)
120.0	200	C052G121(4)2G5CA	CC05CG121(4)
120.0	200	C052G121(4)2G5C(3)	CCR05CG121(4)(3)
130.0	200	C052G131(4)2G5CA	CC05CG131(4)
130.0	200	C052G131(4)2G5C(3)	CCR05CG131(4)(3)
150.0	200	C052G151(4)2G5CA	CC05CG151(4)
150.0	200	C052G151(4)2G5C(3)	CCR05CG151(4)(3)
160.0	200	C052G161(4)2G5CA	CC05CG161(4)
160.0	200	C052G161(4)2G5C(3)	CCR05CG161(4)(3)
180.0	200	C052G181(4)2G5CA	CC05CG181(4)
180.0	200	C052G181(4)2G5C(3)	CCR05CG181(4)(3)
200.0	200	C052G201(4)2G5CA	CC05CG201(4)
200.0	200	C052G201(4)2G5C(3)	CCR05CG201(4)(3)
220.0	200	C052G221(4)2G5CA	CC05CG221(4)
220.0	200	C052G221(4)2G5C(3)	CCR05CG221(4)(3)
240.0	200	C052G241(4)2G5CA	CC05CG241(4)
240.0	200	C052G241(4)2G5C(3)	CCR05CG241(4)(3)
270.0	200	C052G271(4)2G5CA	CC05CG271(4)
270.0	200	C052G271(4)2G5C(3)	CCR05CG271(4)(3)
300.0	200	C052G301(4)2G5CA	CC05CG301(4)
300.0	200	C052G301(4)2G5C(3)	CCR05CG301(4)(3)
330.0	200	C052G331(4)2G5CA	CC05CG331(4)
330.0	200	C052G331(4)2G5C(3)	CCR05CG331(4)(3)
360.0	100	C052G361(4)1G5CA	CC05CG361(4)
360.0	100	C052G361(4)1G5C(3)	CCR05CG361(4)(3)
390.0	100	C052G391(4)1G5CA	CC05CG391(4)
390.0	100	C052G391(4)1G5C(3)	CCR05CG391(4)(3)
430.0	100	C052G431(4)1G5CA	CC05CG431(4)
430.0	100	C052G431(4)1G5C(3)	CCR05CG431(4)(3)

To complete Part Number, insert the following letters:  
 (1) Available Capacitance Tolerances: B, C.  
 (2) Available Capacitance Tolerances: B, C, D.  
 (3) Available Failure Rates: M, P, R & S (CCR styles only).

(4) Available Capacitance Tolerances: F, G, J.  
 (5) Available Capacitance Tolerances: F, G, J, K.  
 (6) Available Capacitance Tolerances: G, J, K.

**MOLDED CASES WITH RADIAL LEADS  
MIL-C-20 ULTRA-STABLE TEMPERATURE CHARACTERISTIC CAPACITORS — CG**

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C052 SIZE (CC(R)05 PER MIL-C-20/35E) (Cont'd)</b>			
470.0	100	C052G471(4)1G5CA	CC05CG471(4)
470.0	100	C052G471(4)1G5C(3)	CCR05CG471(4)(3)
510.0	100	C052G511(4)1G5CA	CC05CG511(4)
510.0	100	C052G511(4)1G5C(3)	CCR05CG511(4)(3)
560.0	100	C052G561(4)1G5CA	CC05CG561(4)
560.0	100	C052G561(4)1G5C(3)	CCR05CG561(4)(3)
620.0	100	C052G621(4)1G5CA	CC05CG621(4)
620.0	100	C052G621(4)1G5C(3)	CCR05CG621(4)(3)
680.0	100	C052G681(4)1G5CA	CC05CG681(4)
680.0	100	C052G681(4)1G5C(3)	CCR05CG681(4)(3)
750.0	100	C052G751(4)1G5CA	CC05CG751(4)
750.0	100	C052G751(4)1G5C(3)	CCR05CG751(4)(3)
820.0	100	C052G821(4)1G5CA	CC05CG821(4)
820.0	100	C052G821(4)1G5C(3)	CCR05CG821(4)(3)
910.0	100	C052G911(4)1G5CA	CC05CG911(4)
910.0	100	C052G911(4)1G5C(3)	CCR05CG911(4)(3)
1,000.0	100	C052G102(4)1G5CA	CC05CG102(4)
1,000.0	100	C052G102(4)1G5C(3)	CCR05CG102(4)(3)
1,100.0	100	C052G112(4)1G5CA	CC05CG112(4)
1,100.0	100	C052G112(4)1G5C(3)	CCR05CG112(4)(3)
1,200.0	100	C052G122(4)1G5CA	CC05CG122(4)
1,200.0	100	C052G122(4)1G5C(3)	CCR05CG122(4)(3)
1,300.0	100	C052G132(4)1G5CA	CC05CG132(4)
1,300.0	100	C052G132(4)1G5C(3)	CCR05CG132(4)(3)
1,500.0	100	C052G152(4)1G5CA	CC05CG152(4)
1,500.0	100	C052G152(4)1G5C(3)	CCR05CG152(4)(3)
1,600.0	100	C052G162(4)1G5CA	CC05CG162(4)
1,600.0	100	C052G162(4)1G5C(3)	CCR05CG162(4)(3)
1,800.0	100	C052G182(4)1G5CA	CC05CG182(4)
1,800.0	100	C052G182(4)1G5C(3)	CCR05CG182(4)(3)
2,000.0	50	C052G202(4)5G5CA	CC05CG202(4)
2,000.0	50	C052G202(4)5G5C(3)	CCR05CG202(4)(3)
2,200.0	50	C052G222(4)5G5CA	CC05CG222(4)
2,200.0	50	C052G222(4)5G5C(3)	CCR05CG222(4)(3)
2,400.0	50	C052G242(4)5G5CA	CC05CG242(4)
2,400.0	50	C052G242(4)5G5C(3)	CCR05CG242(4)(3)
2,700.0	50	C052G272(4)5G5CA	CC05CG272(4)
2,700.0	50	C052G272(4)5G5C(3)	CCR05CG272(4)(3)
3,000.0	50	C052G302(4)5G5CA	CC05CG302(4)
3,000.0	50	C052G302(4)5G5C(3)	CCR05CG302(4)(3)
3,300.0	50	C052G332(4)5G5CA	CC05CG332(4)
3,300.0	50	C052G332(4)5G5C(3)	CCR05CG332(4)(3)
<b>C062 SIZE (CC(R)06 PER MIL-C-20/36D)</b>			
360.0	200	C062G361(4)2G5CA	CC06CG361(4)
360.0	200	C062G361(4)2G5C(3)	CCR06CG361(4)(3)
390.0	200	C062G391(4)2G5CA	CC06CG391(4)
390.0	200	C062G391(4)2G5C(3)	CCR06CG391(4)(3)
430.0	200	C062G431(4)2G5CA	CC06CG431(4)
430.0	200	C062G431(4)2G5C(3)	CCR06CG431(4)(3)
470.0	200	C062G471(4)2G5CA	CC06CG471(4)
470.0	200	C062G471(4)2G5C(3)	CCR06CG471(4)(3)
510.0	200	C062G511(4)2G5CA	CC06CG511(4)
510.0	200	C062G511(4)2G5C(3)	CCR06CG511(4)(3)
560.0	200	C062G561(4)2G5CA	CC06CG561(4)
560.0	200	C062G561(4)2G5C(3)	CCR06CG561(4)(3)
620.0	200	C062G621(4)2G5CA	CC06CG621(4)
620.0	200	C062G621(4)2G5C(3)	CCR06CG621(4)(3)
680.0	200	C062G681(4)2G5CA	CC06CG681(4)
680.0	200	C062G681(4)2G5C(3)	CCR06CG681(4)(3)
750.0	200	C062G751(4)2G5CA	CC06CG751(4)
750.0	200	C062G751(4)2G5C(3)	CCR06CG751(4)(3)
820.0	200	C062G821(4)2G5CA	CC06CG821(4)
820.0	200	C062G821(4)2G5C(3)	CCR06CG821(4)(3)
910.0	200	C062G911(4)2G5CA	CC06CG911(4)
910.0	200	C062G911(4)2G5C(3)	CCR06CG911(4)(3)
1,000.0	200	C062G102(4)2G5CA	CC06CG102(4)

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C062 SIZE (CC(R)06 PER MIL-C-20/36D)</b>			
1,000.0	200	C062G102(4)2G5C(3)	CCR06CG102(4)(3)
1,100.0	200	C062G112(4)2G5CA	CC06CG112(4)
1,100.0	200	C062G112(4)2G5C(3)	CCR06CG112(4)(3)
1,200.0	200	C062G122(4)2G5CA	CC06CG122(4)
1,200.0	200	C062G122(4)2G5C(3)	CCR06CG122(4)(3)
1,300.0	200	C062G132(4)2G5CA	CC06CG132(4)
1,300.0	200	C062G132(4)2G5C(3)	CCR06CG132(4)(3)
1,500.0	200	C062G152(4)2G5CA	CC06CG152(4)
1,500.0	200	C062G152(4)2G5C(3)	CCR06CG152(4)(3)
1,600.0	200	C062G162(4)2G5CA	CC06CG162(4)
1,600.0	200	C062G162(4)2G5C(3)	CCR06CG162(4)(3)
1,800.0	200	C062G182(4)2G5CA	CC06CG182(4)
1,800.0	200	C062G182(4)2G5C(3)	CCR06CG182(4)(3)
2,000.0	100	C062G202(4)1G5CA	CC06CG202(4)
2,000.0	100	C062G202(4)1G5C(3)	CCR06CG202(4)(3)
2,200.0	100	C062G222(4)1G5CA	CC06CG222(4)
2,200.0	100	C062G222(4)1G5C(3)	CCR06CG222(4)(3)
2,400.0	100	C062G242(4)1G5CA	CC06CG242(4)
2,400.0	100	C062G242(4)1G5C(3)	CCR06CG242(4)(3)
2,700.0	100	C062G272(4)1G5CA	CC06CG272(4)
2,700.0	100	C062G272(4)1G5C(3)	CCR06CG272(4)(3)
3,000.0	100	C062G302(4)1G5CA	CC06CG302(4)
3,000.0	100	C062G302(4)1G5C(3)	CCR06CG302(4)(3)
3,300.0	100	C062G332(4)1G5CA	CC06CG332(4)
3,300.0	100	C062G332(4)1G5C(3)	CCR06CG332(4)(3)
3,600.0	100	C062G362(4)1G5CA	CC06CG362(4)
3,600.0	100	C062G362(4)1G5C(3)	CCR06CG362(4)(3)
3,900.0	100	C062G392(4)1G5CA	CC06CG392(4)
3,900.0	100	C062G392(4)1G5C(3)	CCR06CG392(4)(3)
4,300.0	100	C062G432(4)1G5CA	CC06CG432(4)
4,300.0	100	C062G432(4)1G5C(3)	CCR06CG432(4)(3)
4,700.0	100	C062G472(4)1G5CA	CC06CG472(4)
4,700.0	100	C062G472(4)1G5C(3)	CCR06CG472(4)(3)
5,100.0	50	C062G512(5)5G5CA	CC06CG512(5)
5,100.0	50	C062G512(5)5G5C(3)	CCR06CG512(5)(3)
5,600.0	50	C062G562(5)5G5CA	CC06CG562(5)
5,600.0	50	C062G562(5)5G5C(3)	CCR06CG562(5)(3)
6,200.0	50	C062G622(5)5G5CA	CC06CG622(5)
6,200.0	50	C062G622(5)5G5C(3)	CCR06CG622(5)(3)
6,800.0	50	C062G682(5)5G5CA	CC06CG682(5)
6,800.0	50	C062G682(5)5G5C(3)	CCR06CG682(5)(3)
7,500.0	50	C062G752(5)5G5CA	CC06CG752(5)
7,500.0	50	C062G752(5)5G5C(3)	CCR06CG752(5)(3)
8,200.0	50	C062G822(5)5G5CA	CC06CG822(5)
8,200.0	50	C062G822(5)5G5C(3)	CCR06CG822(5)(3)
9,100.0	50	C062G912(5)5G5CA	CC06CG912(5)
9,100.0	50	C062G912(5)5G5C(3)	CCR06CG912(5)(3)
10,000.0	50	C062G103(5)5G5CA	CC06CG103(5)
10,000.0	50	C062G103(5)5G5C(3)	CCR06CG103(5)(3)
12,000.0	50	C062G123(5)5G5CA	CC06CG123(5)
12,000.0	50	C062G123(5)5G5C(3)	CCR06CG123(5)(3)
15,000.0	50	C062G153(5)5G5CA	CC06CG153(5)
15,000.0	50	C062G153(5)5G5C(3)	CCR06CG153(5)(3)
18,000.0	50	C062G183(5)5G5CA	CC06CG183(5)
18,000.0	50	C062G183(5)5G5C(3)	CCR06CG183(5)(3)

To complete Part Number, insert the following letters:

- (1) Available Capacitance Tolerances: B, C.
- (2) Available Capacitance Tolerances: B, C, D.
- (3) Available Failure Rates: M, P, R & S (CCR styles only).

- (4) Available Capacitance Tolerances: F, G, J.
- (5) Available Capacitance Tolerances: F, G, J, K.
- (6) Available Capacitance Tolerances: G, J, K.

**MOLDED CASES WITH RADIAL LEADS  
MIL-C-20 ULTRA-STABLE TEMPERATURE CHARACTERISTIC CAPACITORS — CG**

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C512 SIZE (CC(R)07 PER MIL-C-20/37C)</b>			
2,200.0	200	C512G222(5)2G5CA	CC07CG222(5)
2,200.0	200	C512G222(5)2G5C(3)	CCR07CG222(5)(3)
2,700.0	200	C512G272(5)2G5CA	CC07CG272(5)
2,700.0	200	C512G272(5)2G5C(3)	CCR07CG272(5)(3)
3,300.0	200	C512G332(5)2G5CA	CC07CG332(5)
3,300.0	200	C512G332(5)2G5C(3)	CCR07CG332(5)(3)
3,900.0	200	C512G392(5)2G5CA	CC07CG392(5)
3,900.0	200	C512G392(5)2G5C(3)	CCR07CG392(5)(3)
4,700.0	200	C512G472(5)2G5CA	CC07CG472(5)
4,700.0	200	C512G472(5)2G5C(3)	CCR07CG472(5)(3)
5,600.0	100	C512G562(5)1G5CA	CC07CG562(5)
5,600.0	100	C512G562(5)1G5C(3)	CCR07CG562(5)(3)
6,800.0	100	C512G682(5)1G5CA	CC07CG682(5)
6,800.0	100	C512G682(5)1G5C(3)	CCR07CG682(5)(3)
8,200.0	100	C512G822(5)1G5CA	CC07CG822(5)
8,200.0	100	C512G822(5)1G5C(3)	CCR07CG822(5)(3)
10,000.0	100	C512G103(5)1G5CA	CC07CG103(5)
10,000.0	100	C512G103(5)1G5C(3)	CCR07CG103(5)(3)
12,000.0	100	C512G123(5)1G5CA	CC07CG123(5)
12,000.0	100	C512G123(5)1G5C(3)	CCR07CG123(5)(3)
15,000.0	50	C512G153(5)5G5CA	CC07CG153(5)
15,000.0	50	C512G153(5)5G5C(3)	CCR07CG153(5)(3)
18,000.0	50	C512G183(5)5G5CA	CC07CG183(5)
18,000.0	50	C512G183(5)5G5C(3)	CCR07CG183(5)(3)
22,000.0	50	C512G223(5)5G5CA	CC07CG223(5)
22,000.0	50	C512G223(5)5G5C(3)	CCR07CG223(5)(3)
27,000.0	50	C512G273(5)5G5CA	CC07CG273(5)
27,000.0	50	C512G273(5)5G5C(3)	CCR07CG273(5)(3)
33,000.0	50	C512G333(5)5G5CA	CC07CG333(5)

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C512 SIZE (CC(R)07 PER MIL-C-20/37C)</b>			
33,000.0	50	C512G333(5)5G5C(3)	CCR07CG333(5)(3)
39,000.0	50	C512G393(5)5G5CA	CC07CG393(5)
39,000.0	50	C512G393(5)5G5C(3)	CCR07CG393(5)(3)
47,000.0	50	C512G473(5)5G5CA	CC07CG473(5)
47,000.0	50	C512G473(5)5G5C(3)	CCR07CG473(5)(3)
56,000.0	50	C512G563(5)5G5CA	CC07CG563(5)
56,000.0	50	C512G563(5)5G5C(3)	CCR07CG563(5)(3)
68,000.0	50	C512G683(5)5G5CA	CC07CG683(5)
68,000.0	50	C512G683(5)5G5C(3)	CCR07CG683(5)(3)
82,000.0	50	C512G823(5)5G5CA	CC07CG823(5)
82,000.0	50	C512G823(5)5G5C(3)	CCR07CG823(5)(3)
100,000.0	50	C512G104(5)5G5CA	CC07CG104(5)
100,000.0	50	C512G104(5)5G5C(3)	CCR07CG104(5)(3)
<b>C522 SIZE (CC(R)08 PER MIL-C-20/38A)</b>			
3,900.0	200	C522G392(6)2G5CA	CC08CG392(6)
3,900.0	200	C522G392(6)2G5C(3)	CCR08CG392(6)(3)
4,700.0	200	C522G472(6)2G5CA	CC08CG472(6)
4,700.0	200	C522G472(6)2G5C(3)	CCR08CG472(6)(3)
15,000.0	100	C522G153(6)1G5CA	CC08CG153(6)
15,000.0	100	C522G153(6)1G5C(3)	CCR08CG153(6)(3)
18,000.0	100	C522G183(6)1G5CA	CC08CG183(6)
18,000.0	100	C522G183(6)1G5C(3)	CCR08CG183(6)(3)
56,000.0	50	C522G563(6)5G5CA	CC08CG563(6)
56,000.0	50	C522G563(6)5G5C(3)	CCR08CG563(6)(3)
68,000.0	50	C522G683(6)5G5CA	CC08CG683(6)
68,000.0	50	C522G683(6)5G5C(3)	CCR08CG683(6)(3)

To complete Part Number, insert the following letters:  
 (1) Available Capacitance Tolerances: B, C.  
 (2) Available Capacitance Tolerances: B, C, D.  
 (3) Available Failure Rates: M, P, R & S (CCR styles only).  
 (4) Available Capacitance Tolerances: F, G, J.  
 (5) Available Capacitance Tolerances: F, G, J, K.  
 (6) Available Capacitance Tolerances: G, J, K.

**MOLDED CASES WITH RADIAL LEADS  
STABLE TEMPERATURE CHARACTERISTIC PER MIL-C-11015 & MIL-C-39014  
(EIA X7R; MILITARY BX & BR)  
RATINGS & PART NUMBER REFERENCE**

CAP., pF	TOL., %	VOLTAGE	KEMET PART NUMBER	MIL-C-11015/18	MIL-C-39014/01, FOR FAILURE RATE LEVELS (2)			
					M	P	R	S
<b>C052 SIZE (MILITARY — CK05, CKR05)</b>								
10	10	200	C052(1)100K2X5C(2)	CK05BX100K	1201	1241	1281	1321
10	20	200	C052(1)100M2X5C(2)	CK05BX100M	1202	1242	1282	1322
12	10	200	C052(1)120K2X5C(2)	CK05BX120K	1203	1243	1283	1323
15	10	200	C052(1)150K2X5C(2)	CK05BX150K	1204	1244	1284	1324
15	20	200	C052(1)150M2X5C(2)	CK05BX150M	1205	1245	1285	1325
18	10	200	C052(1)180K2X5C(2)	CK05BX180K	1206	1246	1286	1326
22	10	200	C052(1)220K2X5C(2)	CK05BX220K	1207	1247	1287	1327
22	20	200	C052(1)220M2X5C(2)	CK05BX220M	1208	1248	1288	1328
27	10	200	C052(1)270K2X5C(2)	CK05BX270K	1209	1249	1289	1329
33	10	200	C052(1)330K2X5C(2)	CK05BX330K	1210	1250	1290	1330
33	20	200	C052(1)330M2X5C(2)	CK05BX330M	1211	1251	1291	1331
39	10	200	C052(1)390K2X5C(2)	CK05BX390K	1212	1252	1292	1332
47	10	200	C052(1)470K2X5C(2)	CK05BX470K	1213	1253	1293	1333
47	20	200	C052(1)470M2X5C(2)	CK05BX470M	1214	1254	1294	1334
56	10	200	C052(1)560K2X5C(2)	CK05BX560K	1215	1255	1295	1335
68	10	200	C052(1)680K2X5C(2)	CK05BX680K	1216	1256	1296	1336
68	20	200	C052(1)680M2X5C(2)	CK05BX680M	1217	1257	1297	1337
82	10	200	C052(1)820K2X5C(2)	CK05BX820K	1218	1258	1298	1338
100	10	200	C052(1)101K2X5C(2)	CK05BX101K	1219	1259	1299	1339
100	20	200	C052(1)101M2X5C(2)	CK05BX101M	1220	1260	1300	1340
120	10	200	C052(1)121K2X5C(2)	CK05BX121K	1221	1261	1301	1341
150	10	200	C052(1)151K2X5C(2)	CK05BX151K	1222	1262	1302	1342
150	20	200	C052(1)151M2X5C(2)	CK05BX151M	1223	1263	1303	1343
180	10	200	C052(1)181K2X5C(2)	CK05BX181K	1224	1264	1304	1344
220	10	200	C052(1)221K2X5C(2)	CK05BX221K	1225	1265	1305	1345
220	20	200	C052(1)221M2X5C(2)	CK05BX221M	1226	1266	1306	1346
270	10	200	C052(1)271K2X5C(2)	CK05BX271K	1227	1267	1307	1347
330	10	200	C052(1)331K2X5C(2)	CK05BX331K	1228	1268	1308	1348
330	20	200	C052(1)331M2X5C(2)	CK05BX331M	1229	1269	1309	1349
390	10	200	C052(1)391K2X5C(2)	CK05BX391K	1230	1270	1310	1350
470	10	200	C052(1)471K2X5C(2)	CK05BX471K	1231	1271	1311	1351
470	20	200	C052(1)471M2X5C(2)	CK05BX471M	1232	1272	1312	1352
560	10	200	C052(1)561K2X5C(2)	CK05BX561K	1233	1273	1313	1353
680	10	200	C052(1)681K2X5C(2)	CK05BX681K	1234	1274	1314	1354
680	20	200	C052(1)681M2X5C(2)	CK05BX681M	1235	1275	1315	1355
820	10	200	C052(1)821K2X5C(2)	CK05BX821K	1236	1276	1316	1356
1,000	10	200	C052(1)102K2X5C(2)	CK05BX102K	1237	1277	1317	1357
1,000	20	200	C052(1)102M2X5C(2)	CK05BX102M	1238	1278	1318	1358
1,200	10	100	C052(1)122K1X5C(2)	CK05BX122K	1239	1279	1319	1359
1,500	10	100	C052(1)152K1X5C(2)	CK05BX152K	1240	1280	1320	1360
1,500	20	100	C052(1)152M1X5C(2)	CK05BX152M	1441	1481	1521	1561
1,800	10	100	C052(1)182K1X5C(2)	CK05BX182K	1442	1482	1522	1562
2,200	10	100	C052(1)222K1X5C(2)	CK05BX222K	1443	1483	1523	1563
2,200	20	100	C052(1)222M1X5C(2)	CK05BX222M	1444	1484	1524	1564
2,700	10	100	C052(1)272K1X5C(2)	CK05BX272K	1445	1485	1525	1565
3,300	10	100	C052(1)332K1X5C(2)	CK05BX332K	1446	1486	1526	1566
3,300	20	100	C052(1)332M1X5C(2)	CK05BX332M	1447	1487	1527	1567
3,900	10	100	C052(1)392K1X5C(2)	CK05BX392K	1448	1488	1528	1568
4,700	10	100	C052(1)472K1X5C(2)	CK05BX472K	1449	1489	1529	1569
4,700	20	100	C052(1)472M1X5C(2)	CK05BX472M	1450	1490	1530	1570
5,600	10	100	C052(1)562K1X5C(2)	CK05BX562K	1451	1491	1531	1571
6,800	10	100	C052(1)682K1X5C(2)	CK05BX682K	1452	1492	1532	1572
6,800	20	100	C052(1)682M1X5C(2)	CK05BX682M	1453	1493	1533	1573
8,200	10	100	C052(1)822K1X5C(2)	CK05BX822K	1454	1494	1534	1574
10,000	10	100	C052(1)103K1X5C(2)	CK05BX103K	1455	1495	1535	1575
10,000	20	100	C052(1)103M1X5C(2)	CK05BX103M	1456	1496	1536	1576
12,000	10	50	C052(1)123K5X5C(2)	CK05BX123K	1457	1497	1537	1577
15,000	10	50	C052(1)153K5X5C(2)	CK05BX153K	1458	1498	1538	1578
15,000	20	50	C052(1)153M5X5C(2)	CK05BX153M	1459	1499	1539	1579
18,000	10	50	C052(1)183K5X5C(2)	CK05BX183K	1460	1500	1540	1580
22,000	10	50	C052(1)223K5X5C(2)	CK05BX223K	1461	1501	1541	1581
22,000	20	50	C052(1)223M5X5C(2)	CK05BX223M	1462	1502	1542	1582
27,000	10	50	C052(1)273K5X5C(2)	CK05BX273K	1463	1503	1543	1583
33,000	10	50	C052(1)333K5X5C(2)	CK05BX333K	1464	1504	1544	1584
33,000	20	50	C052(1)333M5X5C(2)	CK05BX333M	1465	1505	1545	1585
39,000	10	50	C052(1)393K5X5C(2)	CK05BX393K	1466	1506	1546	1586
47,000	10	50	C052(1)473K5X5C(2)	CK05BX473K	1467	1507	1547	1587
47,000	20	50	C052(1)473M5X5C(2)	CK05BX473M	1468	1508	1548	1588
56,000	10	50	C052(1)563K5X5C(2)	CK05BX563K	1469	1509	1549	1589
68,000	10	50	C052(1)683K5X5C(2)	CK05BX683K	1470	1510	1550	1590
68,000	20	50	C052(1)683M5X5C(2)	CK05BX683M	1471	1511	1551	1591
82,000	10	50	C052(1)823K5X5C(2)	CK05BX823K	1472	1512	1552	1592
100,000	10	50	C052(1)104K5X5C(2)	CK05BX104K	1473	1513	1553	1593
100,000	20	50	C052(1)104M5X5C(2)	CK05BX104M	1474	1514	1554	1594

**Notes:** (1) Insert proper symbol for specifications: C — Standard, K — MIL-C-11015, T — MIL-C-39014/01.  
(2) Failure rates are designated as follows: A — Not Applicable (applies to all but MIL-C-39014 parts), M — 1%/khr, P — 0.1%/khr, R — 0.01%/khr, and S — 0.001%/khr.

**MOLDED CASES WITH RADIAL LEADS  
X7R STABLE TEMPERATURE CHARACTERISTIC CAPACITORS  
PER MIL-C-11015 & MIL-C-39014**

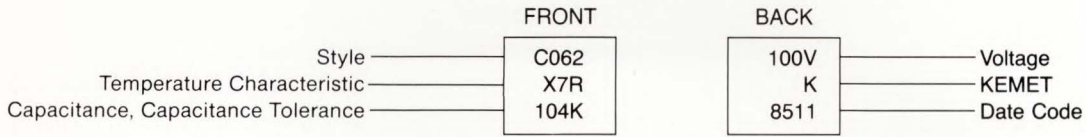
CAP., pF	TOL., %	VOLTAGE	KEMET PART NUMBER	MIL-C-11015/19	MIL-C-39014/02, FOR FAILURE RATE LEVELS (2)			
					M	P	R	S
<b>C062 SIZE (MILITARY — CK06, CKR06)</b>								
1,200	10	200	C062(1)122K2X5C(2)	CK06BX122K	1201	1241	1281	1321
1,500	10	200	C062(1)152K2X5C(2)	CK06BX152K	1202	1242	1282	1322
1,500	20	200	C062(1)152M2X5C(2)	CK06BX152M	1203	1243	1283	1323
1,800	10	200	C062(1)182K2X5C(2)	CK06BX182K	1204	1244	1284	1324
2,200	10	200	C062(1)222K2X5C(2)	CK06BX222K	1206	1246	1286	1326
2,200	20	200	C062(1)222M2X5C(2)	CK06BX222M	1207	1247	1287	1327
2,700	10	200	C062(1)272K2X5C(2)	CK06BX272K	1208	1248	1288	1328
3,300	10	200	C062(1)332K2X5C(2)	CK06BX332K	1209	1249	1289	1329
3,300	20	200	C062(1)332M2X5C(2)	CK06BX332M	1210	1250	1290	1330
3,900	10	200	C062(1)392K2X5C(2)	CK06BX392K	1211	1251	1291	1331
4,700	10	200	C062(1)472K2X5C(2)	CK06BX472K	1212	1252	1292	1332
4,700	20	200	C062(1)472M2X5C(2)	CK06BX472M	1213	1253	1293	1333
5,600	10	200	C062(1)562K2X5C(2)	CK06BX562K	1214	1254	1294	1334
6,800	10	200	C062(1)682K2X5C(2)	CK06BX682K	1215	1255	1295	1335
6,800	20	200	C062(1)682M2X5C(2)	CK06BX682M	1216	1256	1296	1336
8,200	10	200	C062(1)822K2X5C(2)	CK06BX822K	1217	1257	1297	1337
10,000	10	200	C062(1)103K2X5C(2)	CK06BX103K	1218	1258	1298	1338
10,000	20	200	C062(1)103M2X5C(2)	CK06BX103M	1219	1259	1299	1339
12,000	10	100	C062(1)123K1X5C(2)	CK06BX123K	1231	1271	1311	1351
15,000	10	100	C062(1)153K1X5C(2)	CK06BX153K	1220	1260	1300	1340
15,000	20	100	C062(1)153M1X5C(2)	CK06BX153M				
18,000	10	100	C062(1)183K1X5C(2)	CK06BX183K	1221	1261	1301	1341
22,000	10	100	C062(1)223K1X5C(2)	CK06BX223K	1222	1262	1302	1342
22,000	20	100	C062(1)223M1X5C(2)	CK06BX223M				
27,000	10	100	C062(1)273K1X5C(2)	CK06BX273K	1232	1272	1312	1352
33,000	10	100	C062(1)333K1X5C(2)	CK06BX333K	1223	1263	1303	1343
33,000	20	100	C062(1)333M1X5C(2)	CK06BX333M				
39,000	10	100	C062(1)393K1X5C(2)	CK06BX393K	1224	1264	1304	1344
47,000	10	100	C062(1)473K1X5C(2)	CK06BX473K	1225	1265	1305	1345
47,000	20	100	C062(1)473M1X5C(2)	CK06BX473M				
56,000	10	100	C062(1)563K1X5C(2)	CK06BX563K	1226	1266	1306	1346
68,000	10	100	C062(1)683K1X5C(2)	CK06BX683K	1227	1267	1307	1347
68,000	20	100	C062(1)683M1X5C(2)	CK06BX683M				
82,000	10	100	C062(1)823K1X5C(2)	CK06BX823K	1229	1269	1309	1349
100,000	10	100	C062(1)104K1X5C(2)	CK06BX104K	1230	1270	1310	1350
100,000	20	100	C062(1)104M1X5C(2)	CK06BX104M				
120,000	10	50	C062(1)124K5X5C(2)	CK06BX124K	1233	1273	1313	1353
150,000	10	50	C062(1)154K5X5C(2)	CK06BX154K	1234	1274	1314	1354
150,000	20	50	C062(1)154M5X5C(2)	CK06BX154M				
180,000	10	50	C062(1)184K5X5C(2)	CK06BX184K	1235	1275	1315	1355
220,000	10	50	C062(1)224K5X5C(2)	CK06BX224K	1236	1276	1316	1356
220,000	20	50	C062(1)224M5X5C(2)	CK06BX224M				
270,000	10	50	C062(1)274K5X5C(2)	CK06BX274K	1237	1277	1317	1357
330,000	10	50	C062(1)334K5X5C(2)	CK06BX334K	1238	1278	1318	1358
330,000	20	50	C062(1)334M5X5C(2)	CK06BX334M				
390,000	10	50	C062(1)394K5X5C(2)	CK06BX394K	1239	1279	1319	1359
470,000	10	50	C062(1)474K5X5C(2)	CK06BX474K	1240	1280	1320	1360
470,000	20	50	C062(1)474M5X5C(2)	CK06BX474M				
560,000	10	50	C062(1)564K5X5C(2)	CK06BX564K	1404	1408	1412	1416
680,000	10	50	C062(1)684K5X5C(2)	CK06BX684K	1405	1409	1413	1417
680,000	20	50	C062(1)684M5X5C(2)	CK06BX684M				
820,000	10	50	C062(1)824K5X5C(2)	CK06BX824K	1406	1410	1414	1418
1,000,000	10	50	C062(1)105K5X5C(2)	CK06BX105K	1407	1411	1415	1419
1,000,000	20	50	C062(1)105M5X5C(2)	CK06BX105M				
<b>C512 SIZE* (4)</b>								
1,000,000	(3)	50	C512C105(3)5X5CA					
1,500,000	(3)	50	C512C155(3)5X5CA					
2,000,000	(3)	50	C512C205(3)5X5CA					
2,200,000	(3)	50	C512C225(3)5X5CA					
<b>C522 SIZE* (4)</b>								
1,000,000	(3)	100	C522C105(1)1X5CA					
2,000,000	(3)	50	C522C205(3)5X5CA					
2,200,000	(3)	50	C522C225(3)5X5CA					
2,700,000	(3)	50	C522C275(3)5X5CA					
3,300,000	(3)	50	C522C335(3)5X5CA					

\* These parts offer high volumetric efficiency and packaging density with values available as high as 3.3 μF. Lower pF values are available as low as 2200 pF.

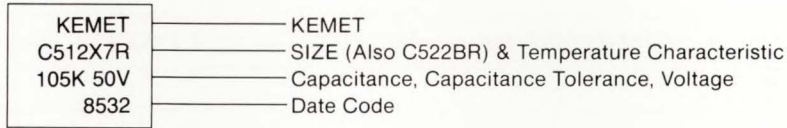
Notes: (1) Insert proper symbol for specifications: C — Standard, K — MIL-C-11015, T — MIL-C-39014/02.  
 (2) Failure rates are designated as follows: A — Not Applicable (applies to all but MIL-C-39014 parts), M — 1% khr, P — 0.1%/khr, R — 0.01% khr, and S — 0.001%/khr.  
 (3) Insert proper symbol for capacitance tolerance: K — ±10%, M — ±20%.  
 (4) Not available from military specification.

**RADIAL CAPACITOR MARKINGS**

**C052C & C062C STANDARD MARKING**

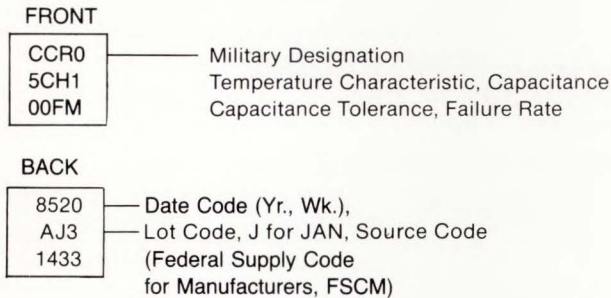


**C512C & C522C STANDARD MARKING**

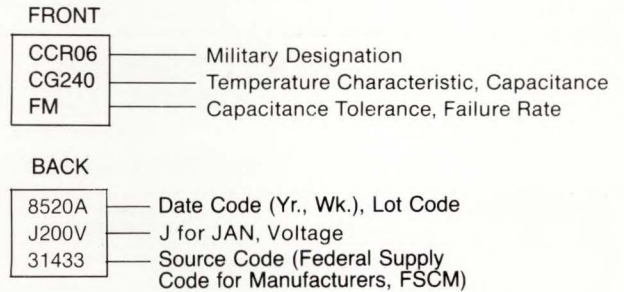


**MIL-C-20**

**CC & CCR05**



**CC & CCR06**

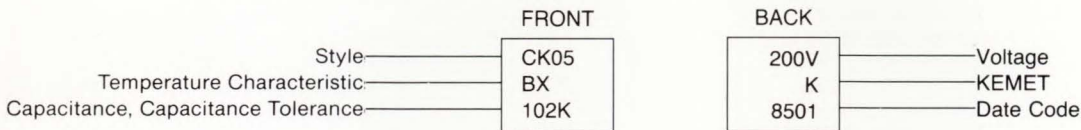


**CC & CCR07, 08**

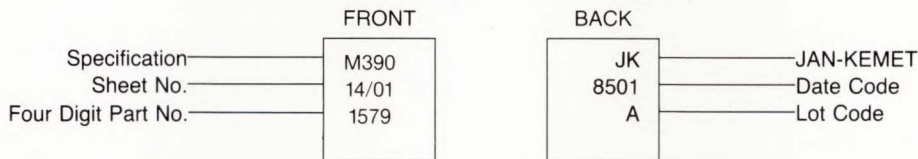


Note: On CC05, 06, 07 and 08 parts, there is no 'J' or 'JAN' marking.

**C052K (CK05) PER MIL-C-11015/18 & C062K (CK06) PER MIL-C-11015/19**



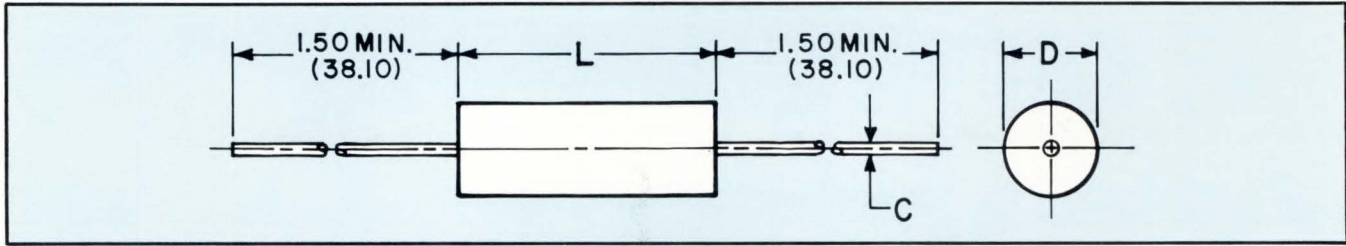
**C052T (CKR05) PER MIL-C-39014/01**



**C062T (CKR06) PER MIL-C-39014/02**



**MOLDED CASES WITH AXIAL LEADS  
CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	MILITARY EQUIVALENT STYLES	L	D	C
C114	CC75, CCR75 CK12, CKR11	.160 ± .010 (4.06 ± .25)	.090 ± .010 (2.29 ± .25)	.020, +.000, -.003 (.51, +.00, -.08)
C124	CC76, CCR76 CK13, CKR12	.250 ± .010 (6.35 ± .25)	.090 ± .010 (2.29 ± .25)	.020, +.000, -.003 (.51, +.00, -.08)
C192	CC77, CCR77 CK14, CKR14	.390 ± .010 (9.91 ± .25)	.140 ± .010 (3.56 ± .25)	.025, +.004, -.002 (.64, +.10, -.05)
C202	CC78, CCR78 CK15, CKR15	.500 ± .020 (12.70 ± .51)	.250 ± .015 (6.35 ± .38)	.025, +.004, -.002 (.64, +.10, -.05)
C222	CC79, CCR79 CK16, CKR16	.690 ± .030 (17.53 ± .76)	.350 ± .020 (8.89 ± .51)	.025, +.004, -.002 (.64, +.10, -.05)

**KEMET STANDARD ULTRA-STABLE TEMPERATURE  
CHARACTERISTIC CAPACITORS — C0G  
EIA — C0G, VERNACULAR — NP0  
RATINGS AND PART NUMBER REFERENCE**

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER
<b>C114 STANDARD C0G</b>		
1.0	200	C114C109□2G5CA
1.5	200	C114C159□2G5CA
2.2	200	C114C229□2G5CA
2.7	200	C114C279□2G5CA
3.3	200	C114C339□2G5CA
3.9	200	C114C399□2G5CA
4.7	200	C114C479□2G5CA
5.6	200	C114C569□2G5CA
6.8	200	C114C689□2G5CA
8.2	200	C114C829□2G5CA
10.0	200	C114C100□2G5CA
12.0	200	C114C120□2G5CA
15.0	200	C114C150□2G5CA
18.0	200	C114C180□2G5CA
22.0	200	C114C220□2G5CA
27.0	200	C114C270□2G5CA
33.0	200	C114C330□2G5CA
39.0	200	C114C390□2G5CA
47.0	200	C114C470□2G5CA
56.0	200	C114C560□2G5CA
68.0	200	C114C680□2G5CA
82.0	200	C114C820□2G5CA
100.0	200	C114C101□2G5CA
120.0	200	C114C121□2G5CA
150.0	200	C114C151□2G5CA
180.0	200	C114C181□2G5CA
220.0	200	C114C221□2G5CA
270.0	200	C114C271□2G5CA
330.0	200	C114C331□2G5CA
82.0	100	C114C820□1G5CA
100.0	100	C114C101□1G5CA
120.0	100	C114C121□1G5CA
150.0	100	C114C151□1G5CA
180.0	100	C114C181□1G5CA
220.0	100	C114C221□1G5CA
270.0	100	C114C271□1G5CA

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER
<b>C114 STANDARD C0G (Cont'd)</b>		
330.0	100	C114C331□1G5CA
390.0	100	C114C391□1G5CA
470.0	100	C114C471□1G5CA
560.0	100	C114C561□1G5CA
680.0	100	C114C681□1G5CA
<b>C124 STANDARD C0G</b>		
390.0	200	C124C391□2G5CA
470.0	200	C124C471□2G5CA
560.0	200	C124C561□2G5CA
820.0	100	C124C821□1G5CA
1,000.0	100	C124C102□1G5CA
<b>C192 STANDARD C0G</b>		
680.0	200	C192C681□2G5CA
820.0	200	C192C821□2G5CA
1,000.0	200	C192C102□2G5CA
1,200.0	200	C192C122□2G5CA
1,500.0	200	C192C152□2G5CA
1,800.0	200	C192C182□2G5CA
2,200.0	200	C192C222□2G5CA
2,700.0	200	C192C272□2G5CA
3,300.0	200	C192C332□2G5CA
3,900.0	200	C192C392□2G5CA
4,700.0	200	C192C472□2G5CA
5,600.0	200	C192C562□2G5CA
1,200.0	100	C192C122□1G5CA
1,500.0	100	C192C152□1G5CA
1,800.0	100	C192C182□1G5CA
2,200.0	100	C192C222□1G5CA
2,700.0	100	C192C272□1G5CA
3,300.0	100	C192C332□1G5CA
3,900.0	100	C192C392□1G5CA
4,700.0	100	C192C472□1G5CA
5,600.0	100	C192C562□1G5CA
6,800.0	100	C192C682□1G5CA
8,200.0	100	C192C822□1G5CA



**MOLDED CASES WITH AXIAL LEADS  
KEMET STANDARD ULTRA-STABLE TEMPERATURE  
CHARACTERISTIC CAPACITORS — C0G  
EIA — C0G, VERNACULAR — NP0**

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER
<b>C202 STANDARD C0G</b>		
6,800.0	200	C202C682(1)2G5CA
8,200.0	200	C202C822(1)2G5CA
10,000.0	200	C202C103(1)2G5CA
12,000.0	200	C202C123(1)2G5CA
15,000.0	200	C202C153(1)2G5CA
18,000.0	200	C202C183(1)2G5CA
22,000.0	200	C202C223(1)2G5CA
10,000.0	100	C202C103(1)1G5CA
12,000.0	100	C202C123(1)1G5CA
15,000.0	100	C202C153(1)1G5CA
18,000.0	100	C202C183(1)1G5CA
22,000.0	100	C202C223(1)1G5CA
27,000.0	100	C202C273(1)1G5CA
33,000.0	100	C202C333(1)1G5CA

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER
<b>C222 STANDARD C0G</b>		
27,000.0	200	C222C273(1)2G5CA
33,000.0	200	C222C333(1)2G5CA
39,000.0	200	C222C393(1)2G5CA
47,000.0	200	C222C473(1)2G5CA
56,000.0	200	C222C563(1)2G5CA
39,000.0	100	C222C393(1)1G5CA
47,000.0	100	C222C473(1)1G5CA
56,000.0	100	C222C563(1)1G5CA
68,000.0	100	C222C683(1)1G5CA
82,000.0	100	C222C823(1)1G5CA
100,000.0	100	C222C104(1)1G5CA

**Note 1:** Insert proper symbol for capacitance tolerance as follows:

- 1.0 pF — 8.2 pF: D — ±5 pF
- 10.0 pF — 22 pF: J — ±5%, K — ±10%
- 27 pF — 47 pF: G — ±2%, J — ±5%, K — ±10%
- 56 pF up: F — ±1%, G — ±2%, J — ±5%, K — ±10%

**MIL-C-20 ULTRA-STABLE TEMPERATURE CHARACTERISTIC CAPACITORS — CG  
MILITARY — CG, VERNACULAR — NP0  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C114 SIZE (CC(R)75 PER MIL-C-20/27C)</b>			
0.10	200	C114G108(1)2G5CA	CC75CGR10(1)
0.10	200	C114G108(1)2G5C(2)	CCR75CGR10(1)(2)
0.11	200	C114G118(1)2G5CA	CC75CGR11(1)
0.11	200	C114G118(1)2G5C(2)	CCR75CGR11(1)(2)
0.12	200	C114G128(1)2G5CA	CC75CGR12(1)
0.12	200	C114G128(1)2G5C(2)	CCR75CGR12(1)(2)
0.13	200	C114G138(1)2G5CA	CC75CGR13(1)
0.13	200	C114G138(1)2G5C(2)	CCR75CGR13(1)(2)
0.15	200	C114G158(1)2G5CA	CC75CGR15(1)
0.15	200	C114G158(1)2G5C(2)	CCR75CGR15(1)(2)
0.16	200	C114G168(1)2G5CA	CC75CGR16(1)
0.16	200	C114G168(1)2G5C(2)	CCR75CGR16(1)(2)
0.18	200	C114G188(1)2G5CA	CC75CGR18(1)
0.18	200	C114G188(1)2G5C(2)	CCR75CGR18(1)(2)
0.20	200	C114G208(1)2G5CA	CC75CGR20(1)
0.20	200	C114G208(1)2G5C(2)	CCR75CGR20(1)(2)
0.22	200	C114G228(1)2G5CA	CC75CGR22(1)
0.22	200	C114G228(1)2G5C(2)	CCR75CGR22(1)(2)
0.24	200	C114G248(1)2G5CA	CC75CGR24(1)
0.24	200	C114G248(1)2G5C(2)	CCR75CGR24(1)(2)
0.27	200	C114G278(1)2G5CA	CC75CGR27(1)
0.27	200	C114G278(1)2G5C(2)	CCR75CGR27(1)(2)
0.30	200	C114G308(1)2G5CA	CC75CGR30(1)
0.30	200	C114G308(1)2G5C(2)	CCR75CGR30(1)(2)
0.33	200	C114G338(1)2G5CA	CC75CGR33(1)
0.33	200	C114G338(1)2G5C(2)	CCR75CGR33(1)(2)
0.36	200	C114G368(1)2G5CA	CC75CGR36(1)
0.36	200	C114G368(1)2G5C(2)	CCR75CGR36(1)(2)
0.39	200	C114G398(1)2G5CA	CC75CGR39(1)
0.39	200	C114G398(1)2G5C(2)	CCR75CGR39(1)(2)
0.43	200	C114G438(1)2G5CA	CC75CGR43(1)
0.43	200	C114G438(1)2G5C(2)	CCR75CGR43(1)(2)
0.47	200	C114G478(1)2G5CA	CC75CGR47(1)
0.47	200	C114G478(1)2G5C(2)	CCR75CGR47(1)(2)
0.51	200	C114G518(1)2G5CA	CC75CGR51(1)

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C114 SIZE (CC(R)75 PER MIL-C-20/27C)</b>			
0.51	200	C114G518(1)2G5C(2)	CCR75CGR51(1)(2)
0.56	200	C114G568(1)2G5CA	CC75CGR56(1)
0.56	200	C114G568(1)2G5C(2)	CCR75CGR56(1)(2)
0.62	200	C114G628(1)2G5CA	CC75CGR62(1)
0.62	200	C114G628(1)2G5C(2)	CCR75CGR62(1)(2)
0.68	200	C114G688(1)2G5CA	CC75CGR68(1)
0.68	200	C114G688(1)2G5C(2)	CCR75CGR68(1)(2)
0.75	200	C114G758(1)2G5CA	CC75CGR75(1)
0.75	200	C114G758(1)2G5C(2)	CCR75CGR75(1)(2)
0.82	200	C114G828(1)2G5CA	CC75CGR82(1)
0.82	200	C114G828(1)2G5C(2)	CCR75CGR82(1)(2)
0.91	200	C114G918(1)2G5CA	CC75CGR91(3)
0.91	200	C114G918(1)2G5C(2)	CCR75CGR91(3)(2)
1.0	200	C114G109(3)2G5CA	CC75CG1R0(3)
1.0	200	C114G109(3)2G5C(2)	CCR75CG1R0(3)(2)
1.1	200	C114G119(3)2G5CA	CC75CG1R1(3)
1.1	200	C114G119(3)2G5C(2)	CCR75CG1R1(3)(2)
1.2	200	C114G129(3)2G5CA	CC75CG1R2(3)
1.2	200	C114G129(3)2G5C(2)	CCR75CG1R2(3)(2)
1.3	200	C114G139(3)2G5CA	CC75CG1R3(3)
1.3	200	C114G139(3)2G5C(2)	CCR75CG1R3(3)(2)
1.5	200	C114G159(3)2G5CA	CC75CG1R5(3)
1.5	200	C114G159(3)2G5C(2)	CCR75CG1R5(3)(2)
1.6	200	C114G169(3)2G5CA	CC75CG1R6(3)
1.6	200	C114G169(3)2G5C(2)	CCR75CG1R6(3)(2)
1.8	200	C114G189(3)2G5CA	CC75CG1R8(3)
1.8	200	C114G189(3)2G5C(2)	CCR75CG1R8(3)(2)
2.0	200	C114G209(3)2G5CA	CC75CG2R0(3)
2.0	200	C114G209(3)2G5C(2)	CCR75CG2R0(3)(2)
2.2	200	C114G229(3)2G5CA	CC75CG2R2(3)
2.2	200	C114G229(3)2G5C(2)	CCR75CG2R2(3)(2)
2.4	200	C114G249(3)2G5CA	CC75CG2R4(3)
2.4	200	C114G249(3)2G5C(2)	CCR75CG2R4(3)(2)
2.7	200	C114G279(4)2G5CA	CC75CG2R7(4)
2.7	200	C114G279(4)2G5C(2)	CCR75CG2R7(4)(2)

- To complete Part Number, insert the following letters:
  - (1) Available Capacitance Tolerance: B.
  - (2) Available Failure Rates: M, P, R & S (CCR styles only).
  - (3) Available Capacitance Tolerances: B, C.
  - (4) Available Capacitance Tolerances: B, C, D.
  - (5) Available Capacitance Tolerances: F, G, J.
  - (6) Available Capacitance Tolerances: F, G, J, K.





**MOLDED CASES WITH AXIAL LEADS  
ULTRA-STABLE TEMPERATURE CHARACTERISTIC CAPACITORS**

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C222 SIZE (CC(R)79 PER MIL-C-20/31A)</b>			
3,900.0	200	C222G392(6)2G5CA	CC79CG392(6)
3,900.0	200	C222G392(6)2G5C(2)	CCR79CG392(6)(2)
4,700.0	200	C222G472(6)2G5CA	CC79CG472(6)
4,700.0	200	C222G472(6)2G5C(2)	CCR79CG472(6)(2)
5,600.0	200	C222G562(6)2G5CA	CC79CG562(6)
5,600.0	200	C222G562(6)2G5C(2)	CCR79CG562(6)(2)
6,800.0	200	C222G682(6)2G5CA	CC79CG682(6)
6,800.0	200	C222G682(6)2G5C(2)	CCR79CG682(6)(2)
8,200.0	200	C222G822(6)2G5CA	CC79CG822(6)
8,200.0	200	C222G822(6)2G5C(2)	CCR79CG822(6)(2)
10,000.0	100	C222G103(6)1G5CA	CC79CG103(6)
10,000.0	100	C222G103(6)1G5C(2)	CCR79CG103(6)(2)
15,000.0	100	C222G153(6)1G5CA	CC79CG153(6)
15,000.0	100	C222G153(6)1G5C(2)	CCR79CG153(6)(2)
18,000.0	100	C222G183(6)1G5CA	CC79CG183(6)
18,000.0	100	C222G183(6)1G5C(2)	CCR79CG183(6)(2)

CAPACITANCE pF	D.C. VOLTAGE	KEMET PART NUMBER	MILITARY PART NUMBER
<b>C222 SIZE (CC(R)79 PER MIL-C-20/31A)</b>			
22,000.0	100	C222G223(6)1G5CA	CC79CG223(6)
22,000.0	100	C222G223(6)1G5C(2)	CCR79CG223(6)(2)
27,000.0	100	C222G273(6)1G5CA	CC79CG273(6)
27,000.0	100	C222G273(6)1G5C(2)	CCR79CG273(6)(2)
33,000.0	100	C222G333(6)1G5CA	CC79CG333(6)
33,000.0	100	C222G333(6)1G5C(2)	CCR79CG333(6)(2)
39,000.0	100	C222G393(6)1G5CA	CC79CG393(6)
39,000.0	100	C222G393(6)1G5C(2)	CCR79CG393(6)(2)
47,000.0	50	C222G473(6)5G5CA	CC79CG473(6)
47,000.0	50	C222G473(6)5G5C(2)	CCR79CG473(6)(2)
56,000.0	50	C222G563(6)5G5CA	CC79CG563(6)
56,000.0	50	C222G563(6)5G5C(2)	CCR79CG563(6)(2)
68,000.0	50	C222G683(6)5G5CA	CC79CG683(6)
68,000.0	50	C222G683(6)5G5C(2)	CCR79CG683(6)(2)
82,000.0	50	C222G823(6)5G5CA	CC79CG823(6)
82,000.0	50	C222G823(6)5G5C(2)	CCR79CG823(6)(2)

To complete Part Number, insert the following letters:  
 (1) Available Capacitance Tolerance: B.  
 (2) Available Failure Rates: M, P, R & S (CCR styles only).  
 (3) Available Capacitance Tolerances: B, C.  
 (4) Available Capacitance Tolerances: B, C, D.  
 (5) Available Capacitance Tolerances: F, G, J.  
 (6) Available Capacitance Tolerances: F, G, J, K.



**MOLDED CASES WITH AXIAL LEADS**

**STABLE TEMPERATURE CHARACTERISTIC PER MIL-C-11015 & MIL-C-39014 (EIA X7R; MILITARY BX & BR)**

CAP. pF	TOL. %	VOLTAGE	KEMET PART NUMBER	MIL-C-11015/20	MIL-C-39014/05, FOR FAILURE RATE LEVELS (2)			
					M	P	R	S
<b>C124 SIZE (MILITARY — CK13 OR CKR12) (Cont'd)</b>								
27,000	10	50	C124(1)273K 5X5C(2)		2669	2869	2069	2269
33,000	10	50	C124(1)333K 5X5C(2)		2670	2870	2070	2270
33,000	20	50	C124(1)333M5X5C(2)		2671	2871	2071	2271
39,000	10	50	C124(1)393K 5X5C(2)		2672	2872	2072	2272
47,000	10	50	C124(1)473K 5X5C(2)		2673	2873	2073	2273
47,000	20	50	C124(1)473M5X5C(2)		2674	2874	2074	2274
<b>C192 SIZE (MILITARY — CK14 OR CKR14)</b>								
12,000	10	100	C192(1)123K 1X5C(2)	CK14BX123K	2675	2875	2075	2275
15,000	10	100	C192(1)153K 1X5C(2)	CK14BX153K	2676	2876	2076	2276
15,000	20	100	C192(1)153M1X5C(2)	CK14BX153M	2677	2877	2077	2277
18,000	10	100	C192(1)183K 1X5C(2)	CK14BX183K	2678	2878	2078	2278
22,000	10	100	C192(1)223K 1X5C(2)	CK14BX223K	2679	2879	2079	2279
22,000	20	100	C192(1)223M1X5C(2)	CK14BX223M	2680	2880	2080	2280
27,000	10	100	C192(1)273K 1X5C(2)	CK14BX273K	2681	2881	2081	2281
33,000	10	100	C192(1)333K 1X5C(2)	CK14BX333K	2682	2882	2082	2282
33,000	20	100	C192(1)333M1X5C(2)	CK14BX333M	2683	2883	2083	2283
39,000	10	100	C192(1)393K 1X5C(2)	CK14BX393K	2684	2884	2084	2284
47,000	10	100	C192(1)473K 1X5C(2)	CK14BX473K	2685	2885	2085	2285
47,000	20	100	C192(1)473M1X5C(2)	CK14BX473M	2686	2886	2086	2286
56,000	10	50	C192(1)563K 5X5C(2)		2687	2887	2087	2287
68,000	10	50	C192(1)683K 5X5C(2)		2688	2888	2088	2288
68,000	20	50	C192(1)683M 5X5C(2)		2689	2889	2089	2289
82,000	10	50	C192(1)823K 5X5C(2)		2690	2890	2090	2290
100,000	10	50	C192(1)104K 5X5C(2)		2691	2891	2091	2291
100,000	20	50	C192(1)104M5X5C(2)		2692	2892	2092	2292
56,000	10	100	C192(1)563K 1R5C(2)	CK14BR563K	2693	2893	2093	2293
68,000	10	100	C192(1)683K 1R5C(2)	CK14BR683K	2694	2894	2094	2294
68,000	20	100	C192(1)683M 1R5C(2)	CK14BR683M	2695	2895	2095	2295
82,000	10	100	C192(1)823K 1R5C(2)	CK14BR823K	2696	2896	2096	2296
100,000	10	100	C192(1)104K 1R5C(2)	CK14BR104K	2697	2897	2097	2297
100,000	20	100	C192(1)104M 1R5C(2)	CK14BR104M	2698	2898	2098	2298
120,000	10	50	C192(1)124K 5R5C(2)	CK14BR124K	2699	2899	2099	2299
150,000	10	50	C192(1)154K 5R5C(2)	CK14BR154K	2700	2900	2100	2300
150,000	20	50	C192(1)154M 5R5C(2)	CK14BR154M	2701	2901	2101	2301
180,000	10	50	C192(1)184K 5R5C(2)	CK14BR184K	2702	2902	2102	2302
220,000	10	50	C192(1)224K 5R5C(2)	CK14BR224K	2703	2903	2103	2303
220,000	20	50	C192(1)224M 5R5C(2)	CK14BR224M	2704	2904	2104	2304
270,000	10	50	C192(1)274K 5R5C(2)	CK14BR274K	2705	2905	2105	2305
<b>C202 SIZE (MILITARY — CK15 OR CKR15)</b>								
56,000	10	100	C202(1)563K 1X5C(2)		2706	2906	2106	2306
68,000	10	100	C202(1)683K 1X5C(2)		2707	2907	2107	2307
68,000	20	100	C202(1)683M1X5C(2)		2708	2908	2108	2308
82,000	10	100	C202(1)823K 1X5C(2)		2709	2909	2109	2309
100,000	10	100	C202(1)104K 1X5C(2)	CK15BX104K	2710	2910	2110	2310
100,000	20	100	C202(1)104M1X5C(2)	CK15BX104M	2711	2911	2111	2311
120,000	10	100	C202(1)124K 1R5C(2)	CK15BR124K	2712	2912	2112	2312
150,000	10	100	C202(1)154K 1R5C(2)	CK15BR154K	2713	2913	2113	2313
150,000	20	100	C202(1)154M 1R5C(2)	CK15BR154M	2714	2914	2114	2314
180,000	10	100	C202(1)184K 1R5C(2)	CK15BR184K	2715	2915	2115	2315
220,000	10	100	C202(1)224K 1R5C(2)	CK15BR224K	2716	2916	2116	2316
220,000	20	100	C202(1)224M 1R5C(2)	CK15BR224M	2717	2917	2117	2317
270,000	10	100	C202(1)274K 1R5C(2)	CK15BR274K	2718	2918	2118	2318
330,000	10	100	C202(1)334K 1R5C(2)	CK15BR334K	2719	2919	2119	2319
330,000	20	100	C202(1)334M 1R5C(2)	CK15BR334M	2720	2920	2120	2320
470,000	10	50	C202(1)474K 5R5C(2)	CK15BR474K	2721	2921	2121	2321
470,000	20	50	C202(1)474M 5R5C(2)	CK15BR474M	2722	2922	2122	2322
680,000	10	50	C202(1)684K 5R5C(2)		2723	2923	2123	2323
680,000	20	50	C202(1)684M 5R5C(2)		2724	2924	2124	2324
1,000,000	10	50	C202(1)105K 5R5C(2)	CK15BR105K	2725	2925	2125	2325
1,000,000	20	50	C202(1)105M 5R5C(2)	CK15BR105M	2726	2926	2126	2326
<b>C222 SIZE (MILITARY — CK16 OR CKR16)</b>								
470,000	10	100	C222(1)474K 1R5C(2)	CK16BR474K	2727	2927	2127	2327
470,000	20	100	C222(1)474M 1R5C(2)	CK16BR474M	2728	2928	2128	2328
680,000	10	100	C222(1)684K 1R5C(2)		2729	2929	2129	2329
680,000	20	100	C222(1)684M 1R5C(2)		2730	2930	2130	2330
1,000,000	10	100	C222(1)105K 1R5C(2)	CK16BR105K	2731	2931	2131	2331
1,000,000	20	100	C222(1)105M 1R5C(2)	CK16BR105M	2732	2932	2132	2332
2,200,000	10	50	C222(1)225K 5R5C(2)	CK16BR225K	2733	2933	2133	2333
2,200,000	20	50	C222(1)225M 5R5C(2)	CK16BR225M	2734	2934	2134	2334
3,300,000	10	50	C222(1)335K 5R5C(2)	CK16BR335K	2735	2935	2135	2335
3,300,000	20	50	C222(1)335M 5R5C(2)	CK16BR335M	2736	2936	2136	2336

Notes: (1) Insert proper symbol for specifications: C — Standard, K — MIL-C-11015, T — MIL-C-39014/05.  
 (2) Failure rates are designated as follows: A — Not Applicable (applies to all but MIL-C-39014 parts), M — 1%/khr, P — 0.1%/khr, R — 0.01%/khr, S — 0.001%/khr.

**MOLDED CASES WITH AXIAL LEADS**  
**GENERAL PURPOSE TEMPERATURE CHARACTERISTIC CAPACITORS — Z5U**

CAPACITANCE pF	TOLERANCE %	D.C. VOLTAGE	KEMET PART NUMBER
<b>C114 SIZE</b>			
4,700	M	100	C114C472M1U5CA
4,700	Z	100	C114C472Z 1U5CA
6,800	M	100	C114C682M1U5CA
6,800	Z	100	C114C682Z 1U5CA
10,000	M	100	C114C103M1U5CA
10,000	Z	100	C114C103Z 1U5CA
15,000	M	50	C114C153M5U5CA
15,000	Z	50	C114C153Z 5U5CA
22,000	M	50	C114C223M5U5CA
22,000	Z	50	C114C223Z 5U5CA
33,000	M	50	C114C333M5U5CA
33,000	Z	50	C114C333Z 5U5CA
47,000	M	50	C114C473M5U5CA
47,000	Z	50	C114C473Z 5U5CA
<b>C124 SIZE</b>			
15,000	M	100	C124C153M1U5CA
15,000	Z	100	C124C153Z 1U5CA
68,000	M	50	C124C683M5U5CA
68,000	Z	50	C124C683Z 5U5CA
100,000	M	50	C124C104M5U5CA
100,000	Z	50	C124C104Z 5U5CA

CAPACITANCE pF	TOLERANCE %	D.C. VOLTAGE	KEMET PART NUMBER
<b>C192 SIZE</b>			
22,000	M	100	C192C223M1U5CA
22,000	Z	100	C192C223Z 1U5CA
33,000	M	100	C192C333M1U5CA
33,000	Z	100	C192C333Z 1U5CA
47,000	M	100	C192C473M1U5CA
47,000	Z	100	C192C473Z 1U5CA
68,000	M	100	C192C683M1U5CA
68,000	Z	100	C192C683Z 1U5CA
100,000	M	100	C192C104M1U5CA
100,000	Z	100	C192C104Z 1U5CA
150,000	M	50	C192C154M5U5CA
150,000	Z	50	C192C154Z 5U5CA
220,000	M	50	C192C224M5U5CA
220,000	Z	50	C192C224Z 5U5CA
330,000	M	50	C192C334M5U5CA
330,000	Z	50	C192C334Z 5U5CA
470,000	M	50	C192C474M5U5CA
470,000	Z	50	C192C474Z 5U5CA

**AXIAL CAPACITOR MARKINGS**

**MIL-C-20**

**CC & CCR75, 76**

JCG	J for JAN, CG or CH as applicable
101	Capacitance
JM5	Capacitance Tolerance, Failure Rate (CCR only) Year Code
11AK	Lot Code, KEMET

**CC & CCR77**

CCR77C	Military Designation, Temperature Characteristic, Capacitance, Capacitance Tolerance, Failure Rate
G151FM	
J31433	J for JAN, Source Code (Federal Supply Code for Manufacturers, FSCM)
8542A	Date Code (Yr., Wk.), Lot Symbol

**CC & CCR78, 79**

CCR789CG	Military
821KM	Designation
JAN K	JAN, KEMET
8511A	Date & Lot Code
821K200V	Capacitance, Capacitance Tolerance, Voltage

Note: On CC75, 76, 77, 78 and 79 parts there is no 'J' or 'JAN' marking.

**STANDARD C114C, C124C, C192C, C202C & C222C**

KC0G	KEMET, Temperature Characteristic
101J	Capacitance, Capacitance Tolerance
200V	Voltage
8512	Date Code

**C114K (CK12) THROUGH C222K (CK16) PER MIL-C-11015**

**C114 (CK12) C124 (CK13)**

KCK	KEMET, CK
12BX	Style (12 or 13), Temp. Char. (BX or BR)
102K	Capacitance, Capacitance Tolerance
8501	Date Code

**C192 (CK14) C202 (CK15) C222 (CK16)**

K100V	KEMET, Voltage
CK14BX	Style, (14, 15 or 16), Temp. Char. (BX or BR)
123K	Capacitance, Capacitance Tolerance
8501	Date Code

**ESTABLISHED RELIABILITY (MIL-C-39014)**

**C114 (CKR11)**

JK	J for JAN, K for KEMET
100	Capacitance
KP3	Capacitance Tolerance, FR Level & Date Code (Yr.)
51A	Date and Lot Code

**C124 (CKR12)**

CKR12	Style
2657J	Dash No., J for JAN
8525A	Date & Lot Code
31433	Source Code (Federal Supply Code for Manufacturers, FSCM)

**C192 (CKR14) C202 (CKR15) C222 (CKR16)**

M39014	Complete Part Number
5-2125	Source Code (Federal Supply Code for Manufacturers, FSCM)
31433	Date & Lot Code
8501A	JAN & Voltage
J50V	Capacitance, Capacitance Tolerance
105K	

**DIPPED CASES WITH RADIAL LEADS  
GOLDEN MAX**

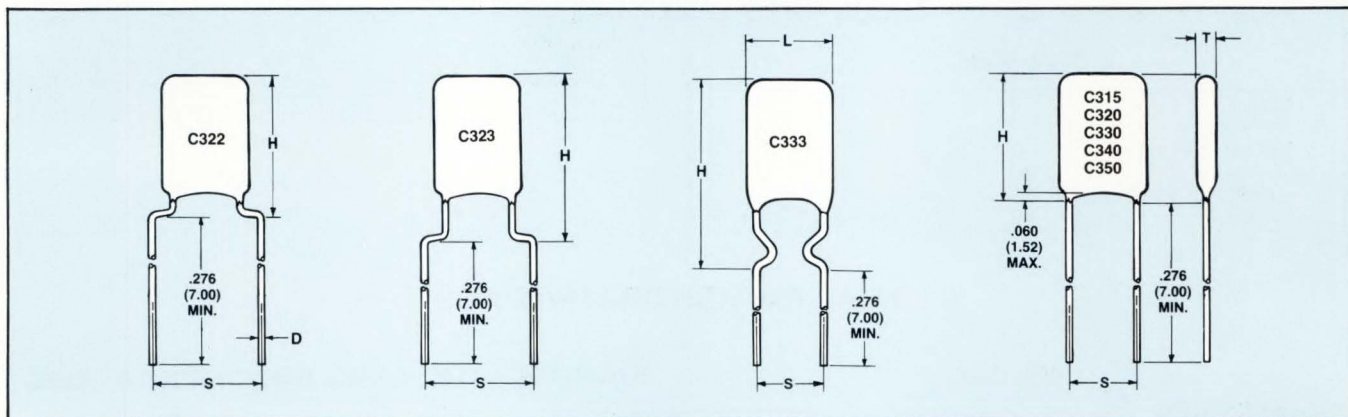
The KEMET Golden Max product line provides maximum range, conformally-coated capacitors in three dielectrics — C0G Ultra-Stable; X7R Stable and Z5U General Purpose. The six case sizes include over 300 CV values in a capacitance range of 1.0 pF to 6.8 μF in 50, 100, and 200 volts. Their reliable performance is built-in through automated manufacture and precision process control techniques that assure uniform dielectric thickness, excellent electrode integrity, and electrode-to-termination continuity. Internal construction consists of the same superior multilayer

body used in KEMET's molded capacitors. Encapsulation consists of a moisture and shock resistant epoxy coating that meets the flame requirements of Underwriters Laboratory Standard 94V-0. The gold color permits Laser marking with outstanding legibility.

KEMET Golden Max Capacitors are also available in KEMET's ARIS (Automatic Radial Insertion System) for automatic insertion machines. For further information, see page 73.

Additional CV values, sizes, and lead configurations are available on special order.

**CAPACITOR OUTLINE DRAWINGS**



**MAXIMUM DIMENSIONS — INCHES & (MILLIMETERS)**

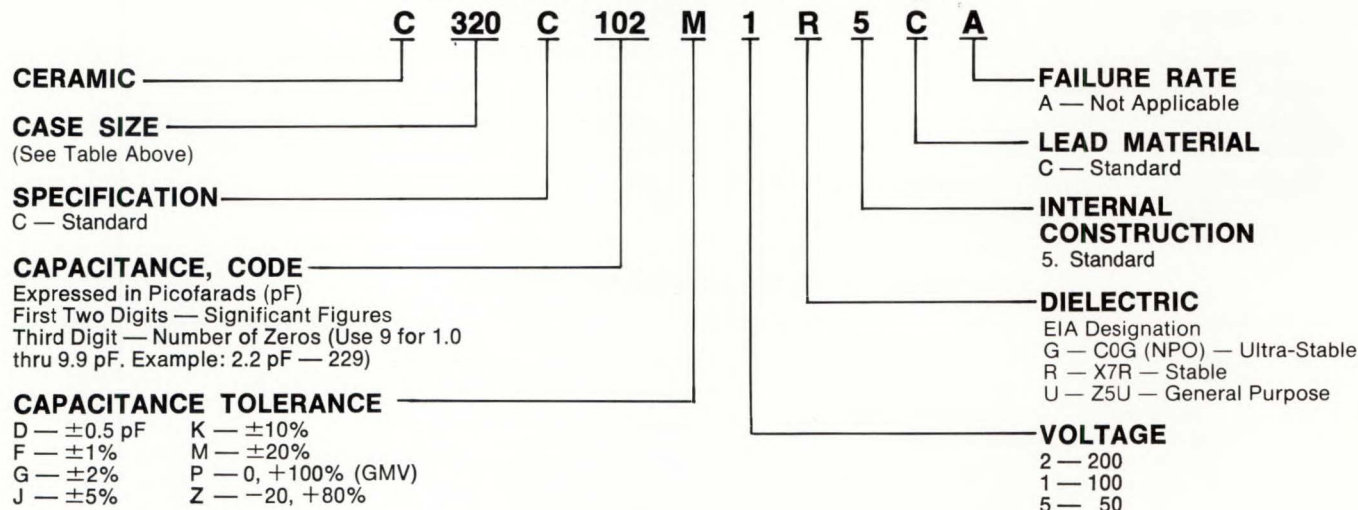
CASE SIZE	L MAX.	H MAX.	T MAX.	S(2) ±.030	D +.004 - .001	CASE SIZE	L MAX.	H MAX.	T MAX.	S(2) ±.030	D +.004 - .001
C315	.150 (3.81)	.210 (5.33)	.100 (2.54)	.100 (2.54)	.020 (.51)	C330(1)	.300 (7.62)	.360 (9.14)	.150 (3.81)	.200 (5.08)	.020 (.51)
C320(1)	.200 (5.08)	.260 (6.60)	.125 (3.18)	.100 (2.54)	.020 (.51)	C333(1)	.300 (7.62)	.390 (9.91)	.150 (3.81)	.200 (5.08)	.020 (.51)
C322(1)	.200 (5.08)	.260 (6.60)	.125 (3.18)	.200 (5.08)	.020 (.51)	C340	.400 (10.16)	.460 (11.68)	.150 (3.81)	.200 (5.08)	.020 (.51)
C323(1)	.200 (5.08)	.320 (8.13)	.125 (3.18)	.200 (5.08)	.020 (.51)	C350	.500 (12.70)	.560 (14.22)	.200 (5.08)	.400 (10.16)	.025 (.64)

NOTE: 1 inch = 25.4 mm.

NOTE: (1) Case Sizes C320/C322, C323, and C330, C333 are identical electrically, but differ in lead spacing.

(2) Measured at seating plane.

**GOLDEN MAX ORDERING INFORMATION**







**GOLDEN MAX — DIPPED CASES WITH RADIAL LEADS  
STABLE TEMPERATURE CHARACTERISTIC: EIA X7R**

200 VOLTS		100 VOLTS		50 VOLTS	
CAPACITANCE	KEMET PART NUMBER	CAPACITANCE	KEMET PART NUMBER	CAPACITANCE	KEMET PART NUMBER
<b>C315 SIZE</b>					
270 pF	C315C271(2)2R5CA	820 pF	C315C821(2)1R5CA	3,300 pF	C315C332(2)5R5CA
330 pF	C315C331(2)2R5CA	1,000 pF	C315C102(2)1R5CA	3,900 pF	C315C392(2)5R5CA
390 pF	C315C391(2)2R5CA	1,200 pF	C315C122(2)1R5CA	4,700 pF	C315C472(2)5R5CA
470 pF	C315C471(2)2R5CA	1,500 pF	C315C152(2)1R5CA	5,600 pF	C315C562(2)5R5CA
560 pF	C315C561(2)2R5CA	1,800 pF	C315C182(2)1R5CA	6,800 pF	C315C682(2)5R5CA
680 pF	C315C681(2)2R5CA	2,200 pF	C315C222(2)1R5CA	8,200 pF	C315C822(2)5R5CA
820 pF	C315C821(2)2R5CA	2,700 pF	C315C272(2)1R5CA	.01 $\mu$ F	C315C103(2)5R5CA
1,000 pF	C315C102(2)2R5CA	3,300 pF	C315C332(2)1R5CA	.012 $\mu$ F	C315C123(2)5R5CA
1,200 pF	C315C122(2)2R5CA	3,900 pF	C315C392(2)1R5CA	.015 $\mu$ F	C315C153(2)5R5CA
1,500 pF	C315C152(2)2R5CA	4,700 pF	C315C472(2)1R5CA	.018 $\mu$ F	C315C183(2)5R5CA
1,800 pF	C315C182(2)2R5CA	5,600 pF	C315C562(2)1R5CA	.022 $\mu$ F	C315C223(2)5R5CA
2,200 pF	C315C222(2)2R5CA	6,800 pF	C315C682(2)1R5CA	.027 $\mu$ F	C315C273(2)5R5CA
2,700 pF	C315C272(2)2R5CA	8,200 pF	C315C822(2)1R5CA	.033 $\mu$ F	C315C333(2)5R5CA
3,300 pF	C315C332(2)2R5CA	.01 $\mu$ F	C315C103(2)1R5CA	.039 $\mu$ F	C315C393(2)5R5CA
		.012 $\mu$ F	C315C123(2)1R5CA		
<b>C320, C322 OR C323 (NOTE 1) SIZE</b>					
3,900 pF	C32(1)C392(2)2R5CA	.015 $\mu$ F	C32(1)C153(2)1R5CA	.047 $\mu$ F	C32(1)C473(2)5R5CA
4,700 pF	C32(1)C472(2)2R5CA	.018 $\mu$ F	C32(1)C183(2)1R5CA	.056 $\mu$ F	C32(1)C563(2)5R5CA
5,600 pF	C32(1)C562(2)2R5CA	.022 $\mu$ F	C32(1)C223(2)1R5CA	.068 $\mu$ F	C32(1)C683(2)5R5CA
6,800 pF	C32(1)C682(2)2R5CA	.027 $\mu$ F	C32(1)C273(2)1R5CA	.082 $\mu$ F	C32(1)C823(2)5R5CA
8,200 pF	C32(1)C822(2)2R5CA	.033 $\mu$ F	C32(1)C333(2)1R5CA	.1 $\mu$ F	C32(1)C104(2)5R5CA
.01 $\mu$ F	C32(1)C103(2)2R5CA	.039 $\mu$ F	C32(1)C393(2)1R5CA	.12 $\mu$ F	C32(1)C124(2)5R5CA
.012 $\mu$ F	C32(1)C123(2)2R5CA	.047 $\mu$ F	C32(1)C473(2)1R5CA	.15 $\mu$ F	C32(1)C154(2)5R5CA
.015 $\mu$ F	C32(1)C153(2)2R5CA	.056 $\mu$ F	C32(1)C563(2)1R5CA	.18 $\mu$ F	C32(1)C184(2)5R5CA
.018 $\mu$ F	C32(1)C183(2)2R5CA	.068 $\mu$ F	C32(1)C683(2)1R5CA	.22 $\mu$ F	C32(1)C224(2)5R5CA
.022 $\mu$ F	C32(1)C223(2)2R5CA	.082 $\mu$ F	C32(1)C823(2)1R5CA	.27 $\mu$ F	C32(1)C274(2)5R5CA
.027 $\mu$ F	C32(1)C273(2)2R5CA	.1 $\mu$ F	C32(1)C104(2)1R5CA		
.033 $\mu$ F	C32(1)C333(2)2R5CA				
<b>C330 OR C333 (NOTE 1) SIZE</b>					
.039 $\mu$ F	C33(1)C393(2)2R5CA	.12 $\mu$ F	C33(1)C124(2)1R5CA	.33 $\mu$ F	C33(1)C334(2)5R5CA
.047 $\mu$ F	C33(1)C473(2)2R5CA	.15 $\mu$ F	C33(1)C154(2)1R5CA	.39 $\mu$ F	C33(1)C394(2)5R5CA
.056 $\mu$ F	C33(1)C563(2)2R5CA	.18 $\mu$ F	C33(1)C184(2)1R5CA	.47 $\mu$ F	C33(1)C474(2)5R5CA
.068 $\mu$ F	C33(1)C683(2)2R5CA	.22 $\mu$ F	C33(1)C224(2)1R5CA	.56 $\mu$ F	C33(1)C564(2)5R5CA
.082 $\mu$ F	C33(1)C823(2)2R5CA	.27 $\mu$ F	C33(1)C274(2)1R5CA	.68 $\mu$ F	C33(1)C684(2)5R5CA
.1 $\mu$ F	C33(1)C104(2)2R5CA	.33 $\mu$ F	C33(1)C334(2)1R5CA	.82 $\mu$ F	C33(1)C824(2)5R5CA
.12 $\mu$ F	C33(1)C124(2)2R5CA	.39 $\mu$ F	C33(1)C394(2)1R5CA	1.0 $\mu$ F	C33(1)C105(2)5R5CA
<b>C340 SIZE</b>					
.15 $\mu$ F	C340C154(2)2R5CA	.47 $\mu$ F	C340C474(2)1R5CA	1.2 $\mu$ F	C340C125(2)5R5CA
.18 $\mu$ F	C340C184(2)2R5CA	.56 $\mu$ F	C340C564(2)1R5CA	1.5 $\mu$ F	C340C155(2)5R5CA
.22 $\mu$ F	C340C224(2)2R5CA	.68 $\mu$ F	C340C684(2)1R5CA	1.8 $\mu$ F	C340C185(2)5R5CA
.27 $\mu$ F	C340C274(2)2R5CA	.82 $\mu$ F	C340C824(2)1R5CA	2.2 $\mu$ F	C340C225(2)5R5CA
		1.0 $\mu$ F	C340C105(2)1R5CA	2.7 $\mu$ F	C340C275(2)5R5CA
<b>C350 SIZE</b>					
.33 $\mu$ F	C350C334(2)2R5CA	1.2 $\mu$ F	C350C125(2)1R5CA	3.3 $\mu$ F	C350C335(2)5R5CA
.39 $\mu$ F	C350C394(2)2R5CA	1.5 $\mu$ F	C350C155(2)1R5CA	3.9 $\mu$ F	C350C395(2)5R5CA
.47 $\mu$ F	C350C474(2)2R5CA			4.7 $\mu$ F	C350C475(2)5R5CA

**Notes:** (1) Case Sizes C320/C322/C323, or C330/C333 are identical electrically, but differ in lead spacing. See table of dimensions. Insert the appropriate symbol, "0" or "2" or "3" in the part number.

(2) Insert proper symbol for capacitance tolerance: K —  $\pm 10\%$ , M —  $\pm 20\%$ .

For further details on Golden Max Ceramic Capacitors consult Catalog F-2795

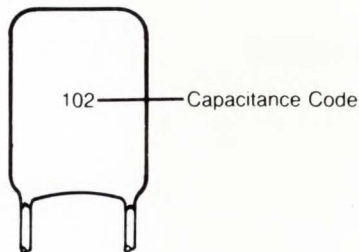
**GOLDEN MAX — DIPPED CASES WITH RADIAL LEADS  
GENERAL-PURPOSE TEMPERATURE CHARACTERISTIC: EIA Z5U**

100 VOLTS		50 VOLTS		100 VOLTS		50 VOLTS	
CAPACITANCE	KEMET PART NUMBER	CAPACITANCE	KEMET PART NUMBER	CAPACITANCE	KEMET PART NUMBER	CAPACITANCE	KEMET PART NUMBER
<b>C315 SIZE</b>				<b>C330 OR C333 (NOTE 1) SIZE</b>			
1,500 pF	C315C152 <sup>(3)</sup> 1U5CA	5,600 pF	C315C562 <sup>(3)</sup> 5U5CA	.18 $\mu$ F	C33 <sup>(1)</sup> C184 <sup>(3)</sup> 1U5CA	.68 $\mu$ F	C33 <sup>(1)</sup> C684 <sup>(3)</sup> 5U5CA
1,800 pF	C315C182 <sup>(3)</sup> 1U5CA	6,800 pF	C315C682 <sup>(3)</sup> 5U5CA	.22 $\mu$ F	C33 <sup>(1)</sup> C224 <sup>(3)</sup> 1U5CA	.82 $\mu$ F	C33 <sup>(1)</sup> C824 <sup>(3)</sup> 5U5CA
2,200 pF	C315C222 <sup>(3)</sup> 1U5CA	8,200 pF	C315C822 <sup>(3)</sup> 5U5CA	.27 $\mu$ F	C33 <sup>(1)</sup> C274 <sup>(3)</sup> 1U5CA	1.0 $\mu$ F	C33 <sup>(1)</sup> C105 <sup>(3)</sup> 5U5CA
2,700 pF	C315C272 <sup>(3)</sup> 1U5CA	.01 $\mu$ F	C315C103 <sup>(3)</sup> 5U5CA	.33 $\mu$ F	C33 <sup>(1)</sup> C334 <sup>(3)</sup> 1U5CA	1.2 $\mu$ F	C33 <sup>(1)</sup> C125 <sup>(3)</sup> 5U5CA
4,700 pF	C315C472 <sup>(3)</sup> 1U5CA	.012 $\mu$ F	C315C123 <sup>(3)</sup> 5U5CA	.39 $\mu$ F	C33 <sup>(1)</sup> C394 <sup>(3)</sup> 1U5CA	1.5 $\mu$ F	C33 <sup>(1)</sup> C155 <sup>(3)</sup> 5U5CA
5,600 pF	C315C562 <sup>(3)</sup> 1U5CA	.015 $\mu$ F	C315C153 <sup>(3)</sup> 5U5CA	.47 $\mu$ F	C33 <sup>(1)</sup> C474 <sup>(3)</sup> 1U5CA	1.8 $\mu$ F	C33 <sup>(1)</sup> C185 <sup>(3)</sup> 5U5CA
6,800 pF	C315C682 <sup>(3)</sup> 1U5CA	.018 $\mu$ F	C315C183 <sup>(3)</sup> 5U5CA			2.0 $\mu$ F	C33 <sup>(1)</sup> C205 <sup>(3)</sup> 5U5CA
8,200 pF	C315C822 <sup>(3)</sup> 1U5CA	.022 $\mu$ F	C315C223 <sup>(3)</sup> 5U5CA			2.2 $\mu$ F	C33 <sup>(1)</sup> C225 <sup>(3)</sup> 5U5CA
.01 $\mu$ F	C315C103 <sup>(3)</sup> 1U5CA	.027 $\mu$ F	C315C273 <sup>(3)</sup> 5U5CA	<b>C340 SIZE</b>			
.012 $\mu$ F	C315C123 <sup>(3)</sup> 1U5CA	.033 $\mu$ F	C315C333 <sup>(3)</sup> 5U5CA	.56 $\mu$ F	C340C564 <sup>(3)</sup> 1U5CA	2.7 $\mu$ F	C340C275 <sup>(3)</sup> 5U5CA
.015 $\mu$ F	C315C153 <sup>(3)</sup> 5U5CA	.039 $\mu$ F	C315C393 <sup>(3)</sup> 5U5CA	.68 $\mu$ F	C340C684 <sup>(3)</sup> 1U5CA	3.3 $\mu$ F	C340C335 <sup>(3)</sup> 5U5CA
.018 $\mu$ F	C315C183 <sup>(3)</sup> 1U5CA	.047 $\mu$ F	C315C473 <sup>(3)</sup> 5U5CA	.82 $\mu$ F	C340C824 <sup>(3)</sup> 1U5CA	3.9 $\mu$ F	C340C395 <sup>(3)</sup> 5U5CA
.022 $\mu$ F	C315C223 <sup>(3)</sup> 1U5CA	.056 $\mu$ F	C315C563 <sup>(3)</sup> 5U5CA	1.0 $\mu$ F	C340C105 <sup>(3)</sup> 1U5CA	4.7 $\mu$ F	C340C475 <sup>(3)</sup> 5U5CA
		.068 $\mu$ F	C315C683 <sup>(3)</sup> 5U5CA	1.2 $\mu$ F	C340C125 <sup>(3)</sup> 1U5CA		
				1.5 $\mu$ F	C340C155 <sup>(3)</sup> 1U5CA		
<b>C320, C322 OR C323 (NOTE 1) SIZE</b>				<b>C350 SIZE</b>			
.027 $\mu$ F	C32 <sup>(1)</sup> C273 <sup>(3)</sup> 1U5CA	.082 $\mu$ F	C32 <sup>(1)</sup> C823 <sup>(3)</sup> 5U5CA	1.8 $\mu$ F	C350C185 <sup>(3)</sup> 1U5CA	5.6 $\mu$ F	C350C565 <sup>(3)</sup> 5U5CA
.033 $\mu$ F	C32 <sup>(1)</sup> C333 <sup>(3)</sup> 1U5CA	0.1 $\mu$ F	C32 <sup>(1)</sup> C104 <sup>(3)</sup> 5U5CA	2.2 $\mu$ F	C350C225 <sup>(3)</sup> 1U5CA	6.8 $\mu$ F	C350C685 <sup>(3)</sup> 5U5CA
.039 $\mu$ F	C32 <sup>(1)</sup> C393 <sup>(3)</sup> 1U5CA	.12 $\mu$ F	C32 <sup>(1)</sup> C124 <sup>(3)</sup> 5U5CA				
.047 $\mu$ F	C32 <sup>(1)</sup> C473 <sup>(3)</sup> 1U5CA	.15 $\mu$ F	C32 <sup>(1)</sup> C154 <sup>(3)</sup> 5U5CA				
.056 $\mu$ F	C32 <sup>(1)</sup> C563 <sup>(3)</sup> 1U5CA	.18 $\mu$ F	C32 <sup>(1)</sup> C184 <sup>(3)</sup> 5U5CA				
.068 $\mu$ F	C32 <sup>(1)</sup> C683 <sup>(3)</sup> 1U5CA	.22 $\mu$ F	C32 <sup>(1)</sup> C224 <sup>(3)</sup> 5U5CA				
.082 $\mu$ F	C32 <sup>(1)</sup> C823 <sup>(3)</sup> 1U5CA	.27 $\mu$ F	C32 <sup>(1)</sup> C274 <sup>(3)</sup> 5U5CA				
0.1 $\mu$ F	C32 <sup>(1)</sup> C104 <sup>(3)</sup> 1U5CA	.33 $\mu$ F	C32 <sup>(1)</sup> C334 <sup>(3)</sup> 5U5CA				
.12 $\mu$ F	C32 <sup>(1)</sup> C124 <sup>(3)</sup> 1U5CA	.39 $\mu$ F	C32 <sup>(1)</sup> C394 <sup>(3)</sup> 5U5CA				
.15 $\mu$ F	C32 <sup>(1)</sup> C154 <sup>(3)</sup> 1U5CA	.47 $\mu$ F	C32 <sup>(1)</sup> C474 <sup>(3)</sup> 5U5CA				
		.56 $\mu$ F	C32 <sup>(1)</sup> C564 <sup>(3)</sup> 5U5CA				

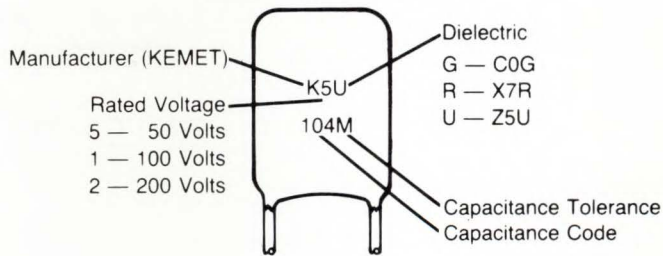
**Notes:** (1) Case Sizes C320/C322/C323, and C330/C333 are identical electrically, but differ in lead spacing. See table of dimensions. Insert the appropriate symbol, "0" or "3" or "3" in the part number.  
(3) Insert proper symbol for capacitance tolerance: M —  $\pm$ 20%, Z — +80%, -20%, P — +100%, -0%.

**GOLDEN MAX  
CAPACITOR MARKINGS**

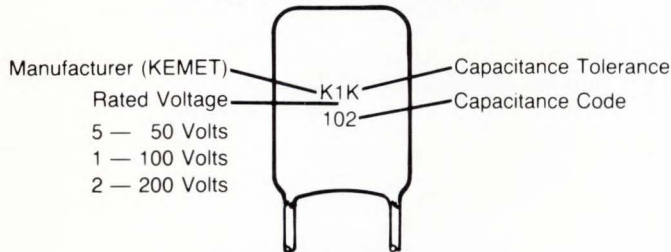
**SIZE C315**



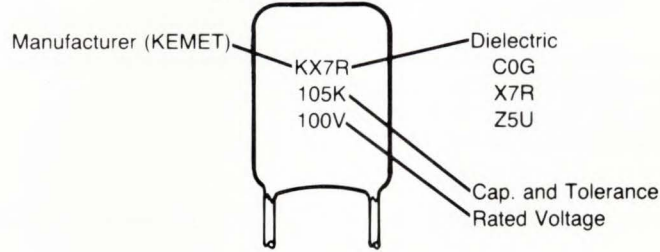
**SIZE C330 & C333**



**SIZE C320, C322 & C323**



**SIZE C340 & C350**



For further details on Golden Max Ceramic Capacitors consult Catalog F-2795

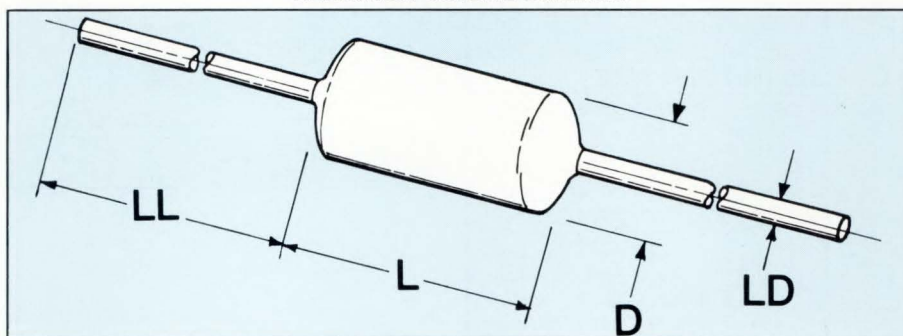
**CONFORMAL CASES WITH AXIAL LEADS  
AXIMAX**

The KEMET AXIMAX product line provides maximum range, conformally-coated capacitors in three dielectrics—COG Ultra-Stable; X7R Stable and Z5U General Purpose. The 4 case sizes include over 138 CV values in a capacitance range of 10 pF to 1.0 μF in 50 and 100 volts. Their reliable performance is built-in through automated manufacture and precision process control techniques that assure uniform dielectric thickness, excellent electrode integrity, and electrode-to-termination continuity. Internal construction consists of the

same superior multilayer body used in KEMET's molded capacitors. Encapsulation consists of a moisture and shock resistant epoxy conformal coating that meets the flame requirements of Underwriters Laboratory Standard 94V-0. The gold color permits laser marking with outstanding legibility.

KEMET AXIMAX Capacitors are available in Lead Tape and Reel configuration. Consult AXIMAX Catalog F-2036 for details.

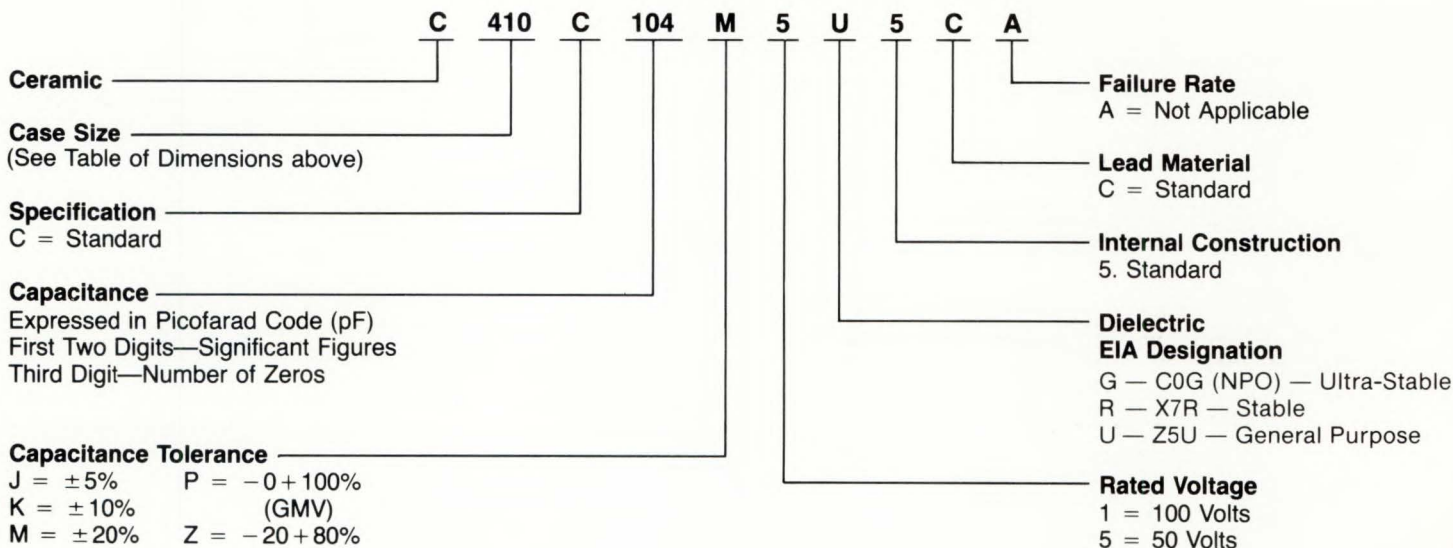
**CAPACITOR OUTLINE DRAWING**



**MAXIMUM DIMENSIONS—INCHES & (MILLIMETERS)**

STYLE	L MAX	D MAX	LD +.001, -.003 (+.025, -.076)	LL MIN
C410	.170(4.32)	.100(2.54)	.020(.51)	1.0(25.4)
C420	.260(6.60)	.100(2.54)	.020(.51)	1.0(25.4)
C430	.290(7.37)	.150(3.81)	.020(.51)	1.0(25.4)
C440	.400(10.16)	.150(3.81)	.020(.51)	1.0(25.4)

**AXIMAX  
ORDERING INFORMATION\***



\*KEMET reserves the option to ship an axial molded ceramic capacitor of comparable quality and size against AXIMAX orders.

For further details on AXIMAX Capacitors consult Catalog F-2036

**AXIMAX — CONFORMAL CASES WITH AXIAL LEADS  
RATINGS & PART NUMBER REFERENCE—COG DIELECTRIC**

CAPACITANCE pF	KEMET PART NUMBER
<b>C410 — 100 VOLTS</b>	
10	C410C100□1G5CA
12	C410C120□1G5CA
15	C410C150□1G5CA
18	C410C180□1G5CA
22	C410C220□1G5CA
27	C410C270□1G5CA
33	C410C330□1G5CA
39	C410C390□1G5CA
47	C410C470□1G5CA
56	C410C560□1G5CA
68	C410C680□1G5CA
82	C410C820□1G5CA
100	C410C101□1G5CA
120	C410C121□1G5CA
150	C410C151□1G5CA
180	C410C181□1G5CA
220	C410C221□1G5CA
270	C410C271□1G5CA
330	C410C331□1G5CA
390	C410C391□1G5CA
470	C410C471□1G5CA
<b>C410 — 50 VOLTS</b>	
560	C410C561□5G5CA
680	C410C681□5G5CA
820	C410C821□5G5CA
1,000	C410C102□5G5CA
<b>C420 — 100 VOLTS</b>	
560	C420C561□1G5CA
680	C420C681□1G5CA
820	C420C821□1G5CA
1,000	C420C102□1G5CA
1,200	C420C122□1G5CA
1,500	C420C152□1G5CA

CAPACITANCE pF	KEMET PART NUMBER
<b>C420 — 50 VOLTS</b>	
1,200	C420C122□5G5CA
1,500	C420C152□5G5CA
1,800	C420C182□5G5CA
2,200	C420C222□5G5CA
<b>C430 — 100 VOLTS</b>	
1,800	C430C182□1G5CA
2,200	C430C222□1G5CA
2,700	C430C272□1G5CA
3,300	C430C332□1G5CA
3,900	C430C392□1G5CA
4,700	C430C472□1G5CA
<b>C430 — 50 VOLTS</b>	
2,700	C430C272□5G5CA
3,300	C430C332□5G5CA
3,900	C430C392□5G5CA
4,700	C430C472□5G5CA
5,600	C430C562□5G5CA
<b>C440 — 100 VOLTS</b>	
5,600	C440C562□1G5CA
6,800	C440C682□1G5CA
<b>C440 — 50 VOLTS</b>	
6,800	C440C682□5G5CA
8,200	C440C822□5G5CA
10,000	C440C103□5G5CA

(1) Insert proper letter for capacitance tolerance desired: J = ±5%, K = ±10%, M = ±20%

**X7R DIELECTRIC**

CAPACITANCE pF	KEMET PART NUMBER
<b>C410 — 100 VOLTS</b>	
470	C410C471□1R5CA
560	C410C561□1R5CA
680	C410C681□1R5CA
820	C410C821□1R5CA
1,000	C410C102□1R5CA
1,200	C410C122□1R5CA
1,500	C410C152□1R5CA
1,800	C410C182□1R5CA
2,200	C410C222□1R5CA
2,700	C410C272□1R5CA
3,300	C410C332□1R5CA
3,900	C410C392□1R5CA
4,700	C410C472□1R5CA
5,600	C410C562□1R5CA
6,800	C410C682□1R5CA
8,200	C410C822□1R5CA
10,000	C410C103□1R5CA
<b>C410 — 50 VOLTS</b>	
8,200	C410C822□5R5CA
10,000	C410C103□5R5CA
12,000	C410C123□5R5CA
15,000	C410C153□5R5CA
18,000	C410C183□5R5CA
22,000	C410C223□5R5CA
27,000	C410C273□5R5CA
33,000	C410C333□5R5CA
39,000	C410C393□5R5CA
47,000	C410C473□5R5CA
<b>C420 — 100 VOLTS</b>	
12,000	C420C123□1R5CA
15,000	C420C153□1R5CA
18,000	C420C183□1R5CA
22,000	C420C223□1R5CA
27,000	C420C273□1R5CA

CAPACITANCE pF	KEMET PART NUMBER
<b>C420 — 50 VOLTS</b>	
56,000	C420C563□5R5CA
68,000	C420C683□5R5CA
82,000	C420C823□5R5CA
100,000	C420C104□5R5CA
<b>C430 — 100 VOLTS</b>	
33,000	C430C333□1R5CA
39,000	C430C393□1R5CA
47,000	C430C473□1R5CA
56,000	C430C563□1R5CA
68,000	C430C683□1R5CA
<b>C430 — 50 VOLTS</b>	
120,000	C430C124□5R5CA
150,000	C430C154□5R5CA
180,000	C430C184□5R5CA
220,000	C430C224□5R5CA
<b>C440 — 100 VOLTS</b>	
82,000	C440C823□1R5CA
100,000	C440C104□1R5CA
120,000	C440C124□1R5CA
<b>C440 — 50 VOLTS</b>	
270,000	C440C274□5R5CA

(1) Insert proper letter for capacitance tolerance desired: K = ±10%, M = ±20%.

For further details on AXIMAX Capacitors consult Catalog F-2036

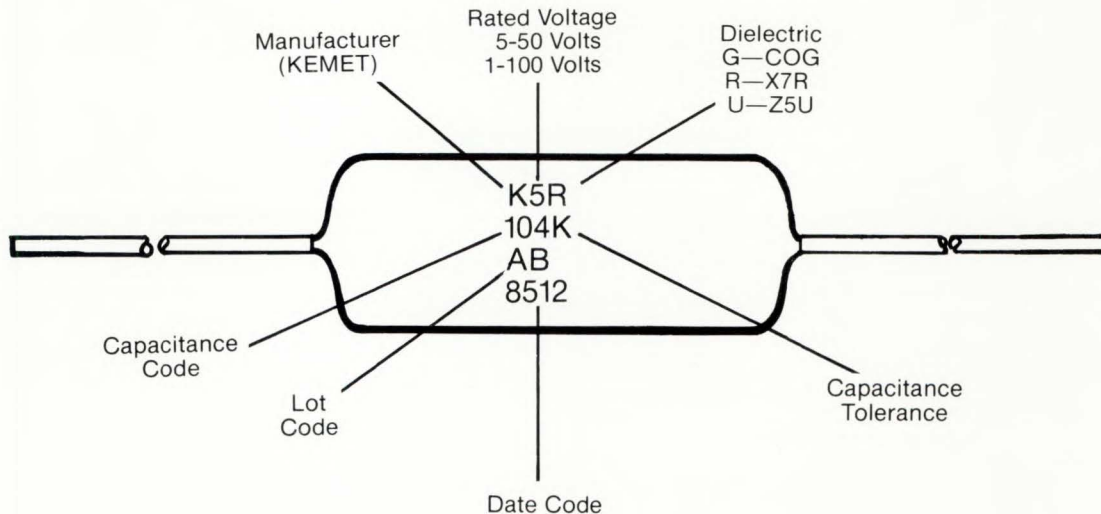
**AXIMAX — CONFORMAL CASES WITH AXIAL LEADS  
Z5U DIELECTRIC**

CAPACITANCE pF	KEMET PART NUMBER
<b>C410 — 100 VOLTS</b>	
10,000	C410C103□1U5CA
12,000	C410C123□1U5CA
15,000	C410C153□1U5CA
18,000	C410C183□1U5CA
22,000	C410C223□1U5CA
<b>C410 — 50 VOLTS</b>	
27,000	C410C273□5U5CA
33,000	C410C333□5U5CA
39,000	C410C393□5U5CA
47,000	C410C473□5U5CA
56,000	C410C563□5U5CA
68,000	C410C683□5U5CA
82,000	C410C823□5U5CA
100,000	C410C104□5U5CA
<b>C420 — 100 VOLTS</b>	
27,000	C420C273□1U5CA
33,000	C420C333□1U5CA
39,000	C420C393□1U5CA
47,000	C420C473□1U5CA
<b>C420 — 50 VOLTS</b>	
120,000	C420C124□5U5CA
150,000	C420C154□5U5CA
180,000	C420C184□5U5CA

CAPACITANCE pF	KEMET PART NUMBER
<b>C430 — 100 VOLTS</b>	
56,000	C430C563□1U5CA
68,000	C430C683□1U5CA
82,000	C430C823□1U5CA
100,000	C430C104□1U5CA
120,000	C430C124□1U5CA
150,000	C430C154□1U5CA
<b>C430 — 50 VOLTS</b>	
220,000	C430C224□5U5CA
270,000	C430C274□5U5CA
330,000	C430C334□5U5CA
390,000	C430C394□5U5CA
470,000	C430C474□5U5CA
<b>C440 — 100 VOLTS</b>	
180,000	C440C184□1U5CA
220,000	C440C224□1U5CA
<b>C440 — 50 VOLTS</b>	
560,000	C440C564□5U5CA
680,000	C440C684□5U5CA
820,000	C440C824□5U5CA
1,000,000	C440C105□5U5CA

(1) Insert proper letter for capacitance tolerance desired:  
M = ±20%, P = 0 +100% (GMV), Z = -20 +80%.

**AXIMAX CAPACITOR MARKING**



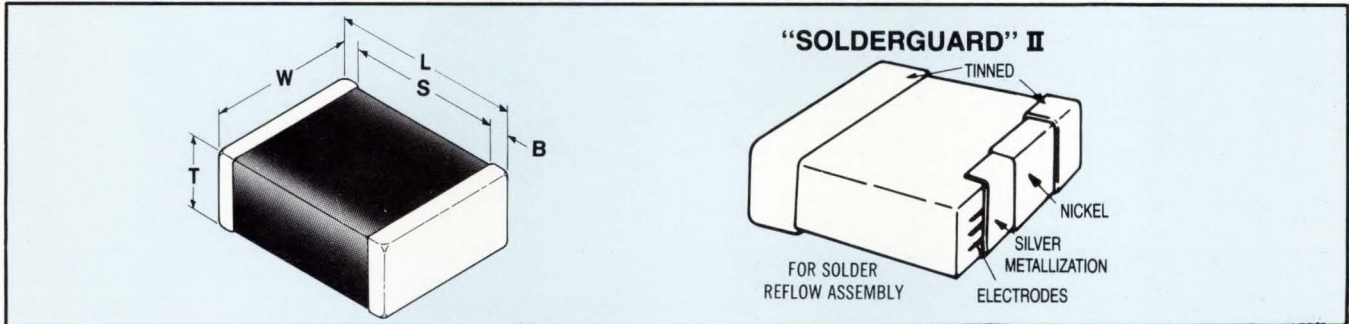
For further details on AXIMAX Capacitors consult Catalog F-2036

**CHIP CAPACITORS FOR HYBRID CIRCUITS**

Standard SolderGuard II chips feature a unique barrier layer of nickel in the end metallization that prevents silver leaching or scavenging, and subsequent open circuits during assembly. The "SolderGuard" chips will withstand solder reflow temperatures with little or no degradation of electrical continuity or performance. KEMET chips are avail-

able in C0G, X7R and Z5U temperature characteristics in 50, 100 and 200 volt ratings. C0805, C1206, and C1210 size capacitors are also available in CoPS (Component Placement System) for automatic insertion machines. For further information, see page 117.

**CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — MILLIMETERS & (INCHES)**

SIZE CODE	L LENGTH	W WIDTH	T THICKNESS MAX.	B BANDWIDTH	S MIN. SEPARATION
0805	2.0 (.078) ± 0.2 (.008)	1.25 (.049) ± 0.2 (.008)	1.4 (.055)	0.43 (.017) ± .25 (.010)	0.61 (.024)
1005	2.5 (.098) ± 0.2 (.008)	1.25 (.049) ± 0.2 (.008)	1.5 (.059)	0.64 (.025) ± .38 (.015)	0.61 (.024)
1206	3.2 (.126) ± 0.2 (.008)	1.6 (.063) ± 0.2 (.008)	1.7 (.067)	0.64 (.025) ± .38 (.015)	1.0 (.040)
1210	3.2 (.126) ± 0.2 (.008)	2.5 (.098) ± 0.2 (.008)	1.7 (.067)	0.64 (.025) ± .38 (.015)	1.0 (.040)
1805	4.5 (.177) ± 0.3 (.012)	1.25 (.049) ± 0.3 (.012)	1.7 (.067)	0.64 (.025) ± .38 (.015)	1.0 (.040)
1808	4.5 (.177) ± 0.3 (.012)	2.0 (.079) ± 0.3 (.012)	2.0 (.079)	0.64 (.025) ± .38 (.015)	1.0 (.040)
1812	4.5 (.177) ± 0.3 (.012)	3.2 (.126) ± 0.3 (.012)	2.0 (.079)	0.64 (.025) ± .38 (.015)	1.0 (.040)
1825	4.5 (.177) ± 0.3 (.012)	6.4 (.252) ± 0.3 (.012)	2.0 (.079)	0.64 (.025) ± .38 (.015)	1.0 (.040)
2225	5.6 (.220) ± 0.4 (.016)	6.3 (.248) ± 0.4 (.016)	2.0 (.079)	0.64 (.025) ± .38 (.015)	1.0 (.040)

**CERAMIC CHIP CAPACITOR ORDERING INFORMATION**

**C** **0805** **C** **103** **K** **5** **R** **A** **C**

**CERAMIC** — CERAMIC

**SIZE CODE** — See table above

**SPECIFICATION** — C — Standard

**CAPACITANCE CODE** — Expressed in Picofarads (pF)  
First two digit-significant figures.  
Third digit-number of zeros. (Use 9 for 1.0 thru 9.9 pF.  
Example: 2.2 pF — 229).

**CAPACITANCE TOLERANCE** —  
K — ±10%    D — ±0.5 pF    H — ±3%    Z — +80%, -20%  
M — ±20%    F — ±1%        J — ±5%    X — Other  
P — (GMV)    G — ±2%

**VOLTAGE** —  
1 — 100    5 — 50  
2 — 200

**END METALLIZATION**  
C — SolderGuard II (KEMET CoPS, Page 117)  
T — Silver

**FAILURE RATE LEVEL (%/1,000 HOURS)**  
A — Standard for "C" specification

**TEMPERATURE CHARACTERISTIC**  
Designated by Capacitance Change Over Temperature Range  
G — C0G (NPO) (±30PPM/°C)  
R — X7R (±15%)  
U — Z5U (+22%, -56%)

Marking per EIA standard is optional.

For further details consult Ceramic Chip Catalog F-2096

**CHIP CAPACITORS  
CHIP DIMENSIONS & CAPACITANCE**

SIZE CODE	DIMENSIONS MILLIMETERS (INCHES)			CAPACITANCE (pF)								
	L LENGTH	W WIDTH	T THICKNESS (MAX)	C0G			X7R			Z5U		
				MIN CAP	200V MIN MAX	100 or 50V MIN MAX	MIN CAP	100V MIN MAX	50V MIN MAX	MIN CAP	100V MIN MAX	50V MIN MAX
0805*	2.0 (.078) ±0.2 (.008)	1.25 (.049) ±0.2 (.008)	1.4 (.055)	1	1-270	330-470	470	470-5600	6800-15,000	6800	6800-10,000	12,000-33,000
1005	2.5 (.098) ±0.2 (.008)	1.25 (.049) ±0.2 (.008)	1.5 (.059)	1	1-680	820-1000	680	680-15,000	18,000-39,000	18,000	18,000-22,000	27,000-82,000
1206*	3.2 (.126) ±0.2 (.008)	1.6 (.063) ±0.2 (.008)	1.7 (.067)	1	1-1200	1500-2200	1000	1000-27,000	33,000-100,000	33,000	33,000-39,000	47,000-150,000
1210*	3.2 (.126) ±0.2 (.008)	2.5 (.098) ±0.2 (.008)	1.7 (.067)	1500	1500-2700	3300-4700	33,000	33,000-56,000	68,000-150,000	47,000	47,000-82,000	100,000-270,000
1805	4.5 (.177) ±0.3 (.012)	1.25 (.049) ±0.3 (.012)	1.7 (.067)	470	470-1200	1500-2700	3300	3300-27,000	33,000-100,000	33,000	33,000-39,000	47,000-150,000
1808	4.5 (.177) ±0.3 (.012)	2.0 (.078) ±0.3 (.012)	2.0 (.079)	470	470-2700	3300-4700	5600	5600-56,000	68,000-180,000	68,000	68,000-82,000	100,000-330,000
1812*	4.5 (.177) ±0.3 (.012)	3.2 (.126) ±0.3 (.012)	2.0 (.079)	470	470-4700	5600-10,000	10,000	10,000-100,000	120,000-330,000	82,000	82,000-150,000	180,000-680,000
1825*	4.5 (.177) ±0.3 (.012)	6.4 (.252) ±0.3 (.012)	2.0 (.079)	5600	5600-10,000	12,000-22,000	120,000	120,000-220,000	270,000-680,000	180,000	180,000-390,000	470,000-1,500,000
2225	5.6 (.220) ±0.4 (.016)	6.3 (.248) ±0.4 (.016)	2.0 (.079)	3300	3300-18,000	22,000-27,000	100,000	100,000-390,000	470,000-1,000,000	330,000	330,000-470,000	560,000-2,200,000

\*EIA preferred chip sizes.

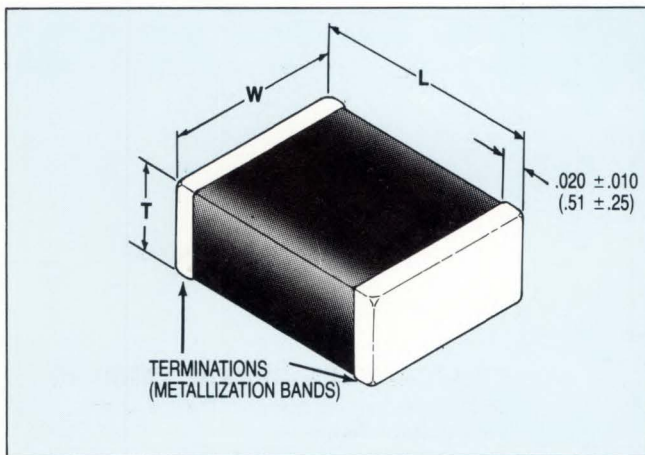
**MAXIMUM CAPACITANCE VALUES AVAILABLE  
IN KEMET CoPS REELED PACKAGING PER EIA SPEC. RS-481**

DIELECTRIC	VOLTAGE	0805	1206	1210
C0G	200	270 pF	1,200 pF	2,200 pF
	100	470 pF	2,200 pF	4,700 pF
X7R	100	4,700 pF	22,000 pF	47,000 pF
	50	12,000 pF	100,000 pF	150,000 pF
Z5U	100	10,000 pF	39,000 pF	82,000 pF
	50	27,000 pF	150,000 pF	270,000 pF

For further details consult Ceramic Chip Catalog F-2096

**MILITARY ESTABLISHED RELIABILITY CERAMIC  
CHIP CAPACITORS PER MIL-C-55681**

**CAPACITOR OUTLINE DRAWINGS**



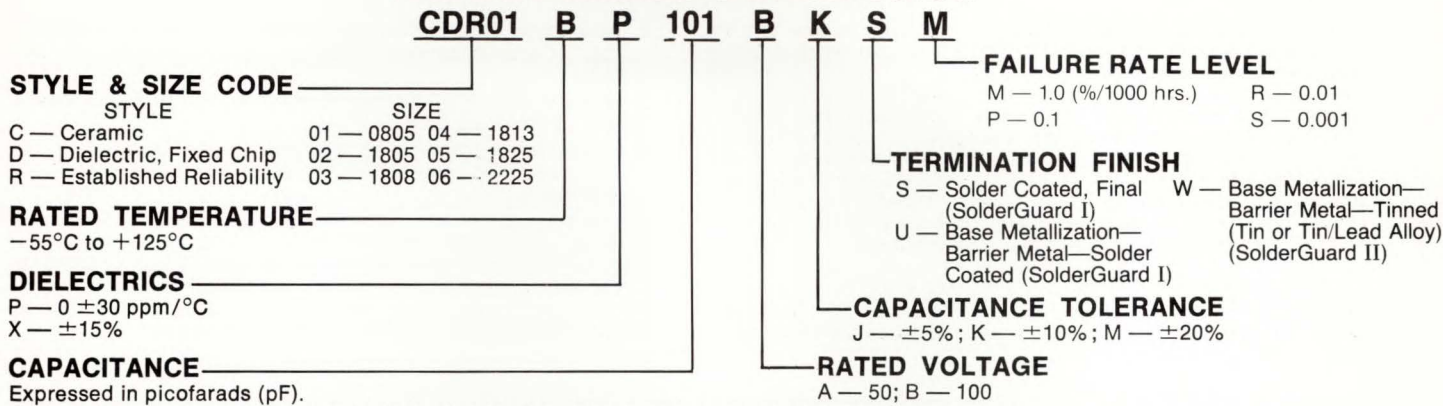
**DIMENSIONS — INCHES & (MILLIMETERS)**

STYLE	KEMET SIZE CODE	L	W	T	
				MIN	MAX
CDR01	C0805	.080 ± .015 (2.03 ± .38)	.050 ± .015 (1.27 ± .38)	.020 (.51)	.055 (1.40)
CDR02	C1805	.180 ± .015 (4.57 ± .38)	.050 ± .015 (1.27 ± .38)	.020 (.51)	.055 (1.40)
CDR03	C1808	.180 ± .015 (4.57 ± .38)	.080 ± .015 (2.03 ± .38)	.020 (.51)	.080 (2.03)
CDR04	C1812	.180 ± .015 (4.57 ± .38)	.125 ± .015 (3.18 ± .38)	.020 (.51)	.080 (2.03)
CDR05	C1825	.180 + .020 - .015 (4.57 + .51 - .38)	.250 + .020 - .015 (6.35 + .51 - .38)	.020 (.51)	.080 (2.03)
CDR06	C2225	.225 ± .020 (5.72 ± .51)	.250 ± .020 (6.35 ± .51)	.020 (.51)	.080 (2.03)

\* Minimum separation between end metallization is .030 (.76)



**CHIP CAPACITORS  
MILITARY ORDERING INFORMATION**



**RATINGS & PART NUMBER REFERENCE**

CAP. pF	VOLTS	CAP. TOL.	CDR01-06 CAPACITORS PER MIL-C-55681	KEMET C0805, C1805, C1808, C1813, C1825 & C2225 CAPACITORS	CAP. pF	VOLTS	CAP. TOL.	CDR01-06 CAPACITORS PER MIL-C-55681	KEMET C0805, C1805, C1808, C1813, C1825 & C2225 CAPACITORS
10	100	J,K	CDR01BP100B(3)S(4)	C0805P100(3)1G(4)H	330	100	J,K	CDR03BP331B(3)S(4)	C1808P331(3)1G(4)H
12	100	J	CDR01BP120BJS(4)	C0805P120J1G(4)H	390	100	J	CDR03BP391BJS(4)	C1808P391J1G(4)H
15	100	J,K	CDR01BP150B(3)S(4)	C0805P150(3)1G(4)H	470	100	J,K	CDR03BP471B(3)S(4)	C1808P471(3)1G(4)H
18	100	J	CDR01BP180BJS(4)	C0805P180J1G(4)H	560	100	J	CDR03BP561BJS(4)	C1808P561J1G(4)H
22	100	J,K	CDR01BP220B(3)S(4)	C0805P220(3)1G(4)H	680	100	J,K	CDR03BP681B(3)S(4)	C1808P681(3)1G(4)H
27	100	J	CDR01BP270BJS(4)	C0805P270J1G(4)H	820	100	J	CDR03BP821BJS(4)	C1808P821J1G(4)H
33	100	J,K	CDR01BP330B(3)S(4)	C0805P330(3)1G(4)H	1,000	100	J,K	CDR03BP102B(3)S(4)	C1808P102(3)1G(4)H
39	100	J	CDR01BP390BJS(4)	C0805P390J1G(4)H	12,000	100	K	CDR03BX123BKS(4)	C1808P123K1X(4)H
47	100	J,K	CDR01BP470B(3)S(4)	C0805P470(3)1G(4)H	15,000	100	K,M	CDR03BX153B(5)S(4)	C1808P153(5)1X(4)H
56	100	J	CDR01BP560BJS(4)	C0805P560J1G(4)H	18,000	100	K	CDR03BX183BKS(4)	C1808P183K1X(4)H
68	100	J,K	CDR01BP680B(3)S(4)	C0805P680(3)1G(4)H	22,000	100	K,M	CDR03BX223B(5)S(4)	C1808P223(5)1X(4)H
82	100	J	CDR01BP820BJS(4)	C0805P820J1G(4)H	27,000	100	K	CDR03BX273BKS(4)	C1808P273K1X(4)H
100	100	J,K	CDR01BP101B(3)S(4)	C0805P101(3)1G(4)H	33,000	100	K,M	CDR03BX333B(5)S(4)	C1808P333(5)1X(4)H
120	100	J,K	CDR01B(1)121B(3)S(4)	C0805P121(3)1(2)4H	39,000	50	K	CDR03BX393AKS(4)	C1808P393K5X(4)H
150	100	J,K	CDR01B(1)151B(3)S(4)	C0805P151(3)1(2)4H	47,000	50	K,M	CDR03BX473A(5)S(4)	C1808P473(5)5X(4)H
180	100	J,K	CDR01B(1)181B(3)S(4)	C0805P181(3)1(2)4H	56,000	50	K	CDR03BX563AKS(4)	C1808P563K5X(4)H
220	100	K,M	CDR01BX221B(5)S(4)	C0805P221(5)1X(4)H	68,000	50	K,M	CDR03BX683A(5)S(4)	C1808P683(5)5X(4)H
270	100	K	CDR01BX271BKS(4)	C0805P271K1X(4)H	1,200	100	J	CDR04BP122BJS(4)	C1812P122J1G(4)H
330	100	K,M	CDR01BX331B(5)S(4)	C0805P331(5)1X(4)H	1,500	100	J,K	CDR04BP152B(3)S(4)	C1812P152(3)1G(4)H
390	100	K	CDR01BX391BKS(4)	C0805P391K1X(4)H	1,800	100	J	CDR04BP182BJS(4)	C1812P182J1G(4)H
470	100	K,M	CDR01BX471B(5)S(4)	C0805P471(5)1X(4)H	2,200	100	J,K	CDR04BP222B(3)S(4)	C1812P222(3)1G(4)H
560	100	K	CDR01BX561BKS(4)	C0805P561K1X(4)H	2,700	100	J	CDR04BP272BJS(4)	C1812P272J1G(4)H
680	100	K,M	CDR01BX681B(5)S(4)	C0805P681(5)1X(4)H	3,300	100	J,K	CDR04BP332B(3)S(4)	C1812P332(3)1G(4)H
820	100	K	CDR01BX821BKS(4)	C0805P821K1X(4)H	39,000	100	K	CDR04BX393BKS(4)	C1812P393K1X(4)H
1,000	100	K,M	CDR01BX102B(5)S(4)	C0805P102(5)1X(4)H	47,000	100	K,M	CDR04BX473B(5)S(4)	C1812P473(5)1X(4)H
1,200	100	K	CDR01BX122BKS(4)	C0805P122K1X(4)H	56,000	100	K	CDR04BX563BKS(4)	C1812P563K1X(4)H
1,500	100	K,M	CDR01BX152B(5)S(4)	C0805P152(5)1X(4)H	82,000	50	K	CDR04BX823AKS(4)	C1812P823K5X(4)H
1,800	100	K	CDR01BX182BKS(4)	C0805P182K1X(4)H	100,000	50	K,M	CDR04BX104A(5)S(4)	C1812P104(5)5X(4)H
2,200	100	K,M	CDR01BX222B(5)S(4)	C0805P222(5)1X(4)H	120,000	50	K	CDR04BX124AKS(4)	C1812P124K5X(4)H
2,700	100	K	CDR01BX272BKS(4)	C0805P272K1X(4)H	150,000	50	K,M	CDR04BX154A(5)S(4)	C1812P154(5)5X(4)H
3,300	100	K,M	CDR01BX332B(5)S(4)	C0805P332(5)1X(4)H	180,000	50	K	CDR04BX184AKS(4)	C1812P184K5X(4)H
3,900	50	K	CDR01BX392AKS(4)	C0805P392K5X(4)H	3,900	100	J,K	CDR05BP392B(3)S(4)	C1825P392(3)1G(4)H
4,700	50	K,M	CDR01BX472A(5)S(4)	C0805P472(5)5X(4)H	4,700	100	J,K	CDR05BP472B(3)S(4)	C1825P472(3)1G(4)H
					5,600	100	J,K	CDR05BP562B(3)S(4)	C1825P562(3)1G(4)H
220	100	J,K	CDR02BP221B(3)S(4)	C1805P221(3)1G(4)H	68,000	100	K,M	CDR05BX683B(5)S(4)	C1825P683(5)1X(4)H
270	100	J	CDR02BP271BJS(4)	C1805P271J1G(4)H	82,000	100	K	CDR05BX823BKS(4)	C1825P823K1X(4)H
3,900	100	K	CDR02BX392BKS(4)	C1805P392K1X(4)H	100,000	100	K,M	CDR05BX104B(5)S(4)	C1825P104(5)1X(4)H
4,700	100	K,M	CDR02BX472B(5)S(4)	C1805P472(5)1X(4)H	120,000	100	K	CDR05BX124BKS(4)	C1825P124K1X(4)H
5,600	100	K	CDR02BX562BKS(4)	C1805P562K1X(4)H	150,000	100	K,M	CDR05BX154B(5)S(4)	C1825P154(5)1X(4)H
6,800	100	K,M	CDR02BX682B(5)S(4)	C1805P682(5)1X(4)H	220,000	50	K,M	CDR05BX224A(5)S(4)	C1825P224(5)5X(4)H
8,200	100	K	CDR02BX822BKS(4)	C1805P822K1X(4)H	270,000	50	K	CDR05BX274AKS(4)	C1825P274K5X(4)H
10,000	100	K,M	CDR02BX103B(5)S(4)	C1805P103(5)1X(4)H	330,000	50	K,M	CDR05BX334A(5)S(4)	C1825P334(5)5X(4)H
12,000	50	K	CDR02BX123AKS(4)	C1805P123K5X(4)H	6,800	100	J,K	CDR06BP682B(3)S(4)	C2225P682(3)1G(4)H
15,000	50	K,M	CDR02BX153A(5)S(4)	C1805P153(5)5X(4)H	8,200	100	J,K	CDR06BP822B(3)S(4)	C2225P822(3)1G(4)H
18,000	50	K	CDR02BX183AKS(4)	C1805P183K5X(4)H	10,000	100	J,K	CDR06BP103B(3)S(4)	C2225P103(3)1G(4)H
22,000	50	K,M	CDR02BX223A(5)S(4)	C1805P223(5)5X(4)H	390,000	50	K	CDR06BX394AKS(4)	C2225P394K5X(4)H
					470,000	50	K,M	CDR06BX474A(5)S(4)	C2225P474(5)5X(4)H

(1) To complete Part Number for Dielectric, insert P or X symbol.  
 (2) To complete Part Number for Dielectric, insert G or X symbol.  
 (3) To complete Part Number, insert Capacitance Tolerance Symbol (when applicable): J — ±5%, K — ±10%.  
 (4) To complete Part Number, insert Failure Rate Symbol: M — 1.0%, P — 0.1%, R — 0.01%.  
 (5) To complete Part Number, insert Capacitance Tolerance Symbol (when applicable): K — ±10%, M — ±20%.

**GR900 SERIES**

**INTRODUCTION**

GR900 capacitors are intended for use in any application where the chance of failure must be reduced to the lowest possible level. While any well-made multilayer ceramic capacitor is an inherently reliable device, GR900 capacitors receive special attention in all phases of manufacture including raw materials selection, special designs, Clean Room production, individual batch testing (not group sample per mil spec), ultrasonic scanning, and destructive physical analysis. These capacitors are built to the highest known standards in the industry today and exceed new EIA specification RS-469 for Destructive Physical Analyses. These parts are well worth the added investment in comparison to the cost of a device or system failure.

Typical applications include:

1. Medical: heart pacemakers, pain control devices, life signs monitoring, eyesight improvement and electroencephalographic equipment.

2. Aerospace: space exploration (Viking, Apollo, Venus Lander, etc.); Communications Satellites; Space Shuttle/IUS; Sky Lab.
3. Military: F-15 Radar, Trident Submarine, Patriot, Hawk Missile and Captor Programs.
4. Consumer: transportation failsafe (elevators and rail), air-line navigation systems, smoke alarms and undersea cable amplifiers.

A data package is sent with each shipment which contains a destructive physical analysis (DPA) photograph representing each batch used in manufacture of the parts. Also, a certificate of compliance is included, stating that the parts meet all applicable requirements of the appropriate military specification to the best failure level to which KEMET is approved.

**SCREENING TESTS**

Although the GR900 Series encompasses a broad spectrum of voltages, capacitance values and case sizes, it is imperative that singular batch identity be maintained. Each batch receives 100% non-destructive testing in the order of the following:

1. **Thermal Shock** — Materials used in the construction of multilayer ceramic capacitors possess various thermal co-efficients of expansion. To assure maximum uniformity, each part is temperature cycled 5 times between -55°C and +125°C. Capacitors failing to withstand this environmental stress are rejected.
2. **Voltage Conditioning** — One of the most strenuous environments for any capacitor is the high temperature/high voltage test. All units are subjected to a minimum of 100 hours at twice rated voltage at 125°C. This screening process is made additionally strenuous by the use of a low impedance (less than 3 ohms) voltage source.
3. **Electrical Test** — The following 100% electrical tests are performed.
  1. Dielectric strength at 4 times rated voltage and 25°C.
  2. Insulation resistance at 25°C. (Twice minimum Military limit.)
  3. Insulation resistance at 125°C.
  4. Storage at 150°C for 2 hours minimum without voltage applied followed by a 24 hour stabilization period (temperature characteristic X only).
  5. Capacitance and dissipation factor at 25°C.
  6. Visual and mechanical examination.
  7. Radiographic examination. (Leaded devices only.)

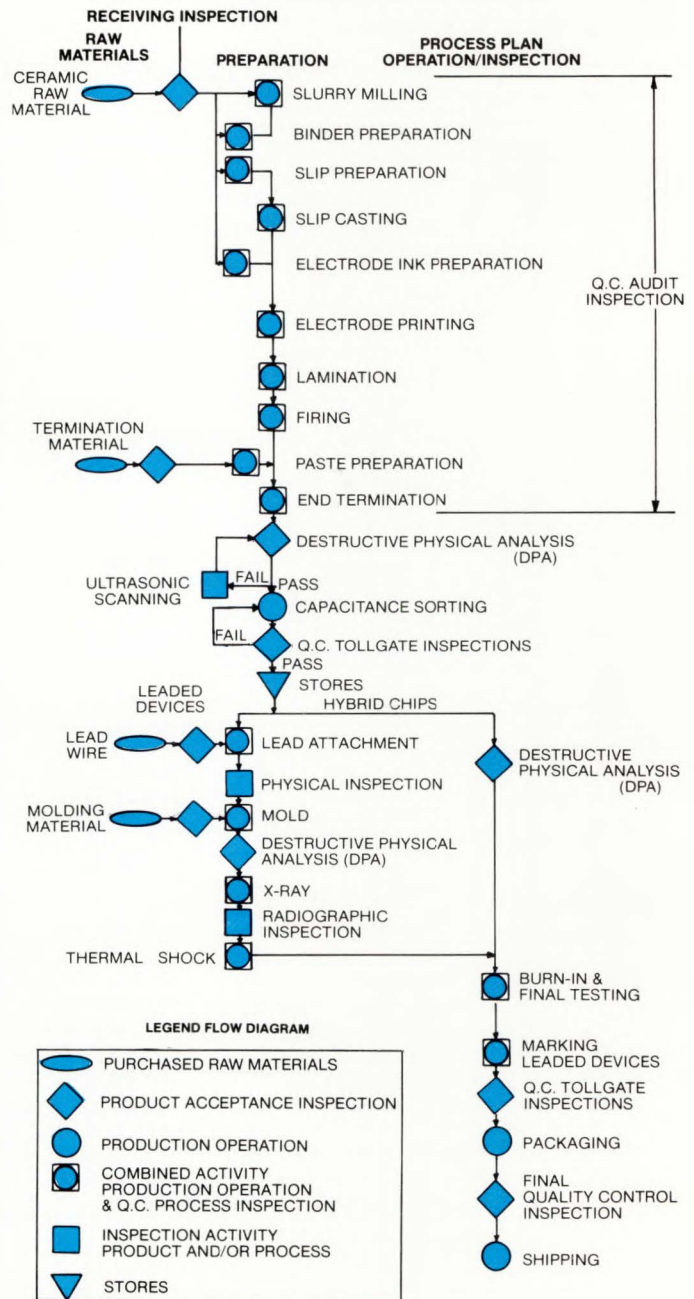
**SAMPLE TESTS**

In addition to these 100% tests, all production batches are subjected to a sample DPA and must meet strict internal void and delamination criteria. Batches failing to meet these criteria may be ultrasonic scanned for removal of marginal product (see general specification GR900 for details).

**INTERNAL EXAMINATION**

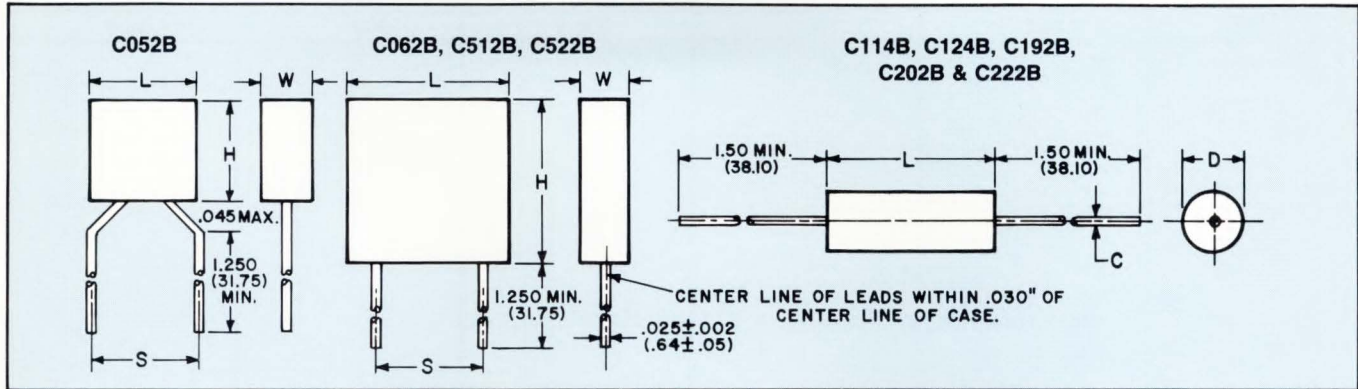
The internal quality of the sectioned capacitors will be examined under 30X or greater magnification. Both sub-samples will be examined for cracks in the ceramic, voids in the dielectric, delaminations, end metallization quality, electrode anomalies and other pertinent features, including dielectric thickness and ceramic margin thicknesses.

**MANUFACTURING FLOW CHART**



For further information consult GR900 Catalog F-3054

**GR900 SERIES  
CAPACITOR OUTLINE DRAWINGS**



**DIMENSIONS — INCHES & (MILLIMETERS)  
RADIAL LEAD**

KEMET CASE SIZE	MILITARY EQUIVALENT STYLES	H HEIGHT	L LENGTH	W WIDTH	S LEAD SPACING
C052	CC05, CCR05 CK05, CKR05	.190 ±.010 (4.83 ±.25)	.190 ±.010 (4.83 ±.25)	.090 ±.010 (2.29 ±.25)	.200 ±.015 (5.08 ±.38)
C062	CC06, CCR06 CK06, CKR06	.290 ±.010 (7.37 ±.25)	.290 ±.010 (7.37 ±.25)	.090 ±.010 (2.29 ±.25)	.200 ±.015 (5.08 ±.38)
C512	CC07, CCR07	.480 ±.020 (12.19 ±.51)	.480 ±.020 (12.19 ±.51)	.140 ±.010 (3.56 ±.25)	.400 ±.020 (10.16 ±.51)
C522	CC08, CCR08	.480 ±.020 (12.19 ±.51)	.480 ±.020 (12.19 ±.51)	.240 ±.010 (6.10 ±.25)	.400 ±.020 (10.16 ±.51)

**AXIAL LEAD**

CASE SIZE	L	D	C	MILITARY STYLES	
				MIL-C-11015	MIL-C-39014
C114	.160 ±.010 (4.06 ±.25)	.090 ±.010 (2.29 ±.25)	.020, +.000, -.003 (.51, +.00, -.08)	CK12	CKR11
C124	.250 ±.010 (6.35 ±.25)	.090 ±.010 (2.29 ±.25)	.020, +.000, -.003 (.51, +.00, -.08)	CK13	CKR12
C192	.390 ±.010 (9.91 ±.25)	.140 ±.010 (3.56 ±.25)	.025, +.004, -.002 (.64, +.10, -.05)	CK14	CKR14
C202	.500 ±.020 (12.70 ±.51)	.250 ±.015 (6.35 ±.38)	.025, +.004, -.002 (.64, +.10, -.05)	CK15	CKR15
C222	.690 ±.030 (17.53 ±.76)	.350 ±.020 (8.89 ±.51)	.025, +.004, -.002 (.64, +.10, -.05)	CK16	CKR16

**SPECIFIC REQUIREMENTS  
GR900/R & GR900/A ORDERING INFORMATION**

**C 124 B 223 K 1 X 5 C A**

**MONOLITHIC CERAMIC CAPACITORS**

**PHYSICAL DIMENSIONS**  
(See above)

**HI REL SPECIFICATIONS APPLY:**  
B — Leaded devices

**CAPACITANCE PICOFARAD CODE**  
First two digits are significant figures of capacitance value and third digit is the number of zeros to follow in stating capacitance in picofarads. For example, "223" is 22,000 pF. The third-digit number "9" indicates a divisor of 10; for example, "229" is 2.2 pF.

**CAPACITANCE TOLERANCE**  
M — ±20%    G — ±2% (G(BP) Temperature Characteristic Only)  
K — ±10%    F — ±1% (G(BP) Temperature Characteristic Only)  
J — ±5%    \*D — ±0.5 pF (G(BP) Temperature Characteristic Only)  
              \*C — ±0.25 pF (G(BP) Temperature Characteristic Only)  
              X — Other

**FAILURE RATE**  
A — Standard — meets or exceeds MIL-C-20, level S or MIL-C-39014, level S

**LEAD MATERIAL**  
C — Standard — Radial: tinned copper  
Axial: tinned copperweld (others available on special order)

**INTERNAL CONSTRUCTION**  
5 — Ultra-High Temperature Solder

**TEMPERATURE CHARACTERISTICS**  
(See table below)

**RATED VOLTAGE**  
1 — 100  
2 — 200  
3 — 50  
0 — Other

\*These tolerances available only for 1.0 through 10 pF capacitors.

**TEMPERATURE CHARACTERISTICS CAPACITANCE CHANGE WITH TEMPERATURE -55° TO +125°C**

PART NUMBER LETTER	WITHOUT D.C. BIAS	WITH RATED D.C. VOLTAGE APPLIED	OTHER NOMENCLATURE		
			EIA	MILITARY	COMMON
G	±30ppm/°C	±30ppm/°C	COG	CG, BP	NPO
X	±15%	+15%, -25%	X7R	BX	—

For further information consult GR900 Catalog F-3054

**GR900 SERIES**  
**STYLE C052—MOLDED CASES WITH RADIAL LEADS**  
**RATINGS & PART NUMBER REFERENCE**

CAPACITANCE PF	BP		BX		
	200 V	100 V	200 V	100 V	50 V
1.0	C052B109(1)2G5CA				
1.1	C052B119(1)2G5CA				
1.2	C052B129(1)2G5CA				
1.5	C052B159(1)2G5CA				
1.8	C052B189(1)2G5CA				
2.0	C052B209(1)2G5CA				
2.2	C052B229(1)2G5CA				
2.4	C052B249(1)2G5CA				
2.7	C052B279(1)2G5CA				
3.0	C052B309(1)2G5CA				
3.3	C052B339(1)2G5CA				
3.6	C052B369(1)2G5CA				
3.9	C052B399(1)2G5CA				
4.3	C052B439(1)2G5CA				
4.7	C052B479(1)2G5CA				
5.1	C052B519(1)2G5CA				
5.6	C052B569(1)2G5CA				
6.2	C052B629(1)2G5CA				
6.8	C052B689(1)2G5CA				
7.5	C052B759(1)2G5CA				
8.2	C052B829(1)2G5CA				
9.1	C052B919(1)2G5CA				
10.0	C052B100(1)2G5CA				
11.0	C052B110(1)2G5CA				
12.0	C052B120(1)2G5CA				
13.0	C052B130(1)2G5CA				
15.0	C052B150(1)2G5CA				
16.0	C052B160(1)2G5CA				
18.0	C052B180(1)2G5CA				
20.0	C052B200(1)2G5CA				
22.0	C052B220(1)2G5CA				
24.0	C052B240(1)2G5CA				
27.0	C052B270(1)2G5CA				
30.0	C052B300(1)2G5CA				
33.0	C052B330(1)2G5CA				
36.0	C052B360(1)2G5CA				
39.0	C052B390(1)2G5CA				
43.0	C052B430(1)2G5CA				
47.0	C052B470(1)2G5CA				
51.0	C052B510(1)2G5CA				
56.0	C052B560(1)2G5CA				
62.0	C052B620(1)2G5CA				
68.0	C052B680(1)2G5CA				
75.0	C052B750(1)2G5CA				
82.0	C052B820(1)2G5CA				
91.0	C052B910(1)2G5CA				
100	C052B101(1)2G5CA				
110	C052B111(1)2G5CA				
120	C052B121(1)2G5CA				
130	C052B131(1)2G5CA				
150	C052B151(1)2G5CA				
160	C052B161(1)2G5CA				
180	C052B181(1)2G5CA				
200	C052B201(1)2G5CA				
220	C052B221(1)2G5CA				
240	C052B241(1)2G5CA				
270	C052B271(1)2G5CA				
300	C052B301(1)2G5CA				
330	C052B331(1)2G5CA				
360	C052B361(1)2G5CA				
390	C052B391(1)2G5CA				
430	C052B431(1)2G5CA				
470	C052B471(1)2G5CA		C052B471(1)2X5CA		
510	C052B511(1)2G5CA		C052B561(1)2X5CA		
560	C052B561(1)2G5CA		C052B681(1)2X5CA		
620	C052B621(1)2G5CA		C052B821(1)2X5CA		
680	C052B681(1)2G5CA		C052B102(1)2X5CA		
750	C052B751(1)2G5CA		C052B122(1)2X5CA		
820	C052B821(1)2G5CA		C052B152(1)2X5CA		
910	C052B911(1)2G5CA		C052B182(1)2X5CA		
1000	C052B102(1)2G5CA		C052B222(1)2X5CA		
1100	C052B112(1)2G5CA		C052B272(1)2X5CA		
1200	C052B122(1)2G5CA		C052B332(1)2X5CA		
1300	C052B132(1)2G5CA		C052B392(1)2X5CA		
1500	C052B152(1)2G5CA		C052B472(1)2X5CA		
1600	C052B162(1)2G5CA		C052B562(1)2X5CA		
1800	C052B182(1)2G5CA		C052B682(1)2X5CA		
2000	C052B202(1)2G5CA		C052B822(1)2X5CA		
2200	C052B222(1)2G5CA		C052B103(1)2X5CA		
2400		C052B242(1)1G5CA			
2700		C052B272(1)1G5CA			
3000		C052B302(1)1G5CA			
3300		C052B332(1)1G5CA			
3600		C052B362(1)1G5CA			
3900		C052B392(1)1G5CA			
4300		C052B432(1)1G5CA			
4700		C052B472(1)1G5CA			
5100		C052B512(1)1G5CA			
5600		C052B562(1)1G5CA			
6800					
8200					
10,000					
12,000					
15,000					
18,000					
22,000					
27,000					
33,000					
39,000					
47,000					
56,000					
68,000					
82,000					
100,000					

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 103.

BP CAPACITANCE TOLERANCE: ± 1%, ± 2%, ± 5%, ± 10%, ± 20%  
 (± 0.5 pF & ± 0.25 pF tolerances available, 1.0 through 10 pF only)  
 TEMPERATURE CHARACTERISTIC "G"

BX CAPACITANCE TOLERANCE: ± 5%, ± 10%, ± 20%  
 TEMPERATURE CHARACTERISTIC "X"

(2) Capacitance values shown above are standard. Other capacitance values are available upon request.

**GR900 SERIES**  
**STYLE C062—MOLDED CASES WITH RADIAL LEADS**

CAPACITANCE pF	BP		BX		
	200 V	100 V	200 V	100 V	50 V
330	C062B331(1)2G5CA				
360	C062B361(1)2G5CA				
390	C062B391(1)2G5CA				
430	C062B431(1)2G5CA				
470	C062B471(1)2G5CA				
510	C062B511(1)2G5CA				
560	C062B561(1)2G5CA				
620	C062B621(1)2G5CA				
680	C062B681(1)2G5CA				
750	C062B751(1)2G5CA				
820	C062B821(1)2G5CA				
910	C062B911(1)2G5CA				
1000	C062B102(1)2G5CA				
1100	C062B112(1)2G5CA				
1200	C062B122(1)2G5CA				
1300	C062B132(1)2G5CA				
1500	C062B152(1)2G5CA				
1600	C062B162(1)2G5CA				
1800	C062B182(1)2G5CA				
2000	C062B202(1)2G5CA				
2200	C062B222(1)2G5CA				
2400	C062B242(1)2G5CA				
2700	C062B272(1)2G5CA				
3000	C062B302(1)2G5CA				
3300	C062B332(1)2G5CA		C062B332(1)2X5CA		
3600	C062B362(1)2G5CA				
3900	C062B392(1)2G5CA		C062B392(1)2X5CA		
4700	C062B472(1)2G5CA		C062B472(1)2X5CA		
5100	C062B512(1)2G5CA				
5600	C062B562(1)2G5CA		C062B562(1)2X5CA		
6200	C062B622(1)2G5CA				
6800	C062B682(1)2G5CA		C062B682(1)2X5CA		
7500	C062B752(1)2G5CA				
8200	C062B822(1)2G5CA		C062B822(1)2X5CA		
9100	C062B922(1)2G5CA				
10,000	C062B103(1)2G5CA		C062B103(1)2X5CA		
11,000		C062B113(1)1G5CA			
12,000		C062B123(1)1G5CA	C062B123(1)2X5CA		
13,000		C062B133(1)1G5CA			
15,000		C062B153(1)1G5CA	C062B153(1)2X5CA		
16,000		C062B163(1)1G5CA			
18,000		C062B183(1)1G5CA	C062B183(1)2X5CA		
20,000		C062B203(1)1G5CA			
22,000		C062B223(1)1G5CA	C062B223(1)2X5CA		
27,000			C062B273(1)2X5CA		
33,000			C062B333(1)2X5CA		
39,000			C062B393(1)2X5CA		
47,000			C062B473(1)2X5CA		
56,000				C062B563(1)1X5CA	
68,000				C062B683(1)1X5CA	
82,000				C062B823(1)1X5CA	
100,000				C062B104(1)1X5CA	
120,000				C062B124(1)1X5CA	
150,000				C062B154(1)1X5CA	
180,000				C062B184(1)1X5CA	
220,000					C062B224(1)5X5CA
270,000					C062B274(1)5X5CA
330,000					C062B334(1)5X5CA
390,000					C062B394(1)5X5CA
470,000					C062B474(1)5X5CA
560,000					C062B564(1)5X5CA
680,000					C062B684(1)5X5CA
820,000					C062B824(1)5X5CA
1,000,000					C062B105(1)5X5CA

**STYLE C512**

2000	C512B202(1)2G5CA				
2200	C512B222(1)2G5CA				
2400	C512B242(1)2G5CA				
2700	C512B272(1)2G5CA				
3000	C512B302(1)2G5CA				
3300	C512B332(1)2G5CA				
3600	C512B362(1)2G5CA				
3900	C512B392(1)2G5CA				
4300	C512B432(1)2G5CA				
4700	C512B472(1)2G5CA				
5600	C512B562(1)2G5CA				
6800	C512B682(1)2G5CA				
8200	C512B822(1)2G5CA				
10,000	C512B103(1)2G5CA				
12,000	C512B123(1)2G5CA				
15,000	C512B153(1)2G5CA				
18,000	C512B183(1)2G5CA				
22,000	C512B223(1)2G5CA				
27,000	C512B273(1)2G5CA				
33,000	C512B333(1)2G5CA				
39,000	C512B393(1)2G5CA		C512B393(1)2X5CA		
47,000	C512B473(1)2G5CA		C512B473(1)2X5CA		
56,000	C512B563(1)2G5CA		C512B563(1)2X5CA		
68,000	C512B683(1)2G5CA		C512B683(1)2X5CA		
82,000		C512B823(1)1G5CA	C512B823(1)2X5CA		
100,000		C512B104(1)1G5CA	C512B104(1)2X5CA		
120,000			C512B124(1)2X5CA		
150,000			C512B154(1)2X5CA		
180,000			C512B184(1)2X5CA		
220,000			C512B224(1)2X5CA		
270,000			C512B274(1)2X5CA		
330,000				C512B334(1)1X5CA	
390,000				C512B394(1)1X5CA	
470,000				C512B474(1)1X5CA	
560,000				C512B564(1)1X5CA	
680,000				C512B684(1)1X5CA	
820,000				C512B824(1)1X5CA	
1,000,000				C512B105(1)1X5CA	
1,200,000					C512B125(1)5X5CA
1,500,000					C512B155(1)5X5CA
2,000,000					C512B205(1)5X5CA
2,200,000					C512B225(1)5X5CA

- (1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 103.  
 BP CAPACITANCE TOLERANCE: ± 1%, ± 2%, ± 5%, ± 10%, ± 20%      BX CAPACITANCE TOLERANCE: ± 5%, ± 10%, ± 20%  
 TEMPERATURE CHARACTERISTIC "G"      TEMPERATURE CHARACTERISTIC "X"
- (2) Capacitance values shown above are standard. Other capacitance values are available upon request.

**GR900 SERIES  
STYLE C522—MOLDED CASES WITH RADIAL LEADS  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE pF	BP		BX		
	200 V	100 V	200 V	100 V	50 V
2000	C522B202(1)2G5CA				
2200	C522B222(1)2G5CA				
2400	C522B242(1)2G5CA				
2700	C522B272(1)2G5CA				
3000	C522B302(1)2G5CA				
3300	C522B332(1)2G5CA				
3600	C522B362(1)2G5CA				
3900	C522B392(1)2G5CA				
4300	C522B432(1)2G5CA				
4700	C522B472(1)2G5CA				
5600	C522B562(1)2G5CA				
6800	C522B682(1)2G5CA				
8200	C522B822(1)2G5CA				
10,000	C522B103(1)2G5CA				
12,000	C522B123(1)2G5CA				
15,000	C522B153(1)2G5CA				
18,000	C522B183(1)2G5CA				
22,000	C522B223(1)2G5CA				
27,000	C522B273(1)2G5CA				
33,000	C522B333(1)2G5CA				
39,000	C522B393(1)2G5CA		C522B393(1)2X5CA		
47,000	C522B473(1)2G5CA		C522B473(1)2X5CA		
56,000	C522B563(1)2G5CA		C522B563(1)2X5CA		
68,000	C522B683(1)2G5CA		C522B683(1)2X5CA		
82,000	C522B823(1)2G5CA		C522B823(1)2X5CA		
100,000	C522B104(1)2G5CA		C522B104(1)2X5CA		
120,000		C522B124(1)1G5CA	C522B124(1)2X5CA		
150,000		C522B154(1)1G5CA	C522B154(1)2X5CA		
180,000		C522B184(1)1G5CA	C522B184(1)2X5CA	C522B184(1)1X5CA	
220,000			C522B224(1)2X5CA	C522B224(1)1X5CA	
270,000			C522B274(1)2X5CA	C522B274(1)1X5CA	
330,000			C522B334(1)2X5CA	C522B334(1)1X5CA	
390,000				C522B394(1)1X5CA	
470,000				C522B474(1)1X5CA	
560,000				C522B564(1)1X5CA	
680,000				C522B684(1)1X5CA	
820,000				C522B824(1)1X5CA	
1,000,000				C522B105(1)1X5CA	C522B105(1)5X5CA
1,500,000				C522B155(1)1X5CA	C522B155(1)5X5CA
2,000,000				C522B205(1)1X5CA	C522B205(1)5X5CA
2,200,000					C522B225(1)5X5CA
3,300,000					C522B335(1)5X5CA

- (1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 103.  
 BP CAPACITANCE TOLERANCE:                      BX CAPACITANCE TOLERANCE:  
 ± 1%, ± 2%, ± 5%, ± 10%, ± 20%                      ± 5%, ± 10%, ± 20%  
 TEMPERATURE CHARACTERISTIC "G"                      TEMPERATURE CHARACTERISTIC "X"
- (2) Capacitance values shown above are standard. Other capacitance values are available upon request.

**GR900 SERIES  
STYLE C114—MOLDED CASES WITH RADIAL LEADS  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE pF	BP		BX		
	200 V	100 V	200 V	100 V	50 V
1.0	C114B109(1)2G5CA				
1.1	C114B119(1)2G5CA				
1.2	C114B129(1)2G5CA				
1.5	C114B159(1)2G5CA				
1.6	C114B169(1)2G5CA				
1.8	C114B189(1)2G5CA				
2.0	C114B209(1)2G5CA				
2.2	C114B229(1)2G5CA				
2.4	C114B249(1)2G5CA				
2.7	C114B279(1)2G5CA				
3.0	C114B309(1)2G5CA				
3.3	C114B339(1)2G5CA				
4.3	C114B439(1)2G5CA				
4.7	C114B479(1)2G5CA				
5.1	C114B519(1)2G5CA				
5.6	C114B569(1)2G5CA				
6.2	C114B629(1)2G5CA				
6.8	C114B689(1)2G5CA				
7.5	C114B759(1)2G5CA				
8.2	C114B829(1)2G5CA				
9.1	C114B919(1)2G5CA				
10.0	C114B100(1)2G5CA				
11.0	C114B110(1)2G5CA				
12.0	C114B120(1)2G5CA				
13.0	C114B130(1)2G5CA				
15.0	C114B150(1)2G5CA				
16.0	C114B160(1)2G5CA				
18.0	C114B180(1)2G5CA				
20.0	C114B200(1)2G5CA				
22.0	C114B220(1)2G5CA				
24.0	C114B240(1)2G5CA				
27.0	C114B270(1)2G5CA				
30.0	C114B300(1)2G5CA				
33.0	C114B330(1)2G5CA				
36.0	C114B360(1)2G5CA				
39.0	C114B390(1)2G5CA				
43.0	C114B430(1)2G5CA				
47.0	C114B470(1)2G5CA				
51.0	C114B510(1)2G5CA				
56.0	C114B560(1)2G5CA				
62.0	C114B620(1)2G5CA				
65.0	C114B650(1)2G5CA				
75.0	C114B750(1)2G5CA				
82.0	C114B820(1)2G5CA				
91.0	C114B910(1)2G5CA				
100	C114B101(1)2G5CA				
110	C114B111(1)2G5CA				
120	C114B121(1)2G5CA				
130	C114B131(1)2G5CA				
150	C114B151(1)2G5CA				
160	C114B161(1)2G5CA				
180	C114B181(1)2G5CA				
200	C114B201(1)2G5CA				
220	C114B221(1)2G5CA				
240	C114B241(1)2G5CA				
270	C114B271(1)2G5CA				
300	C114B301(1)2G5CA				
330	C114B331(1)2G5CA				
360		C114B361(1)1G5CA			
390		C114B391(1)1G5CA	C114B391(1)2X5CA		
430		C114B431(1)1G5CA			
470		C114B471(1)1G5CA	C114B471(1)2X5CA		
510		C114B511(1)1G5CA			
560		C114B561(1)1G5CA	C114B561(1)2X5CA		
620		C114B621(1)1G5CA			
680		C114B681(1)1G5CA	C114B681(1)2X5CA		
820			C114B821(1)2X5CA		
1000			C114B102(1)2X5CA		
1200				C114B122(1)1X5CA	
1500				C114B152(1)1X5CA	
1800				C114B182(1)1X5CA	
2200				C114B222(1)1X5CA	
2700				C114B272(1)1X5CA	
3300				C114B332(1)1X5CA	
3900				C114B392(1)1X5CA	
4700				C114B472(1)1X5CA	
5600				C114B562(1)1X5CA	
6800					C114B682(1)5X5CA
8200					C114B822(1)5X5CA
10,000					C114B103(1)5X5CA
12,000					C114B123(1)5X5CA
15,000					C114B153(1)5X5CA
18,000					C114B183(1)5X5CA
22,000					C114B223(1)5X5CA

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 103.

BP CAPACITANCE TOLERANCE: ± 1%, ± 2%, ± 5%, ± 10%, ± 20% (± 0.5 pF & ± 0.25 pF tolerances available, 1.0 through 10 pF only) TEMPERATURE CHARACTERISTIC "G"	BX CAPACITANCE TOLERANCE: ± 5%, ± 10%, ± 20% TEMPERATURE CHARACTERISTIC "X"
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(2) Capacitance values shown above are standard. Other capacitance values are available upon request.

**GR900 SERIES**  
**STYLE C124—MOLDED CASES WITH AXIAL LEADS**

CAPACITANCE pF	BP		BX		
	200 V	100 V	200 V	100 V	50 V
82.0	C124B820(1)2G5CA				
91.0	C124B910(1)2G5CA				
100	C124B101(1)2G5CA				
110	C124B111(1)2G5CA				
120	C124B121(1)2G5CA				
130	C124B131(1)2G5CA				
150	C124B151(1)2G5CA				
160	C124B161(1)2G5CA				
180	C124B181(1)2G5CA				
200	C124B201(1)2G5CA				
220	C124B221(1)2G5CA				
240	C124B241(1)2G5CA				
270	C124B271(1)2G5CA				
300	C124B301(1)2G5CA				
330	C124B331(1)2G5CA				
360	C124B361(1)2G5CA				
390	C124B391(1)2G5CA		C124B391(1)2X5CA		
430	C124B431(1)2G5CA		C124B471(1)2X5CA		
470	C124B471(1)2G5CA				
510	C124B511(1)2G5CA		C124B561(1)2X5CA		
560	C124B561(1)2G5CA				
620	C124B621(1)2G5CA		C124B681(1)2X5CA		
680	C124B681(1)2G5CA		C124B821(1)2X5CA		
820		C124B821(1)1G5CA			
910		C124B911(1)1G5CA			
1000		C124B102(1)1G5CA	C124B102(1)2X5CA		
1200			C124B122(1)2X5CA		
1500			C124B152(1)2X5CA		
1800			C124B182(1)2X5CA		
2200			C124B222(1)2X5CA		
2700				C124B272(1)1X5CA	
3300				C124B332(1)1X5CA	
3900				C124B392(1)1X5CA	
4700				C124B472(1)1X5CA	
5600				C124B562(1)1X5CA	
6800				C124B682(1)1X5CA	
8200				C124B822(1)1X5CA	
10,000				C124B103(1)1X5CA	
12,000					C124B123(1)5X5CA
15,000					C124B153(1)5X5CA
18,000					C124B183(1)5X5CA
22,000					C124B223(1)5X5CA
27,000					C124B273(1)5X5CA
33,000					C124B333(1)5X5CA
39,000					C124B393(1)5X5CA
47,000					C124B473(1)5X5CA
56,000					C124B563(1)5X5CA

**STYLE C192**

150	C192B151(1)2G5CA				
160	C192B161(1)2G5CA				
180	C192B181(1)2G5CA				
200	C192B201(1)2G5CA				
220	C192B221(1)2G5CA				
240	C192B241(1)2G5CA				
270	C192B271(1)2G5CA				
300	C192B301(1)2G5CA				
330	C192B331(1)2G5CA				
360	C192B361(1)2G5CA				
390	C192B391(1)2G5CA				
430	C192B431(1)2G5CA				
470	C192B471(1)2G5CA				
510	C192B511(1)2G5CA				
560	C192B561(1)2G5CA				
620	C192B621(1)2G5CA				
680	C192B681(1)2G5CA				
750	C192B751(1)2G5CA				
820	C192B821(1)2G5CA				
910	C192B911(1)2G5CA				
1000	C192B102(1)2G5CA				
1100	C192B112(1)2G5CA				
1200	C192B122(1)2G5CA				
1300	C192B132(1)2G5CA				
1500	C192B152(1)2G5CA				
1600	C192B162(1)2G5CA				
1800	C192B182(1)2G5CA				
2000	C192B202(1)2G5CA				
2200	C192B222(1)2G5CA				
2400	C192B242(1)2G5CA				
2700	C192B272(1)2G5CA				
3000	C192B302(1)2G5CA				
3300	C192B332(1)2G5CA				
3600	C192B362(1)2G5CA				
3900	C192B392(1)2G5CA				
4300	C192B432(1)2G5CA				
4700	C192B472(1)2G5CA				
5600		C192B562(1)1G5CA	C192B562(1)2X5CA		
6200		C192B622(1)1G5CA			
6800		C192B682(1)1G5CA	C192B682(1)2X5CA		
7500		C192B752(1)1G5CA			
8200		C192B822(1)1G5CA	C192B822(1)2X5CA		
9100		C192B912(1)1G5CA			
10,000		C192B103(1)1G5CA	C192B103(1)2X5CA		
12,000			C192B123(1)2X5CA		
15,000			C192B153(1)2X5CA		
18,000			C192B183(1)2X5CA		
22,000				C192B223(1)1X5CA	
27,000				C192B273(1)1X5CA	
33,000				C192B333(1)1X5CA	
39,000				C192B393(1)1X5CA	
47,000				C192B473(1)1X5CA	
56,000				C192B563(1)1X5CA	
68,000					C192B683(1)5X5CA
82,000					C192B823(1)5X5CA
100,000					C192B104(1)5X5CA

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 103.

BP CAPACITANCE TOLERANCE: ± 1%, ± 2%, ± 5%, ± 10%, ± 20%  
 BX CAPACITANCE TOLERANCE: ± 5%, ± 10%, ± 20%

TEMPERATURE CHARACTERISTIC "G" TEMPERATURE CHARACTERISTIC "X"

(2) Capacitance values shown above are standard. Other capacitance values are available upon request.



**GR900 SERIES**  
**STYLE C202—MOLDED CASES WITH AXIAL LEADS**

CAPACITANCE pF	BP		BX		
	200 V	100 V	200 V	100 V	50 V
750	C202B751(1)2G5CA				
820	C202B821(1)2G5CA				
910	C202B911(1)2G5CA				
1000	C202B102(1)2G5CA				
1100	C202B112(1)2G5CA				
1200	C202B122(1)2G5CA				
1300	C202B132(1)2G5CA				
1500	C202B152(1)2G5CA				
1600	C202B162(1)2G5CA				
1800	C202B182(1)2G5CA				
2000	C202B202(1)2G5CA				
2200	C202B222(1)2G5CA				
2400	C202B242(1)2G5CA				
2700	C202B272(1)2G5CA				
3000	C202B302(1)2G5CA				
3300	C202B332(1)2G5CA				
3600	C202B362(1)2G5CA				
3900	C202B392(1)2G5CA				
4300	C202B432(1)2G5CA				
4700	C202B472(1)2G5CA				
5100	C202B512(1)2G5CA				
5600	C202B562(1)2G5CA				
6200	C202B622(1)2G5CA				
6800	C202B682(1)2G5CA				
7500	C202B752(1)2G5CA				
8200	C202B822(1)2G5CA				
9100	C202B912(1)2G5CA				
10,000	C202B103(1)2G5CA				
11,000	C202B113(1)2G5CA				
12,000	C202B123(1)2G5CA	C202B123(1)1G5CA			
13,000	C202B133(1)2G5CA	C202B133(1)1G5CA			
15,000	C202B153(1)2G5CA	C202B153(1)1G5CA			
16,000	C202B163(1)2G5CA	C202B163(1)1G5CA			
18,000	C202B183(1)2G5CA	C202B183(1)1G5CA			
20,000	C202B203(1)2G5CA	C202B203(1)1G5CA			
22,000	C202B223(1)2G5CA	C202B223(1)1G5CA	C202B223(1)2X5CA		
27,000			C202B273(1)2X5CA		
33,000			C202B333(1)2X5CA		
39,000			C202B393(1)2X5CA		
47,000			C202B473(1)2X5CA		
56,000			C202B563(1)2X5CA		
68,000			C202B683(1)2X5CA		
82,000				C202B823(1)1X5CA	
100,000				C202B104(1)1X5CA	
120,000				C202B124(1)1X5CA	
150,000				C202B154(1)1X5CA	
180,000				C202B184(1)1X5CA	
220,000				C202B224(1)1X5CA	
270,000					C202B274(1)5X5CA
330,000					C202B334(1)5X5CA
470,000					C202B474(1)5X5CA
560,000					C202B564(1)5X5CA
680,000					C202B684(1)5X5CA
820,000					C202B824(1)5X5CA

**STYLE C222**

3900	C222B392(1)2G5CA				
4300	C222B432(1)2G5CA				
4700	C222B472(1)2G5CA				
5100	C222B512(1)2G5CA				
5600	C222B562(1)2G5CA				
6200	C222B622(1)2G5CA				
6800	C222B682(1)2G5CA				
7500	C222B752(1)2G5CA				
8200	C222B822(1)2G5CA				
9100	C222B912(1)2G5CA				
10,000	C222B103(1)2G5CA				
11,000	C222B113(1)2G5CA				
12,000	C222B123(1)2G5CA				
13,000	C222B133(1)2G5CA				
15,000	C222B153(1)2G5CA				
16,000	C222B163(1)2G5CA				
18,000	C222B183(1)2G5CA				
20,000	C222B203(1)2G5CA				
22,000	C222B223(1)2G5CA				
27,000	C222B273(1)2G5CA				
33,000	C222B333(1)2G5CA				
36,000		C222B363(1)1G5CA			
39,000		C222B393(1)1G5CA			
47,000		C222B473(1)1G5CA			
56,000		C222B563(1)1G5CA			
68,000		C222B683(1)1G5CA			
82,000		C222B823(1)1G5CA	C222B823(1)2X5CA		
100,000			C222B104(1)2X5CA		
120,000			C222B124(1)2X5CA		
150,000			C222B154(1)2X5CA		
180,000			C222B184(1)2X5CA		
220,000			C222B224(1)2X5CA		
270,000			C222B274(1)2X5CA		
330,000			C222B334(1)2X5CA		
390,000				C222B394(1)1X5CA	
470,000				C222B474(1)1X5CA	
560,000				C222B564(1)1X5CA	
680,000				C222B684(1)1X5CA	
820,000				C222B824(1)1X5CA	
1,000,000				C222B105(1)1X5CA	C222B824(1)5X5CA
1,500,000					C222B105(1)5X5CA
2,000,000					C222B155(1)5X5CA
3,300,000					C222B205(1)5X5CA
					C222B335(1)5X5CA

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 103.

BP CAPACITANCE TOLERANCE:

± 1%, ± 2%, ± 5%, ± 10%, ± 20%

TEMPERATURE CHARACTERISTIC "G"

BX CAPACITANCE TOLERANCE:

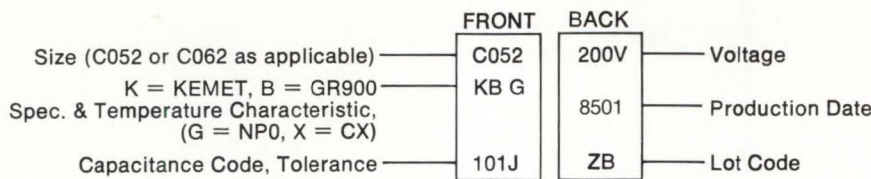
± 5%, ± 10%, ± 20%

TEMPERATURE CHARACTERISTIC "X"

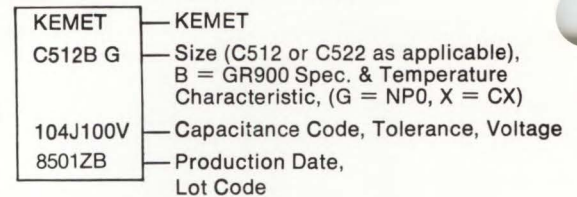
(2) Capacitance values above are standard. Other capacitance values are available upon request.

**GR900 CAPACITOR MARKINGS**

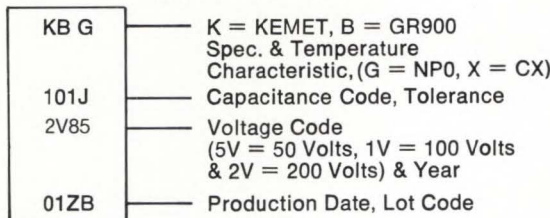
**C052B & C062B**



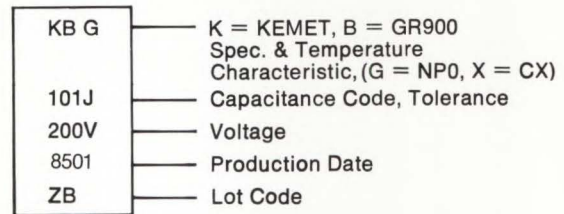
**C512B & C522B**



**C114B & C124B**

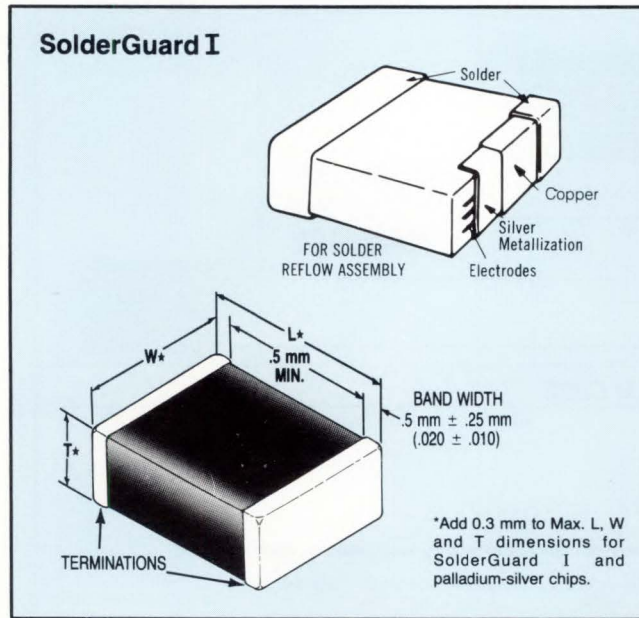


**C192B, C202B & C222B**



**GR900 SERIES — HYBRID CERAMIC CHIP CAPACITORS**

**CAPACITOR OUTLINE DRAWING**

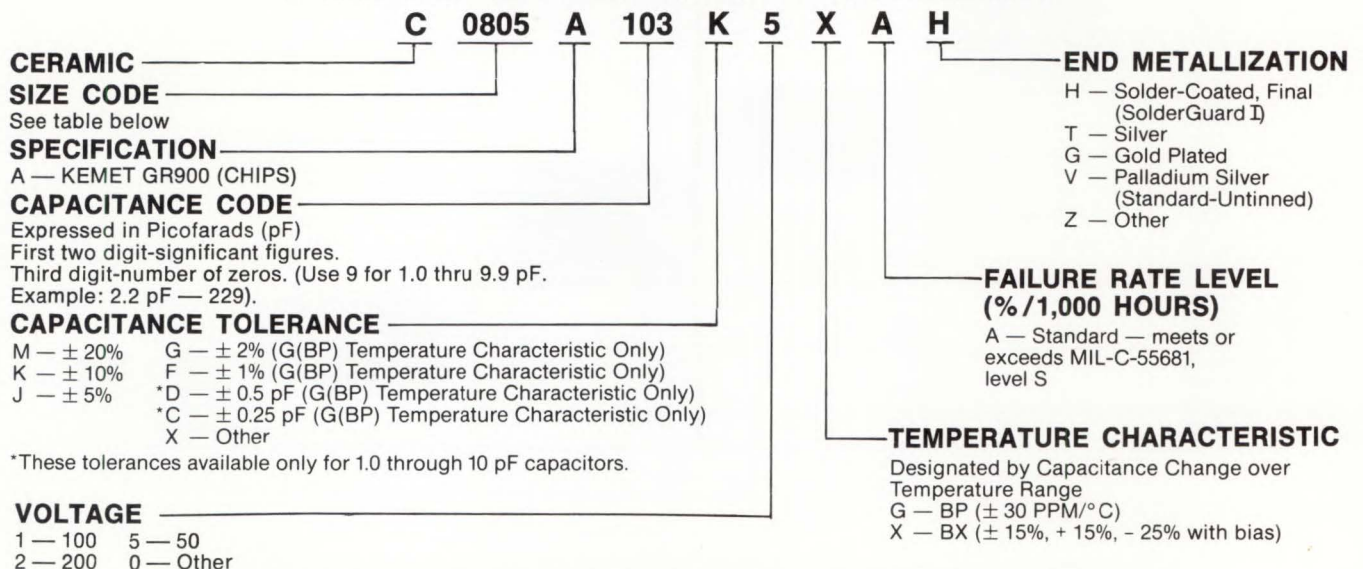


**DIMENSIONS - MILLIMETERS & (INCHES)**

SIZE CODE	L LENGTH	W WIDTH	T THICKNESS MAX.
0805	2.0 (.078) ±0.2 (.008)	1.25 (.049) ±0.2 (.008)	1.4 (.055)
1005	2.5 (.098) ±0.2 (.008)	1.25 (.049) ±0.2 (.008)	1.5 (.059)
1210	3.2 (.126) ±0.2 (.008)	2.5 (.098) ±0.2 (.008)	1.5 (.059)
1805	4.5 (.177) ±0.3 (.012)	1.25 (.049) ±0.3 (.012)	1.5 (.059)
1808	4.5 (.177) ±0.3 (.012)	2.0 (.078) ±0.3 (.012)	2.0 (.079)
1812	4.5 (.177) ±0.3 (.012)	3.2 (.126) ±0.3 (.012)	2.0 (.079)
1825	4.5 (.177) ±0.3 (.012)	6.4 (.252) ±0.3 (.012)	2.0 (.079)
2225	5.6 (.220) ±0.4 (.016)	6.3 (.248) ±0.4 (.016)	2.0 (.079)

Note: Refer to CoPS (Component Placement System), page 117, for chip quantities per reel.

**GR900 CERAMIC CHIP ORDERING INFORMATION**



**GR900 SERIES  
STYLE C0805—GRADED RELIABILITY MULTILAYER CERAMIC CHIPS  
RATINGS & PART NUMBER REFERENCE**

CAPACITANCE pF	BP			BX		
	200 V	100 V	50 V	200 V	100 V	50 V
1.0	C0805A109(1)2GA(2)					
1.1	C0805A119(1)2GA(2)					
1.2	C0805A129(1)2GA(2)					
1.5	C0805A159(1)2GA(2)					
1.6	C0805A169(1)2GA(2)					
1.8	C0805A189(1)2GA(2)					
2.0	C0805A209(1)2GA(2)					
2.2	C0805A229(1)2GA(2)					
2.4	C0805A249(1)2GA(2)					
2.7	C0805A279(1)2GA(2)					
3.0	C0805A309(1)2GA(2)					
3.3	C0805A339(1)2GA(2)					
3.6	C0805A369(1)2GA(2)					
3.9	C0805A399(1)2GA(2)					
4.3	C0805A439(1)2GA(2)					
4.7	C0805A479(1)2GA(2)					
5.1	C0805A519(1)2GA(2)					
5.6	C0805A569(1)2GA(2)					
6.2	C0805A629(1)2GA(2)					
6.8	C0805A689(1)2GA(2)					
7.5	C0805A759(1)2GA(2)					
8.2	C0805A829(1)2GA(2)					
9.1	C0805A919(1)2GA(2)					
10.0	C0805A100(1)2GA(2)					
11.0	C0805A110(1)2GA(2)					
12.0	C0805A120(1)2GA(2)					
13.0	C0805A130(1)2GA(2)					
15.0	C0805A150(1)2GA(2)					
16.0	C0805A160(1)2GA(2)					
18.0	C0805A180(1)2GA(2)					
20.0	C0805A200(1)2GA(2)					
22.0	C0805A220(1)2GA(2)					
24.0	C0805A240(1)2GA(2)					
27.0	C0805A270(1)2GA(2)					
30.0	C0805A300(1)2GA(2)					
33.0	C0805A330(1)2GA(2)					
36.0	C0805A360(1)2GA(2)					
39.0	C0805A390(1)2GA(2)					
43.0	C0805A430(1)2GA(2)					
47.0	C0805A470(1)2GA(2)					
51.0	C0805A510(1)2GA(2)					
56.0	C0805A560(1)2GA(2)					
62.0	C0805A620(1)2GA(2)					
75.0	C0805A750(1)2GA(2)					
82.0	C0805A820(1)2GA(2)					
91.0	C0805A910(1)2GA(2)					
100	C0805A101(1)2GA(2)					
110	C0805A111(1)2GA(2)					
120	C0805A121(1)2GA(2)					
130	C0805A131(1)2GA(2)					
150	C0805A151(1)2GA(2)					
160		C0805A161(1)1GA(2)				
180		C0805A181(1)1GA(2)		C0805A181(1)2XA(2)		
200		C0805A201(1)1GA(2)				
220		C0805A221(1)1GA(2)		C0805A221(1)2XA(2)		
240		C0805A241(1)1GA(2)				
270		C0805A271(1)1GA(2)		C0805A271(1)2XA(2)		
300		C0805A301(1)1GA(2)				
330		C0805A331(1)1GA(2)		C0805A331(1)2XA(2)		
360			C0805A361(1)5GA(2)			
390			C0805A391(1)5GA(2)	C0805A391(1)2XA(2)		
430			C0805A431(1)5GA(2)			
470			C0805A471(1)5GA(2)	C0805A471(1)2XA(2)		
510			C0805A511(1)5GA(2)			
560			C0805A561(1)5GA(2)	C0805A561(1)2XA(2)		
680					C0805A681(1)1XA(2)	
820					C0805A821(1)1XA(2)	
1000					C0805A102(1)1XA(2)	
1200					C0805A122(1)1XA(2)	
1500					C0805A152(1)1XA(2)	
1800					C0805A182(1)1XA(2)	
2200					C0805A222(1)1XA(2)	
2700					C0805A272(1)1XA(2)	
3300					C0805A332(1)1XA(2)	
3900						C0805A392(1)5XA(2)
4700						C0805A472(1)5XA(2)
5600						C0805A562(1)5XA(2)
6800						C0805A682(1)5XA(2)
8200						C0805A822(1)5XA(2)
10,000						C0805A103(1)5XA(2)
12,000						C0805A123(1)5XA(2)
15,000						C0805A153(1)5XA(2)

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 110.

BP CAPACITANCE TOLERANCE:	BX CAPACITANCE TOLERANCE:
± 1%, ± 2%, ± 5%, ± 10%, ± 20%	± 5%, ± 10%, ± 20%
TEMPERATURE CHARACTERISTIC "G"	TEMPERATURE CHARACTERISTIC "X"

(2) Complete part number by inserting End Metallization, as applicable as shown in ordering information on page 110.

- H — Solder Coated, Final (SolderGuard I)
- T — Silver
- G — Gold Plated
- V — Palladium Silver (Standard-Untinned)
- Z — Other

(3) Capacitance values shown above are standard. Other capacitance values are available upon request.

**GR900 SERIES**  
**STYLE C1005—GRADED RELIABILITY MULTILAYER CERAMIC CHIPS**

CAPACITANCE pF	BP			BX		
	200 V	100 V	50 V	200 V	100 V	50 V
1.0	C1005A109(1)2GA(2)					
1.1	C1005A119(1)2GA(2)					
1.2	C1005A129(1)2GA(2)					
1.5	C1005A159(1)2GA(2)					
1.6	C1005A169(1)2GA(2)					
1.8	C1005A189(1)2GA(2)					
2.0	C1005A209(1)2GA(2)					
2.2	C1005A229(1)2GA(2)					
2.4	C1005A249(1)2GA(2)					
2.7	C1005A279(1)2GA(2)					
3.0	C1005A309(1)2GA(2)					
3.3	C1005A339(1)2GA(2)					
3.6	C1005A369(1)2GA(2)					
3.9	C1005A399(1)2GA(2)					
4.3	C1005A439(1)2GA(2)					
4.7	C1005A479(1)2GA(2)					
5.1	C1005A519(1)2GA(2)					
5.6	C1005A569(1)2GA(2)					
6.8	C1005A689(1)2GA(2)					
7.5	C1005A759(1)2GA(2)					
8.2	C1005A829(1)2GA(2)					
9.1	C1005A919(1)2GA(2)					
10.0	C1005A100(1)2GA(2)					
11.0	C1005A110(1)2GA(2)					
12.0	C1005A120(1)2GA(2)					
13.0	C1005A130(1)2GA(2)					
15.0	C1005A150(1)2GA(2)					
16.0	C1005A160(1)2GA(2)					
18.0	C1005A180(1)2GA(2)					
20.0	C1005A200(1)2GA(2)					
22.0	C1005A220(1)2GA(2)					
24.0	C1005A240(1)2GA(2)					
27.0	C1005A270(1)2GA(2)					
30.0	C1005A300(1)2GA(2)					
33.0	C1005A330(1)2GA(2)					
36.0	C1005A360(1)2GA(2)					
39.0	C1005A390(1)2GA(2)					
43.0	C1005A430(1)2GA(2)					
47.0	C1005A470(1)2GA(2)					
51.0	C1005A510(1)2GA(2)					
56.0	C1005A560(1)2GA(2)					
62.0	C1005A620(1)2GA(2)					
75.0	C1005A750(1)2GA(2)					
82.0	C1005A820(1)2GA(2)					
91.0	C1005A910(1)2GA(2)					
100	C1005A101(1)2GA(2)					
110	C1005A111(1)2GA(2)					
120	C1005A121(1)2GA(2)					
130	C1005A131(1)2GA(2)					
150	C1005A151(1)2GA(2)					
160	C1005A161(1)2GA(2)					
180	C1005A181(1)2GA(2)					
200	C1005A201(1)2GA(2)					
220	C1005A221(1)2GA(2)					
240	C1005A241(1)2GA(2)					
270	C1005A271(1)2GA(2)					
300	C1005A301(1)2GA(2)					
330	C1005A331(1)2GA(2)					
360		C1005A361(1)1GA(2)		C1005A331(1)2XA(2)		
390		C1005A391(1)1GA(2)		C1005A391(1)2XA(2)		
430		C1005A431(1)1GA(2)				
470		C1005A471(1)1GA(2)		C1005A471(1)2XA(2)		
510		C1005A511(1)1GA(2)				
560		C1005A561(1)1GA(2)		C1005A561(1)2XA(2)		
620		C1005A621(1)1GA(2)				
680		C1005A681(1)1GA(2)		C1005A681(1)2XA(2)		
750			C1005A751(1)5GA(2)			
820			C1005A821(1)5GA(2)	C1005A821(1)2XA(2)		
910			C1005A911(1)5GA(2)			
1000			C1005A102(1)5GA(2)	C1005A102(1)2XA(2)		
1100			C1005A112(1)5GA(2)			
1200			C1005A122(1)5GA(2)	C1005A122(1)2XA(2)		
1500					C1005A152(1)1XA(2)	
1800					C1005A182(1)1XA(2)	
2200					C1005A222(1)1XA(2)	
2700					C1005A272(1)1XA(2)	
3300					C1005A332(1)1XA(2)	
3900					C1005A392(1)1XA(2)	
4700					C1005A472(1)1XA(2)	
5600					C1005A562(1)1XA(2)	
6800						C1005A682(1)5XA(2)
8200						C1005A822(1)5XA(2)
10,000						C1005A103(1)5XA(2)
12,000						C1005A123(1)5XA(2)
15,000						C1005A153(1)5XA(2)
18,000						C1005A183(1)5XA(2)
22,000						C1005A223(1)5XA(2)

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 110.

BP CAPACITANCE TOLERANCE:	BX CAPACITANCE TOLERANCE
± 1%, ±2%, ± 5%, ±10%, ±20%	±5%, ±10%, ±20%
(± 0.5 pF & ± 0.25 pF tolerances available 1.0 through 10 pF only)	
TEMPERATURE CHARACTERISTIC "G"	TEMPERATURE CHARACTERISTIC "X"

(2) Complete part number by inserting End Metallization, as applicable as shown in ordering information on page 110.

H — Solder Coated, Final (SolderGuard I)  
T — Silver  
G — Gold Plated  
V — Palladium Silver (Standard-Untinned)  
Z — Other

(3) Capacitance values shown above are standard. Other capacitance values are available upon request.

**GR900 SERIES**  
**STYLE C1210—GRADED RELIABILITY MULTILAYER CERAMIC CHIPS**

CAPACITANCE pF	BP			BX		
	200 V	100 V	50 V	200 V	100 V	50 V
10.0	C1210A100(1)2GA(2)					
11.0	C1210A110(1)2GA(2)					
12.0	C1210A120(1)2GA(2)					
13.0	C1210A130(1)2GA(2)					
15.0	C1210A150(1)2GA(2)					
16.0	C1210A160(1)2GA(2)					
18.0	C1210A180(1)2GA(2)					
20.0	C1210A200(1)2GA(2)					
22.0	C1210A220(1)2GA(2)					
24.0	C1210A240(1)2GA(2)					
27.0	C1210A270(1)2GA(2)					
30.0	C1210A300(1)2GA(2)					
33.0	C1210A330(1)2GA(2)					
36.0	C1210A360(1)2GA(2)					
39.0	C1210A390(1)2GA(2)					
43.0	C1210A430(1)2GA(2)					
47.0	C1210A470(1)2GA(2)					
51.0	C1210A510(1)2GA(2)					
56.0	C1210A560(1)2GA(2)					
62.0	C1210A620(1)2GA(2)					
68.0	C1210A680(1)2GA(2)					
75.0	C1210A750(1)2GA(2)					
82.0	C1210A820(1)2GA(2)					
91.0	C1210A910(1)2GA(2)					
100	C1210A101(1)2GA(2)					
110	C1210A111(1)2GA(2)					
120	C1210A121(1)2GA(2)					
130	C1210A131(1)2GA(2)					
150	C1210A151(1)2GA(2)					
160	C1210A161(1)2GA(2)					
180	C1210A181(1)2GA(2)					
200	C1210A201(1)2GA(2)					
220	C1210A221(1)2GA(2)					
240	C1210A241(1)2GA(2)					
270	C1210A271(1)2GA(2)					
300	C1210A301(1)2GA(2)					
330	C1210A331(1)2GA(2)					
360	C1210A361(1)2GA(2)					
390	C1210A391(1)2GA(2)					
430	C1210A431(1)2GA(2)					
470	C1210A471(1)2GA(2)			C1210A471(1)2XA(2)		
510	C1210A511(1)2GA(2)					
560	C1210A561(1)2GA(2)			C1210A561(1)2XA(2)		
620	C1210A621(1)2GA(2)					
680	C1210A681(1)2GA(2)			C1210A681(1)2XA(2)		
750	C1210A751(1)2GA(2)					
820	C1210A821(1)2GA(2)			C1210A821(1)2XA(2)		
910	C1210A911(1)2GA(2)					
1000	C1210A102(1)2GA(2)			C1210A102(1)2XA(2)		
1100	C1210A112(1)2GA(2)					
1200	C1210A122(1)2GA(2)			C1210A122(1)2XA(2)		
1300	C1210A132(1)2GA(2)					
1500	C1210A152(1)2GA(2)			C1210A152(1)2XA(2)		
1600		C1210A162(1)1GA(2)				
1800		C1210A182(1)1GA(2)				
2000		C1210A202(1)1GA(2)				
2200		C1210A222(1)1GA(2)				
2400		C1210A242(1)1GA(2)				
2700		C1210A272(1)1GA(2)		C1210A272(1)2XA(2)		
3000			C1210A302(1)5GA(2)			
3300			C1210A332(1)5GA(2)	C1210A332(1)2XA(2)		
3900				C1210A392(1)2XA(2)		
4700				C1210A472(1)2XA(2)		
5600					C1210A562(1)1XA(2)	
6800					C1210A682(1)1XA(2)	
8200					C1210A822(1)1XA(2)	
10,000					C1210A103(1)1XA(2)	
12,000					C1210A123(1)1XA(2)	
15,000					C1210A153(1)1XA(2)	
18,000					C1210A183(1)1XA(2)	
22,000						C1210A223(1)5XA(2)
27,000						C1210A273(1)5XA(2)
33,000						C1210A333(1)5XA(2)
39,000						C1210A393(1)5XA(2)
47,000						C1210A473(1)5XA(2)
56,000						C1210A563(1)5XA(2)
68,000						C1210A683(1)5XA(2)
82,000						C1210A823(1)5XA(2)
100,000						C1210A104(1)5XA(2)

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 110.

BP CAPACITANCE TOLERANCE: ± 1%, ± 2%, ± 5%, ± 10%, ± 20%  
 BX CAPACITANCE TOLERANCE: ± 5%, ± 10%, ± 20%  
 TEMPERATURE CHARACTERISTIC "G" TEMPERATURE CHARACTERISTIC "X"

(2) Complete part number by inserting End Metallization, as applicable as shown in ordering information on page 110.

H — Solder Coated, Final (SolderGuard I)  
 T — Silver  
 G — Gold Plated  
 V — Palladium Silver (Standard-Untinned)  
 Z — Other

(3) Capacitance values shown above are standard. Other capacitance values are available upon request.

**GR900 SERIES**  
**STYLE C1805—GRADED RELIABILITY MULTILAYER CERAMIC CHIPS**

CAPACITANCE pF	BP			BX		
	200 V	100 V	50 V	200 V	100 V	50 V
220	C1805A221(1)2GA(2)					
240	C1805A241(1)2GA(2)					
270	C1805A271(1)2GA(2)					
300	C1805A301(1)2GA(2)					
330	C1805A331(1)2GA(2)					
360	C1805A361(1)2GA(2)					
390	C1805A391(1)2GA(2)					
430	C1805A431(1)2GA(2)					
470	C1805A471(1)2GA(2)					
510	C1805A511(1)2GA(2)					
560	C1805A561(1)2GA(2)					
620	C1805A621(1)2GA(2)					
680	C1805A681(1)2GA(2)					
750		C1805A751(1)1GA(2)				
820		C1805A821(1)1GA(2)				
910		C1805A911(1)1GA(2)				
1000		C1805A102(1)1GA(2)				
1100		C1805A112(1)1GA(2)				
1200		C1805A122(1)1GA(2)		C1805A122(1)2XA(2)		
1300		C1805A132(1)1GA(2)		C1805A152(1)2XA(2)		
1500		C1805A152(1)1GA(2)				
1600			C1805A162(1)5GA(2)	C1805A182(1)2XA(2)		
1800			C1805A182(1)5GA(2)			
2000			C1805A202(1)5GA(2)			
2200			C1805A222(1)5GA(2)	C1805A222(1)2XA(2)		
2700				C1805A272(1)2XA(2)		
3300					C1805A332(1)1XA(2)	
3900					C1805A392(1)1XA(2)	
4700					C1805A472(1)1XA(2)	
5600					C1805A562(1)1XA(2)	
6800					C1805A682(1)1XA(2)	
8200					C1805A822(1)1XA(2)	
10,000					C1805A103(1)1XA(2)	
12,000					C1805A123(1)1XA(2)	
15,000						C1805A153(1)5XA(2)
18,000						C1805A183(1)5XA(2)
22,000						C1805A223(1)5XA(2)
27,000						C1805A273(1)5XA(2)
33,000						C1805A333(1)5XA(2)
39,000						C1805A393(1)5XA(2)
47,000						C1805A473(1)5XA(2)
56,000						C1805A563(1)5XA(2)

**STYLE C1808**

330	C1808A331(1)2GA(2)					
360	C1808A361(1)2GA(2)					
390	C1808A391(1)2GA(2)					
430	C1808A431(1)2GA(2)					
470	C1808A471(1)2GA(2)					
510	C1808A511(1)2GA(2)					
560	C1808A561(1)2GA(2)					
620	C1808A621(1)2GA(2)					
680	C1808A681(1)2GA(2)					
750	C1808A751(1)2GA(2)					
820	C1808A821(1)2GA(2)					
910	C1808A911(1)2GA(2)					
1000	C1808A102(1)2GA(2)					
1100	C1808A112(1)2GA(2)					
1200	C1808A122(1)2GA(2)					
1300	C1808A132(1)2GA(2)					
1500	C1808A152(1)2GA(2)					
1600	C1808A162(1)2GA(2)					
1800	C1808A182(1)2GA(2)					
2000		C1808A202(1)1GA(2)				
2200		C1808A222(1)1GA(2)		C1808A222(1)2XA(2)		
2400		C1808A242(1)1GA(2)				
2700		C1808A272(1)1GA(2)		C1808A272(1)2XA(2)		
3000		C1808A302(1)1GA(2)				
3300		C1808A332(1)1GA(2)		C1808A332(1)2XA(2)		
3600		C1808A362(1)1GA(2)				
3900		C1808A392(1)1GA(2)		C1808A392(1)2XA(2)		
4300		C1808A432(1)1GA(2)				
4700		C1808A472(1)1GA(2)		C1808A472(1)2XA(2)		
5100			C1808A512(1)5GA(2)			
5600			C1808A562(1)5GA(2)	C1808A562(1)2XA(2)		
6800				C1808A682(1)2XA(2)		
8200				C1808A822(1)2XA(2)		
10,000					C1808A103(1)1XA(2)	
12,000					C1808A123(1)1XA(2)	
15,000					C1808A153(1)1XA(2)	
18,000					C1808A183(1)1XA(2)	
22,000					C1808A223(1)1XA(2)	
27,000					C1808A273(1)1XA(2)	
33,000					C1808A333(1)1XA(2)	
39,000						C1808A393(1)5XA(2)
47,000						C1808A473(1)5XA(2)
56,000						C1808A563(1)5XA(2)
68,000						C1808A683(1)5XA(2)
82,000						C1808A823(1)5XA(2)
100,000						C1808A104(1)5XA(2)

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 110.  
 BP CAPACITANCE TOLERANCE: ± 1%, ± 2%, ± 5%, ± 10%, ± 20% BX CAPACITANCE TOLERANCE: ± 5%, ± 10%, ± 20%

TEMPERATURE CHARACTERISTIC "G" TEMPERATURE CHARACTERISTIC "X"

(2) Complete part number by inserting End Metallization, as applicable as shown in ordering information on page 110.  
 H — Solder Coated, Final (SolderGuard I)  
 T — Silver  
 G — Gold Plated  
 V — Palladium Silver (Standard-Untinned)  
 Z — Other

(3) Capacitance values shown above are standard. Other capacitance values are available upon request.

**GR900 SERIES**  
**STYLE C1812—GRADED RELIABILITY MULTILAYER CERAMIC CHIPS**

CAPACITANCE pF	BP			BX		
	200 V	100 V	50 V	200 V	100 V	50 V
330	C1812A331(1)2GA(2)					
360	C1812A361(1)2GA(2)					
390	C1812A391(1)2GA(2)					
430	C1812A431(1)2GA(2)					
470	C1812A471(1)2GA(2)					
510	C1812A511(1)2GA(2)					
560	C1812A561(1)2GA(2)					
620	C1812A621(1)2GA(2)					
680	C1812A681(1)2GA(2)					
750	C1812A751(1)2GA(2)					
820	C1812A821(1)2GA(2)					
910	C1812A911(1)2GA(2)					
1000	C1812A102(1)2GA(2)					
1100	C1812A112(1)2GA(2)					
1200	C1812A122(1)2GA(2)					
1300	C1812A132(1)2GA(2)					
1500	C1812A152(1)2GA(2)					
1600	C1812A162(1)2GA(2)					
1800	C1812A182(1)2GA(2)					
2000	C1812A202(1)2GA(2)					
2200	C1812A222(1)2GA(2)			C1812A222(1)2XA(2)		
2400	C1812A242(1)2GA(2)					
2700	C1812A272(1)2GA(2)			C1812A272(1)2XA(2)		
3000	C1812A302(1)2GA(2)					
3300	C1812A332(1)2GA(2)			C1812A332(1)2XA(2)		
3600	C1812A362(1)2GA(2)	C1812A362(1)1GA(2)				
3900	C1812A392(1)2GA(2)	C1812A392(1)1GA(2)		C1812A392(1)2XA(2)		
4300	C1812A432(1)2GA(2)	C1812A432(1)1GA(2)				
4700	C1812A472(1)2GA(2)	C1812A472(1)1GA(2)		C1812A472(1)2XA(2)		
5100	C1812A512(1)2GA(2)	C1812A512(1)1GA(2)				
5600	C1812A562(1)2GA(2)	C1812A562(1)1GA(2)		C1812A562(1)2XA(2)		
6200	C1812A622(1)2GA(2)	C1812A622(1)1GA(2)				
6800	C1812A682(1)2GA(2)	C1812A682(1)1GA(2)		C1812A682(1)2XA(2)		
7500			C1812A752(1)5GA(2)			
8200			C1812A822(1)5GA(2)	C1812A822(1)2XA(2)		
9100			C1812A912(1)5GA(2)			
10,000			C1812A103(1)5GA(2)	C1812A103(1)2XA(2)		
12,000				C1812A123(1)2XA(2)		
15,000				C1812A153(1)2XA(2)		
18,000					C1812A183(1)1XA(2)	
22,000					C1812A223(1)1XA(2)	
27,000					C1812A273(1)1XA(2)	
33,000					C1812A333(1)1XA(2)	
39,000					C1812A393(1)1XA(2)	
47,000					C1812A473(1)1XA(2)	
56,000					C1812A563(1)1XA(2)	
68,000						C1812A683(1)5XA(2)
82,000						C1812A823(1)5XA(2)
100,000						C1812A104(1)5XA(2)
120,000						C1812A124(1)5XA(2)
150,000						C1812A154(1)5XA(2)
180,000						C1812A184(1)5XA(2)
220,000						C1812A224(1)5XA(2)

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 110.  
 BP CAPACITANCE TOLERANCE:                      BX CAPACITANCE TOLERANCE:  
 ± 1%, ± 2%, ± 5%, ± 10%, ± 20%                      ± 5%, ± 10%, ± 20%  
 TEMPERATURE CHARACTERISTIC "G"                      TEMPERATURE CHARACTERISTIC "X"

(2) Complete part number by inserting End Metallization, as applicable as shown in ordering information on page 110.  
 H — Solder Coated, Final (SolderGuard I)  
 T — Silver  
 G — Gold Plated  
 V — Palladium Silver (Standard-Untinned)  
 Z — Other

(3) Capacitance values shown above are standard. Other capacitance values are available upon request.

**STYLE C1825**

2700	C1825A272(1)2GA(2)					
3000	C1825A302(1)2GA(2)					
3300	C1825A332(1)2GA(2)					
3600	C1825A362(1)2GA(2)					
3900	C1825A392(1)2GA(2)					
4300	C1825A432(1)2GA(2)					
4700	C1825A472(1)2GA(2)					
5100	C1825A512(1)2GA(2)					
5600	C1825A562(1)2GA(2)					
6200	C1825A622(1)2GA(2)					
6800	C1825A682(1)2GA(2)			C1825A682(1)2XA(2)		
7500	C1825A752(1)2GA(2)			C1825A822(1)2XA(2)		
8200	C1825A822(1)2GA(2)					
9100		C1825A912(1)1GA(2)				
10,000		C1825A103(1)1GA(2)		C1825A103(1)2XA(2)		
11,000		C1825A113(1)1GA(2)				
12,000		C1825A123(1)1GA(2)		C1825A123(1)2XA(2)		
13,000			C1825A133(1)5GA(2)			
15,000			C1825A153(1)5GA(2)	C1825A153(1)2XA(2)		
16,000			C1825A163(1)5GA(2)			
18,000			C1825A183(1)5GA(2)	C1825A183(1)2XA(2)		
20,000			C1825A203(1)5GA(2)			
22,000			C1825A223(1)5GA(2)	C1825A223(1)2XA(2)		
27,000						
33,000				C1825A333(1)2XA(2)		
39,000				C1825A393(1)2XA(2)		
47,000					C1825A473(1)1XA(2)	
56,000					C1825A563(1)1XA(2)	
68,000					C1825A683(1)1XA(2)	
82,000					C1825A823(1)1XA(2)	
100,000					C1825A104(1)1XA(2)	
120,000					C1825A124(1)1XA(2)	
150,000					C1825A154(1)1XA(2)	
180,000						C1825A184(1)5XA(2)
220,000						C1825A224(1)5XA(2)
270,000						C1825A274(1)5XA(2)
330,000						C1825A334(1)5XA(2)
390,000						C1825A394(1)5XA(2)
470,000						C1825A474(1)5XA(2)

**GR900 SERIES  
STYLE C2225—GRADED RELIABILITY MULTILAYER CERAMIC CHIPS**

CAPACITANCE pF	BP			BX		
	200 V	100 V	50 V	200 V	100 V	50 V
2700	C2225A272(1)2GA(2)					
3000	C2225A302(1)2GA(2)					
3300	C2225A332(1)2GA(2)					
3600	C2225A362(1)2GA(2)					
3900	C2225A392(1)2GA(2)					
4300	C2225A432(1)2GA(2)					
4700	C2225A472(1)2GA(2)					
5100	C2225A512(1)2GA(2)					
5600	C2225A562(1)2GA(2)					
6200	C2225A622(1)2GA(2)					
6800	C2225A682(1)2GA(2)					
7500	C2225A752(1)2GA(2)					
8200	C2225A822(1)2GA(2)					
9100	C2225A912(1)2GA(2)					
10,000	C2225A103(1)2GA(2)					
11,000		C2225A113(1)1GA(2)				
12,000		C2225A123(1)1GA(2)				
13,000		C2225A133(1)1GA(2)				
15,000		C2225A153(1)1GA(2)				
16,000		C2225A163(1)1GA(2)				
18,000		C2225A183(1)1GA(2)		C2225A183(1)2XA(2)		
20,000		C2225A203(1)1GA(2)		C2225A223(1)2XA(2)		
22,000		C2225A223(1)1GA(2)				
24,000			C2225A243(1)5GA(2)			
27,000			C2225A273(1)5GA(2)	C2225A273(1)2XA(2)		
33,000				C2225A333(1)2XA(2)		
39,000				C2225A393(1)2XA(2)		
47,000				C2225A473(1)2XA(2)		
56,000					C2225A563(1)1XA(2)	
68,000					C2225A683(1)1XA(2)	
82,000					C2225A823(1)1XA(2)	
100,000					C2225A104(1)1XA(2)	
120,000					C2225A124(1)1XA(2)	
150,000					C2225A154(1)1XA(2)	
180,000					C2225A184(1)1XA(2)	
220,000						C2225A224(1)5XA(2)
270,000						C2225A274(1)5XA(2)
330,000						C2225A334(1)5XA(2)
390,000						C2225A394(1)5XA(2)
470,000						C2225A474(1)5XA(2)
560,000						C2225A564(1)5XA(2)
680,000						C2225A684(1)5XA(2)
820,000						C2225A824(1)5XA(2)
1,000,000						C2225A105(1)5XA(2)

(1) Complete KEMET Part Number by inserting capacitance tolerance, as applicable as shown in ordering information on page 110.

BP CAPACITANCE TOLERANCE:      BX CAPACITANCE TOLERANCE:  
 ± 1%, ± 2%, ± 5%, ± 10%, ± 20%      ± 5%, ± 10%, ± 20%  
 TEMPERATURE CHARACTERISTIC "G"      TEMPERATURE CHARACTERISTIC "X"

(2) Complete part number by inserting End Metallization, as applicable as shown in ordering information on page 110.

H — Solder Coated, Final (SolderGuard I)  
 T — Silver  
 G — Gold Plated  
 V — Palladium Silver (Standard-Untinned)  
 Z — Other

(3) Capacitance values shown above are standard. Other capacitance values are available upon request.



# CoPS SPECIFICATIONS

KEMET offers CoPS (Component Placement System), Multilayer Ceramic Chip Capacitors in carrier tape form for automatic placement on printed circuit boards. They are available in three sizes:

- C0805 (.08" x .05") (2.0 x 1.25 mm)
- C1206 (.12" x .06") (3.2 x 1.6 mm)
- C1210 (.12" x .10") (3.2 x 2.5 mm)

KEMET CoPS capacitors conform to the Electronic Industries Association specification RS-481 for Automated Component Processing and Insertion.

See table below for maximum capacitance in the three dielectrics and voltages available. For further information on C0805, C1206, and C1210 capacitors, see page 99.

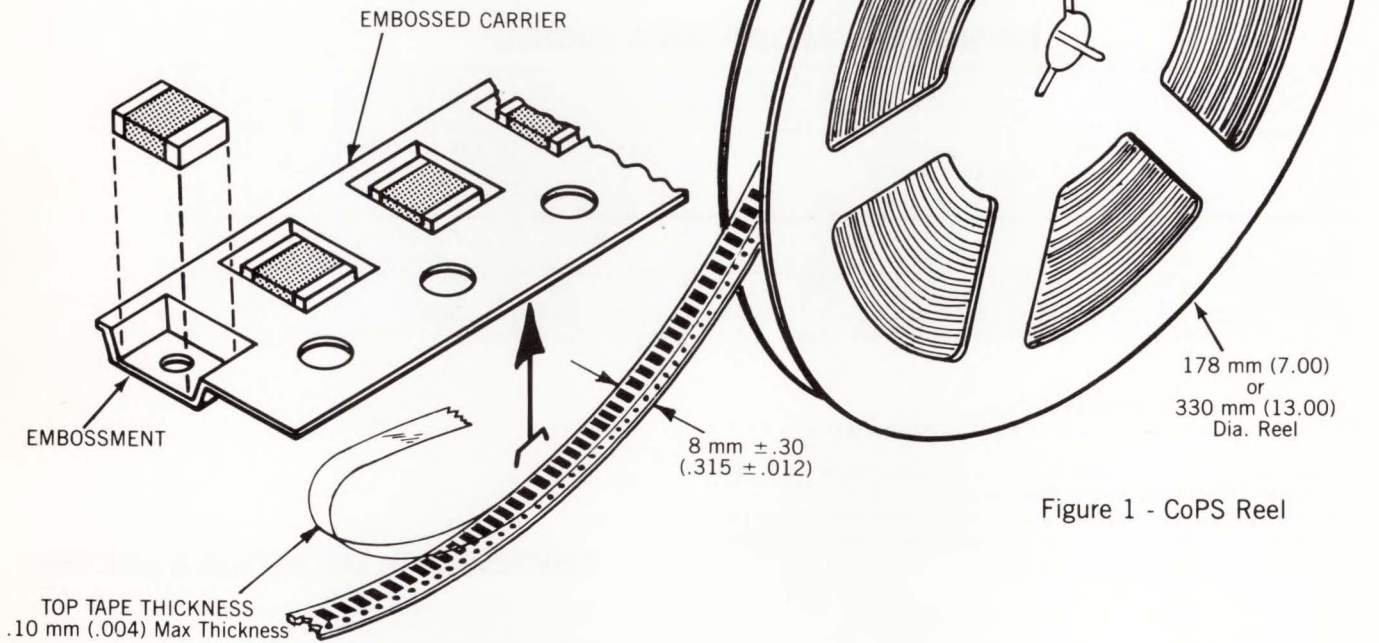


Figure 1 - CoPS Reel

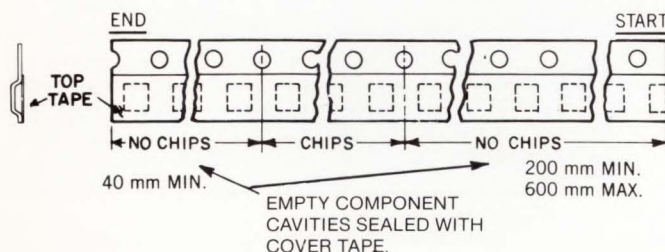
Shown in Figure 1, KEMET CoPS Capacitors are wound on a standard 178.0 mm (7.00") or 330.0 mm (13.00") diameter 8 mm reel. Seven inch diameter reels contain 2,500 chips and for 13.0" diameter reels, 10,000 chips.

Figure 2 shows carrier leader and ending amounts of KEMET Multilayer Ceramic

Chips on CoPS reels and Figure 3 (page 118), carrier dimensions.

If your company is already using chip component placement machines that utilize reeled components, or if you are considering the purchase of such equipment, KEMET CoPS reeled capacitors can be easily fed into your machine.

Figure 2 - CoPS Carrier Chips



Maximum Capacitance Values Available in KEMET CoPS Reeled Packaging per EIA Spec. RS-481

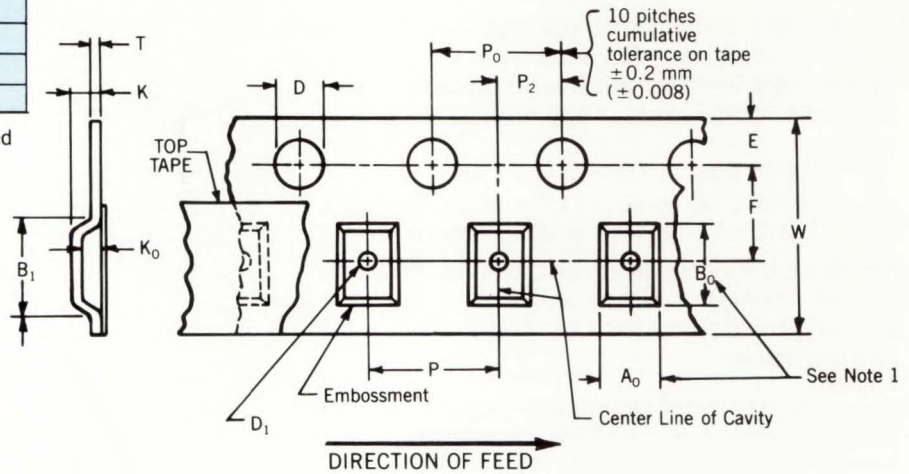
Dielectric	Voltage	0805	1206	1210
COG	200	270 pF	1,200 pF	2,200 pF
	100	470 pF	2,200 pF	4,700 pF
X7R	100	4,700 pF	22,000 pF	47,000 pF
	50	12,000 pF	100,000 pF	150,000 pF
Z5U	100	10,000 pF	39,000 pF	82,000 pF
	50	27,000 pF	150,000 pF	270,000 pF

**CHIP QUANTITIES PER REEL**

CHIP SIZE	178 mm DIA. (7 inches)	330 mm DIA. (13 inches)
C0805	2500	10,000
C1206	2500	10,000
C1210	2500	10,000

Minimum shipping quantity is quantity contained on one reel.

Figure 3 — CoPS Carrier Dimensions



**DIMENSIONS—MILLIMETERS & (INCHES)**

SIZE	B <sub>1</sub>	D	D <sub>1</sub>	E	F	K
8 MM	4.2 max. (.165)	1.5 +0.1 -0.0 (.059 +.004) -0.0	1.0 min. (.039)	1.75 ±.10 (.069 ±.004)	3.5 ±.05 (.138 ±.002)	2.4 max. (.094)
P	P <sub>0</sub>	P <sub>2</sub>	T	W	A <sub>0</sub> , B <sub>0</sub> K <sub>0</sub>	SPROCKET
4.0 ±0.1 (1.57 ±.004)	4.0 ±.10 (.156 ±.004)	2.0 ±.05 (.079 ±.002)	.33 max. (.013)	8.0 ±.30 (.315 ±.012)	See Note 1	Single

Metric Dimensions will govern.  
English measurements rounded and for reference only.

Note: 1.A<sub>0</sub>, B<sub>0</sub> & K<sub>0</sub> are determined by maximum specific length, width, and thickness of components plus 0.4 ±0.2 (0.016 ±0.008), plus the additional requirements that components not be allowed to rotate more than 20° within the cavity clearance or whichever condition occurs first.

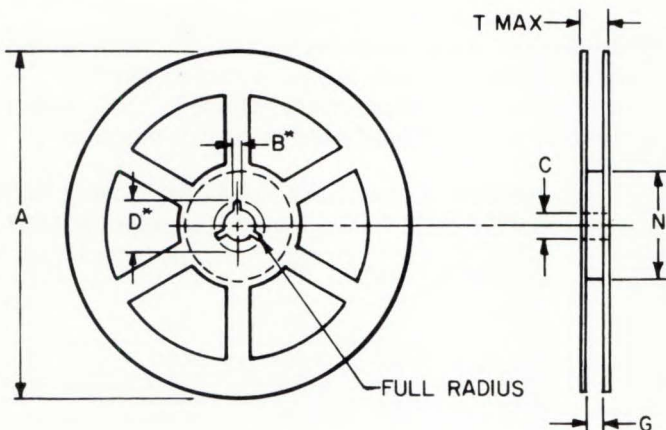
**DIMENSIONS IN MILLIMETERS & (INCHES)**

\*DRIVE SPOKES OPTIONAL.  
IF USED, ASTERISKED DIMENSIONS APPLY.

DIMENSION	SYMBOL	NOMINAL mm (Inch)	TOLERANCE mm (Inch)
REEL DIAMETER	A	A. 178.0 (7.00) or B. 330.0 (13.00)	±2.0 (±0.079)
DRIVE SPOKE WIDTH	B*	1.5 (.06)	MIN.
REEL CENTER HOLE DIAMETER	C	13.0 (0.512)	±0.5 (±0.020)
DRIVE SPROCKET DIAMETER	D*	20.2 (0.795)	MIN.
REEL HUB DIAMETER	N	50.0 (1.969)	MIN.
REEL INSIDE WIDTH	G	8.4 (0.33)	+1.5, -0 (+0.059)
REEL OUTSIDE WIDTH	T	14.4 (0.56)	MAX.

METRIC DIMENSIONS WILL GOVERN.  
ENGLISH MEASUREMENTS ROUNDED AND FOR REFERENCE ONLY.

Figure 4 - CoPS Reel Dimensions

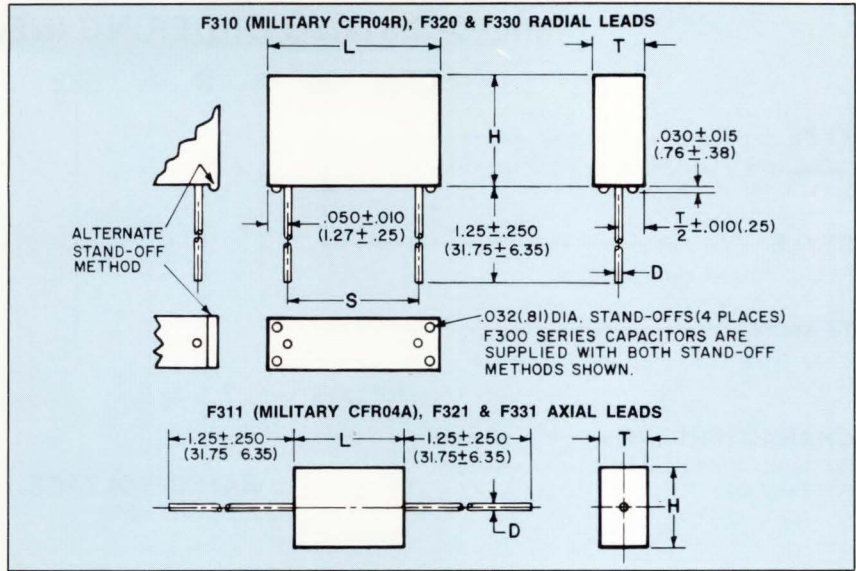


**FLAT KAP FILM CAPACITORS**

Flat Kaps are small ultra stable film capacitors ideally suited for filters, A/D converters, integrators, multivibrator timing capacitors, and other applications where capacitance stability is essential. This stability is obtained by locking the capacitor body in place with a solid impregnant. Outstanding electrical characteristics and volumetric efficiencies, up to 20 times greater than mica, glass and porcelain are derived from the unique vacuum deposited dielectric, Parylene.

Available in three different temperature coefficient of capacitance characteristics: - 200, ± 30, 0 ± 50, and 0 ± 100 ppm/°C over the operating range -55°C to + 125°C. Capacitors are tested in accordance with MIL-C-55514 and are stocked in all standard values down to ± ¼% tolerance. Non-standard values are available on special order. For additional information refer to KEMET Flat Kap Capacitor Catalog F-2274.

**CAPACITOR OUTLINE DRAWINGS**

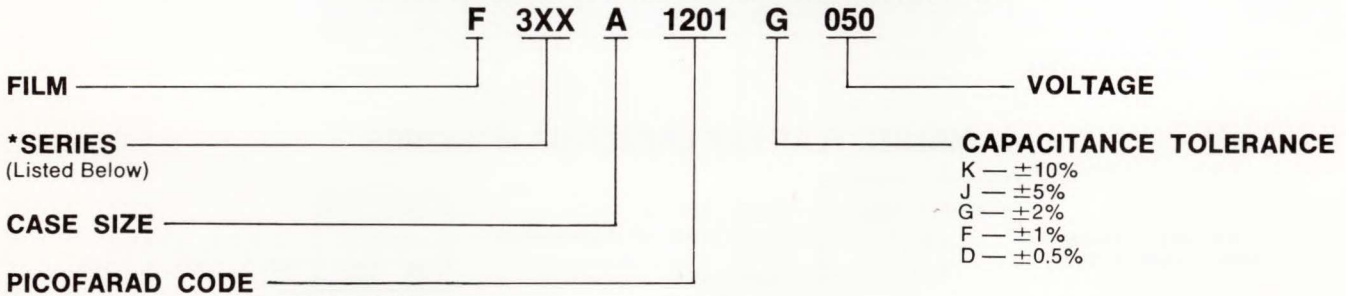


**DIMENSIONS — INCHES & (MILLIMETERS)**

CASE SIZE	H ±.030 (±.76)	L ±.015 (±.38)	T ±.015 (±.38)	S ±.005 (±.13)	D ±.001 (±.03)
A	.280 (7.11)	.500 (12.70)	.125 (3.18)	.400 (10.16)	.020 (.51)
B	.375 (9.53)	.500 (12.70)	.195 (4.95)	.400 (10.16)	.025 (.64)
C*	.375 (9.53)	.600 (15.24)	.195 (4.95)	.500 (12.70)	.025 (.64)
D	.375 (9.53)	.600 (15.24)	.295 (7.49)	.500 (12.70)	.025 (.64)
E	.375 (9.53)	.750 (19.05)	.500 (12.70)	.650 (16.51)	.025 (.64)
H	.550 (13.97)	1.50 (38.10)	.600 (15.24)	1.40 (35.56)	.032 (.81)
J	.375 (9.53)	.600 (15.24)	.225 (5.72)	.500 (12.70)	.025 (.64)

\* 'C' case available on special order only.

**MOLDED FLAT KAP ORDERING INFORMATION**



First three digits represent significant figures. Fourth digit specifies number of zeros to follow.

- 300 Plastic Encapsulation, Flat Kaps
- 310 \*(CFR04R Per MIL-C-55514/3) A Temp. Coef., (-200 ± 30 ppm) Molded, Radial Leads
- 311 \*(CFR04A Per MIL-C-55514/3) A Temp. Coef., (-200 ± 30 ppm) Molded, Axial Leads
- 320 †B Temp. Coef., (0 ± 100 ppm) Molded, Radial Leads
- 321 †B Temp. Coef., (0 ± 100 ppm) Molded, Axial Leads

**\*SERIES**

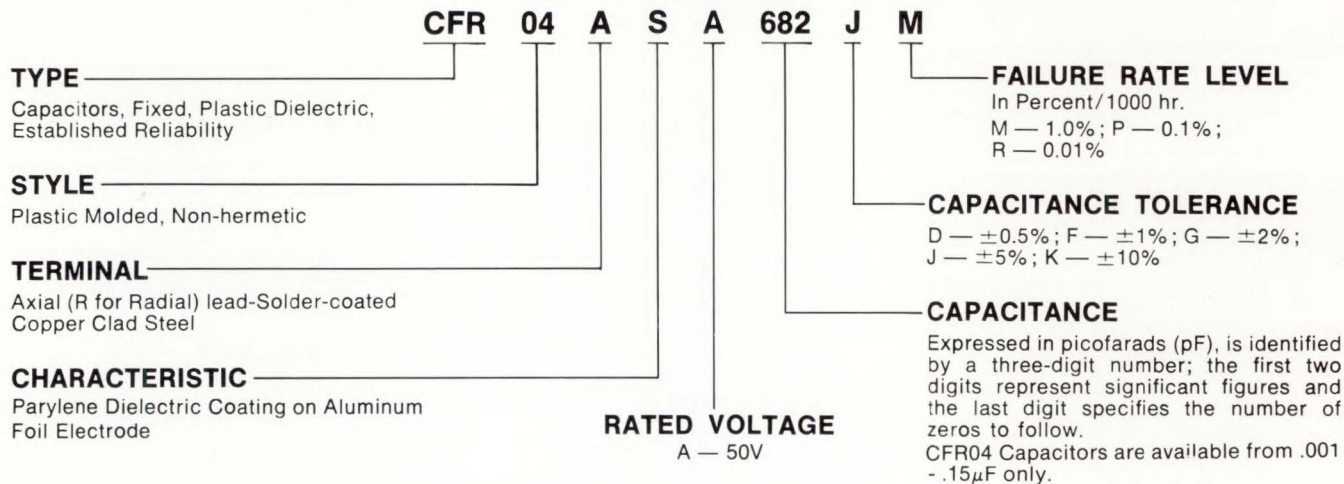
- 330 †C Temp. Coef., (0 ± 50 ppm) Molded, Radial Leads
- 331 †C Temp. Coef., (0 ± 50 ppm) Molded, Axial Leads
- † A Temperature coefficient available through all ratings. B & C temperature coefficient available all ratings to .1µF and to .22µF on special order.
- Flat Kap film capacitors are also available in hermetically sealed cases.

\* Available .001µF through .15µF

For further details consult Flat Kap Film Capacitors Catalog F-2274

**FLAT KAP FILM CAPACITORS**

**MIL-C-55514/3C ORDERING INFORMATION**

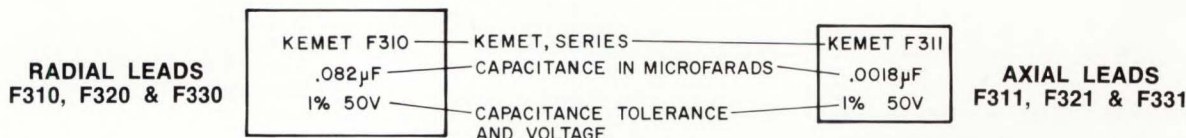


**STANDARD RATINGS & CASE SIZES**

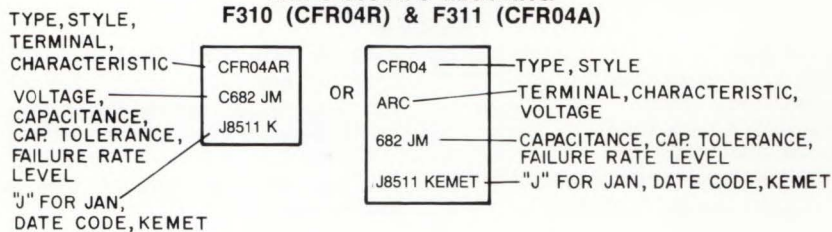
CAPACITANCE µF 25°C 1 kHz	CASE SIZE	CAPACITANCE µF 25°C 1 kHz	CASE SIZE	CAPACITANCE µF 25°C 1 kHz	CASE SIZE	CAPACITANCE µF 25°C 1 kHz	CASE SIZE
0.001	A	.0056	A	.033	B	.22	E
0.0012	A	.0068	A	.039	B	.27	E
0.0015	A	.0082	A	.047	J <sup>(1)</sup>	.33	H
0.0018	A	.01	A	.056	J <sup>(1)</sup>	.47	H
0.0022	A	.012	B	.068	J <sup>(1)</sup>	.56	H
0.0027	A	.015	B	.082	J* <sup>(1)</sup>	.68	H
0.0033	A	.018	B	.1	J* <sup>(1)</sup>	.82	H
0.0039	A	.022	B	.12	D	1.0	H
0.0047	A	.027	B	.15	D		

\* 1 & 2% Capacitance Tolerance available in "D" case size only.  
(1) For axial parts, use letter "D" for case size.

**MOLDED FLAT KAP CAPACITOR MARKINGS**



**MIL-C-55514/3 MARKING  
F310 (CFR04R) & F311 (CFR04A)**



For further details consult Flat Kap Film Capacitors Catalog F-2274

**HERMETICALLY SEALED FLAT KAPS**

**CAPACITANCE CHANGE WITH TEMPERATURE**

Three temperature coefficients of capacitance characteristics are available. The temperature coefficient shall be computed in accordance with MIL-C-19978.

**CHARACTERISTIC A**

The capacitance change between +25°C and -55°C shall not exceed +2% and between +25°C and +125°C shall not exceed -3%. The nominal linearized temperature coefficient of capacitance between -55°C and +125°C is -200 PPM/°C.

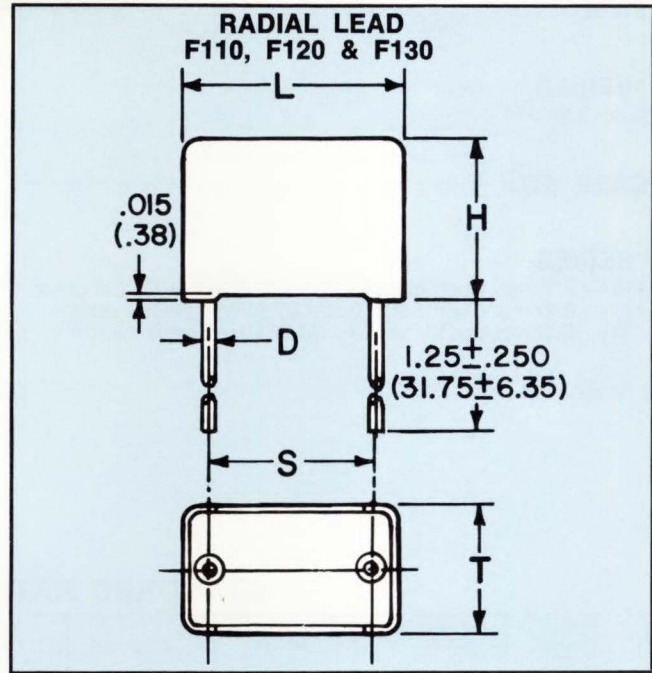
**CHARACTERISTIC B**

Capacitance change shall not exceed ±0.65% between 25°C and either -40°C or +90°C. Measurement error shall not exceed 0.1% of capacitance or 2.5pF, whichever is greater. The nominal linearized temperature coefficient of capacitance between -55°C and +125°C is 0 ±100 PPM/°C.

**CHARACTERISTIC C**

Capacitance change shall not exceed ±0.33% between 25°C and either -40°C or +90°C. Measurement error shall not exceed 0.1% of capacitance reading or 2.5pF, whichever is greater. The nominal linearized temperature coefficient of capacitance between -55°C and +125°C is 0 ±50 PPM/°C.

**CAPACITOR OUTLINE DRAWINGS**

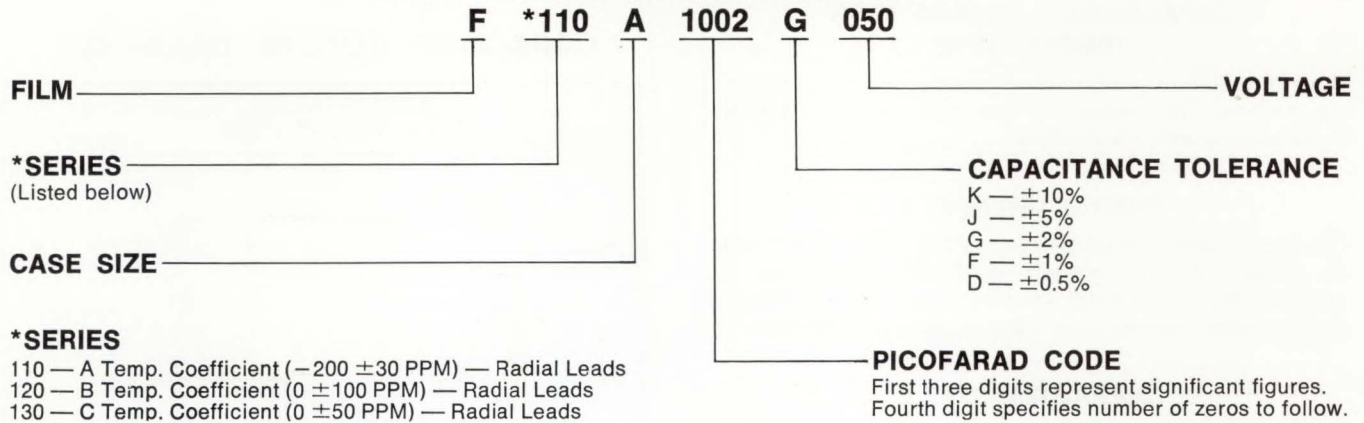


**DIMENSIONS — INCHES & (MILLIMETERS) F110, F120 & F130**

CASE SIZE	L ±.010 (±.25)	H +.005 -.015 (.13) (.38)	T ±.010 (±.25)	S ±.005 (±.13)	D ±.001 (±.03)
A	.550 (13.97)	.375 (9.53)	.170 (4.32)	.400 (10.16)	.020 (.51)
B	.550 (13.97)	.470 (11.94)	.250 (6.35)	.400 (10.16)	.025 (.64)
C	.650 (16.51)	.470 (11.94)	.250 (6.35)	.500 (12.70)	.025 (.64)
D	.650 (16.51)	.470 (11.94)	.350 (8.89)	.500 (12.70)	.025 (.64)

For further details consult Flat Kap Film Capacitors Catalog F-2274

**HERMETICALLY SEALED FLAT KAPS  
FLAT KAP ORDERING INFORMATION**

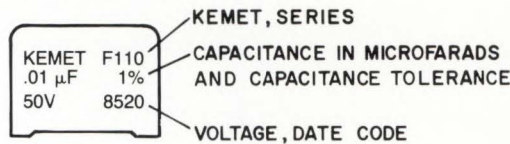


**STANDARD RATINGS & CASE SIZES**

CAPACITANCE μF 25°C 1 kHz	CASE SIZE 1, 5, 10% CAP. TOL.	CAPACITANCE μF 25°C 1 kHz	CASE SIZE 1, 5, 10%	CAPACITANCE μF 25°C 1 kHz	CASE SIZE 1, 5, 10%	CAPACITANCE μF 25°C 1 kHz	CASE SIZE	
							5 & 10%	1%
.001	A	.0039	A	.012	B	.047	C	D
.0012	A	.0047	A	.015	B	.056	C	D
.0015	A	.0056	A	.018	B	.068	C	D
.0018	A	.0068	A	.022	B	.082	C	D
.0022	A	.0082	A	.027	B	.1	C	D
.0027	A	.01	A	.033	B	.15	D	D
.0033	A			.039	B			

**CAPACITOR MARKINGS**

**RADIAL  
F110, F120 & F130**



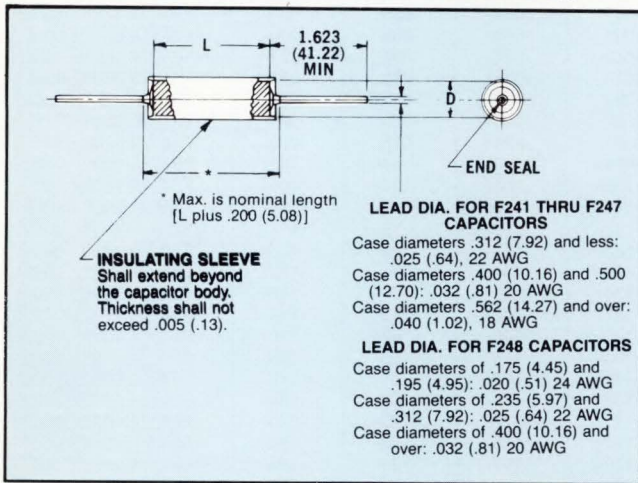
*For further details consult Flat Kap Film Capacitors Catalog F-2274*

**METALLIZED POLYCARBONATE FILM CAPACITORS  
(MIL - C - 83421/01, MIL - C - 39022/09 AND MIL - C - 39022/10)**

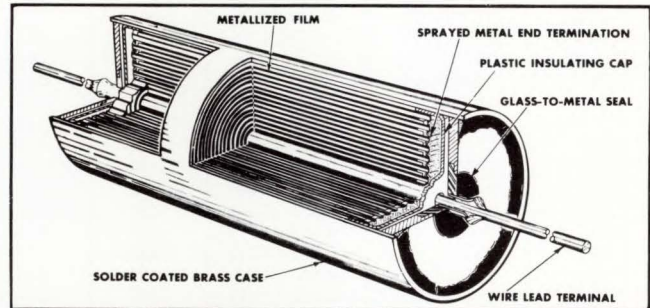
KEMET Metallized Polycarbonate Film Capacitors are designed for circuits requiring stable performance characteristics over a wide temperature range, small size, and operational reliability. They meet the same excellent quality standards associated with all other Union Carbide products. Electrical features include high insulation resistance, low dielectric absorption, low dissipation factor, and full voltage rating to 100°C. In addition, they are AC rated and have the self-healing properties that are inherent in a metallized dielectric. Typical applications include filtering, bypass, timing, SCR commu-

tating, and 400 Hz AC power circuits. Construction consists of high-purity metallized polycarbonate film with sprayed metal end terminations, hermetically sealed in ultra-small solder-coated tubular metal cases. The capacitance range is .001 to 22  $\mu$ F with a DC voltage rating range of 30 to 600 volts. The 400 Hz AC voltage ratings range is 22 to 240 VRMS. The appropriate series are capable of meeting MIL-C-83421 CRH and MIL-C-39022 CHR requirements (see table below). For additional information refer to the KEMET Metallized Polycarbonate Catalog Form F-2867.

**CAPACITOR OUTLINE DRAWING**



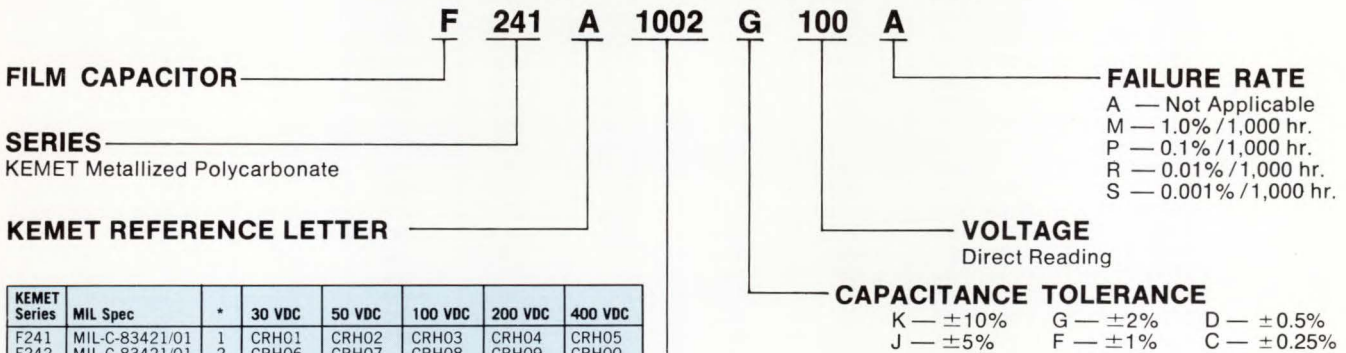
**TYPICAL HERMETICALLY SEALED METALLIZED CAPACITOR**



Marking—Capacitors are printed with KEMET Series designation, capacitance, capacitance tolerance, voltage, and date code.

Millimeters are in parentheses — 1 inch = 25.4mm

**F24 — PART NUMBER IDENTIFICATION**



KEMET Series	MIL Spec	*	30 VDC	50 VDC	100 VDC	200 VDC	400 VDC
F241	MIL-C-83421/01	1	CRH01	CRH02	CRH03	CRH04	CRH05
F242	MIL-C-83421/01	2	CRH06	CRH07	CRH08	CRH09	CRH00
F245	MIL-C-39022/09	1	CHR01A	CHR01D	CHR01G	CHR01K	CHR01N
F246	MIL-C-39022/09	2	CHR01B	CHR01E	CHR01H	CHR01L	CHR01P
F247	MIL-C-39022/09	3	CHR01C	CHR01F	CHR01J	CHR01M	CHR01R

KEMET Series	MIL Spec	50 VDC	100 VDC	200 VDC	300 VDC	400 VDC	600 VDC
F248	MIL-C-39022/10	CHR10	CHR10	CHR10	CHR10	CHR10	CHR10

\* Quality Level

**PICOFARAD CODE**

First three digits represent significant figures. Fourth digit specifies number of zeros to follow.

For further details consult Metallized Polycarbonate Film Capacitors Catalog F-2867







METALLIZED POLYCARBONATE FILM CAPACITORS
F241, F242 (MIL-C-83421/01)

Table with columns: CAPACITANCE μF, CASE SIZE (D, L), MIL DASH NUMBER REFERENCE VALUE IN (%), CAPACITANCE TOLERANCE (C, D, F, G, J, K), KEMET CATALOG NUMBER. Includes sections for 100 VOLTS DC RATING and 200 VOLTS DC RATING.

To complete KEMET Part Number, insert the following:

- (1) Insert 1 or 2 for F241 or F242 Series.
(2) Insert proper symbol for Capacitance Tolerance: K - ±10%, J - ±5%, G - ±2%, F - ±1%, D - ±0.5%, C - ±0.25%.
(3) Insert proper symbol for failure rate: M - 1.0%, P - 0.1%, R - 0.01% or S - 0.001%.

For further details consult Metallized Polycarbonate Film Capacitors Catalog F-2867



**MIL-C-83421/01 MARKING INFORMATION  
(F241 and F242)**

KEMET F24_	Manufacturer's name and part type (F241 or F242)
M83421/01—	MIL specification number and slash sheet number
-----X	Four digit MIL dash number and failure rate designation (M, P, R, S), i.e.: 5006M
---- μF _%	Capacitance value in microfarads and tolerance, i.e.: .001 μF 10%
---- V 31433	DC voltage rating and Federal Supply Code for Manufacturers (FSCM)
J ---- XXX	Military "J" for JAN marking followed by the KEMET date-lot code

**F245, F246, F247 (MIL-C-39022/09)**

CAPACITANCE μF	DIMENSIONS		MIL DASH NUMBER REFERENCE—CAPACITANCE TOLERANCE VALUE IN (%)						'KEMET CATALOG NUMBER
	D—.00 +.020 (.51)	L ±.03 (.76)	C ±0.25	D ±0.5	F ±1.0	G ±2.0	J ±5.0	K ±10.0	
<b>30 VOLTS DC RATING CHR01 A,B,C, PER MIL-C-39022/09</b>									
0.001	0.170 (4.32)	0.500 (12.70)	-001-	-002-	-003-	-004-	-005-	-006-	F24(1)A 1001(2)030(3)
0.0012	0.170 (4.32)	0.500 (12.70)	-007-	-008-	-009-	-010-	-011-	-012-	F24(1)A 1201(2)030(3)
0.0015	0.170 (4.32)	0.500 (12.70)	-013-	-014-	-015-	-016-	-017-	-018-	F24(1)A 1501(2)030(3)
0.0018	0.170 (4.32)	0.500 (12.70)	-019-	-020-	-021-	-022-	-023-	-024-	F24(1)A 1801(2)030(3)
0.002	0.170 (4.32)	0.500 (12.70)	-025-	-026-	-027-	-028-	-029-	-030-	F24(1)A 2001(2)030(3)
0.0022	0.170 (4.32)	0.500 (12.70)	-031-	-032-	-033-	-034-	-035-	-036-	F24(1)A 2201(2)030(3)
0.0027	0.170 (4.32)	0.500 (12.70)	-037-	-038-	-039-	-040-	-041-	-042-	F24(1)A 2701(2)030(3)
0.0033	0.170 (4.32)	0.500 (12.70)	-043-	-044-	-045-	-046-	-047-	-048-	F24(1)A 3301(2)030(3)
0.0047	0.170 (4.32)	0.500 (12.70)	-049-	-050-	-051-	-052-	-053-	-054-	F24(1)A 4701(2)030(3)
0.005	0.170 (4.32)	0.500 (12.70)	-055-	-056-	-057-	-058-	-059-	-060-	F24(1)A 5001(2)030(3)
0.0068	0.170 (4.32)	0.500 (12.70)	-061-	-062-	-063-	-064-	-065-	-066-	F24(1)A 6801(2)030(3)
0.0082	0.170 (4.32)	0.500 (12.70)	-067-	-068-	-069-	-070-	-071-	-072-	F24(1)A 8201(2)030(3)
0.01	0.170 (4.32)	0.500 (12.70)	-073-	-074-	-075-	-076-	-077-	-078-	F24(1)A 1002(2)030(3)
0.012	0.170 (4.32)	0.500 (12.70)	-079-	-080-	-081-	-082-	-083-	-084-	F24(1)A 1202(2)030(3)
0.015	0.170 (4.32)	0.500 (12.70)	-085-	-086-	-087-	-088-	-089-	-090-	F24(1)A 1502(2)030(3)
0.018	0.170 (4.32)	0.500 (12.70)	-091-	-092-	-093-	-094-	-095-	-096-	F24(1)A 1802(2)030(3)
0.02	0.170 (4.32)	0.500 (12.70)	-097-	-098-	-099-	-100-	-101-	-102-	F24(1)A 2002(2)030(3)
0.022	0.170 (4.32)	0.500 (12.70)	-103-	-104-	-105-	-106-	-107-	-108-	F24(1)A 2202(2)030(3)
0.027	0.170 (4.32)	0.562 (14.27)	-109-	-110-	-111-	-112-	-113-	-114-	F24(1)A 2702(2)030(3)
0.033	0.170 (4.32)	0.562 (14.27)	-115-	-116-	-117-	-118-	-119-	-120-	F24(1)A 3302(2)030(3)
0.039	0.170 (4.32)	0.562 (14.27)	-301-	-302-	-303-	-304-	-305-	-306-	F24(1)A 3902(2)030(3)
0.047	0.170 (4.32)	0.562 (14.27)	-121-	-122-	-123-	-124-	-125-	-126-	F24(1)A 4702(2)030(3)
0.05	0.170 (4.32)	0.562 (14.27)	-127-	-128-	-129-	-130-	-131-	-132-	F24(1)A 5002(2)030(3)
0.056	0.170 (4.32)	0.562 (14.27)	-307-	-308-	-309-	-310-	-311-	-312-	F24(1)A 5602(2)030(3)
0.068	0.170 (4.32)	0.687 (17.45)	-133-	-134-	-135-	-136-	-137-	-138-	F24(1)A 6802(2)030(3)
0.082	0.170 (4.32)	0.687 (17.45)	-139-	-140-	-141-	-142-	-143-	-144-	F24(1)A 8202(2)030(3)
0.1	0.193 (4.90)	0.687 (17.45)	-145-	-146-	-147-	-148-	-149-	-150-	F24(1)A 1003(2)030(3)
0.12	0.193 (4.90)	0.687 (17.45)	-151-	-152-	-153-	-154-	-155-	-156-	F24(1)A 1203(2)030(3)
0.15	0.235 (5.97)	0.562 (14.27)	-157-	-158-	-159-	-160-	-161-	-162-	F24(1)A 1503(2)030(3)
0.20	0.235 (5.97)	0.687 (17.45)	-163-	-164-	-165-	-166-	-167-	-168-	F24(1)A 2003(2)030(3)
0.22	0.235 (5.97)	0.687 (17.45)	-169-	-170-	-171-	-172-	-173-	-174-	F24(1)A 2203(2)030(3)
0.27	0.235 (5.97)	0.687 (17.45)	-175-	-176-	-177-	-178-	-179-	-180-	F24(1)A 2703(2)030(3)
0.33	0.235 (5.97)	0.687 (17.45)	-181-	-182-	-183-	-184-	-185-	-186-	F24(1)B 3303(2)030(3)
0.39	0.235 (5.97)	0.687 (17.45)	-313-	-314-	-315-	-316-	-317-	-318-	F24(1)B 3903(2)030(3)
0.47	0.312 (7.92)	0.687 (17.45)	-187-	-188-	-189-	-190-	-191-	-192-	F24(1)B 4703(2)030(3)

To complete KEMET Part Number, insert the following:

- (1) Insert 5, 6 or 7 for F245, F246 or F247 Series.
- (2) Insert proper symbol for Capacitance Tolerance: K — ±10%, J — ±5%, G — ±2%, F — ±1%, D — ±0.5%, C — ±0.25%.
- (3) Insert proper symbol for failure rate: M — 1.0%, P — 0.1%, R — 0.01% or S — 0.001%.

*For further details consult Metallized Polycarbonate Film Capacitors Catalog F-2867*





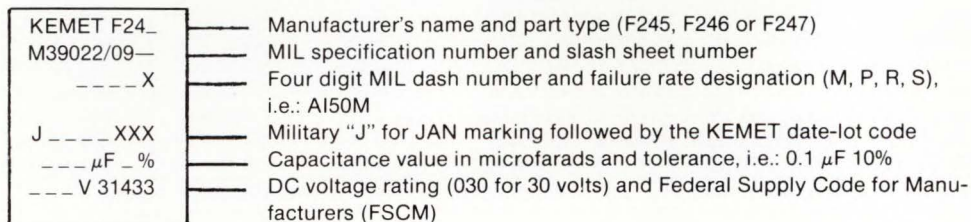
**METALLIZED POLYCARBONATE FILM CAPACITORS  
F245, F246, F247 (MIL-C-39022/09)**

CAPACITANCE μF	DIMENSIONS		MIL DASH NUMBER REFERENCE — CAPACITANCE TOLERANCE VALUE IN (%)						KEMET CATALOG NUMBER
	D +.020 (.51) -.00	L ±.03 (.76)	C ±0.25	D ±0.5	F ±1.0	G ±2.0	J ±5.0	K ±10.0	
<b>200 VOLTS DC RATING CHR01 K,L,M PER MIL-C-39022/09 (Cont'd)</b>									
0.018	0.235(5.97)	0.687(17.45)	-103-	-104-	-105-	-106-	-107-	-108-	F24(1)A 1802(2)200(3)
0.02	0.235(5.97)	0.687(17.45)	-109-	-110-	-111-	-112-	-113-	-114-	F24(1)A 2002(2)200(3)
0.022	0.235(5.97)	0.687(17.45)	-115-	-116-	-117-	-118-	-119-	-120-	F24(1)A 2202(2)200(3)
0.027	0.312(7.92)	0.687(17.45)	-121-	-122-	-123-	-124-	-125-	-126-	F24(1)A 2702(2)200(3)
0.033	0.312(7.92)	0.687(17.45)	-127-	-128-	-129-	-130-	-131-	-132-	F24(1)A 3302(2)200(3)
0.039	0.312(7.92)	0.687(17.45)	-133-	-134-	-135-	-136-	-137-	-138-	F24(1)A 3902(2)200(3)
0.047	0.312(7.92)	0.687(17.45)	-139-	-140-	-141-	-142-	-143-	-144-	F24(1)A 4702(2)200(3)
0.050	0.312(7.92)	0.813(20.65)	-145-	-146-	-147-	-148-	-149-	-150-	F24(1)A 5002(2)200(3)
0.056	0.312(7.92)	0.813(20.65)	-151-	-152-	-153-	-154-	-155-	-156-	F24(1)A 5602(2)200(3)
0.068	0.312(7.92)	0.813(20.65)	-157-	-158-	-159-	-160-	-161-	-162-	F24(1)A 6802(2)200(3)
0.082	0.312(7.92)	0.813(20.65)	-163-	-164-	-165-	-166-	-167-	-168-	F24(1)A 8202(2)200(3)
0.10	0.312(7.92)	0.813(20.65)	-169-	-170-	-171-	-172-	-173-	-174-	F24(1)A 1003(2)200(3)
0.12	0.312(7.92)	0.813(20.65)	-175-	-176-	-177-	-178-	-179-	-180-	F24(1)B 1203(2)200(3)
0.15	0.400(10.16)	1.063(27.00)	-181-	-182-	-183-	-184-	-185-	-186-	F24(1)B 1503(2)200(3)
0.18	0.400(10.16)	1.375(34.93)	-187-	-188-	-189-	-190-	-191-	-192-	F24(1)B 1803(2)200(3)
0.22	0.400(10.16)	1.375(34.93)	-193-	-194-	-195-	-196-	-197-	-198-	F24(1)B 2203(2)200(3)
0.27	0.500(12.70)	1.375(34.93)	-199-	-200-	-201-	-202-	-203-	-204-	F24(1)B 2703(2)200(3)
0.33	0.500(12.70)	1.375(34.93)	-205-	-206-	-207-	-208-	-209-	-210-	F24(1)B 3303(2)200(3)
0.39	0.500(12.70)	1.375(34.93)	-211-	-212-	-213-	-214-	-215-	-216-	F24(1)C 3903(2)200(3)
0.47	0.500(12.70)	1.375(34.93)	-217-	-218-	-219-	-220-	-221-	-222-	F24(1)C 4703(2)200(3)
0.50	0.500(12.70)	1.375(34.93)	-223-	-224-	-225-	-226-	-227-	-228-	F24(1)C 5003(2)200(3)
0.56	0.500(12.70)	1.375(34.93)	-229-	-230-	-231-	-232-	-233-	-234-	F24(1)C 5603(2)200(3)
0.68	0.562(14.27)	1.375(34.93)	-235-	-236-	-237-	-238-	-239-	-240-	F24(1)D 8203(2)200(3)
0.82	0.562(14.27)	1.875(47.63)	-241-	-242-	-243-	-244-	-245-	-246-	F24(1)D 8203(2)200(3)
1.0	0.562(14.27)	1.875(47.63)	-247-	-248-	-249-	-250-	-251-	-252-	F24(1)E 1004(2)200(3)
1.25	0.562(14.27)	1.875(47.63)	-253-	-254-	-255-	-256-	-257-	-258-	F24(1)E 1254(2)200(3)
1.5	0.670(17.02)	1.875(47.63)	-259-	-260-	-261-	-262-	-263-	-264-	F24(1)F 1504(2)200(3)
2.0	0.750(19.05)	1.875(47.63)	-265-	-266-	-267-	-268-	-269-	-270-	F24(1)G 2004(2)200(3)
2.5	0.750(19.05)	1.875(47.63)	-271-	-272-	-273-	-274-	-275-	-276-	F24(1)J 2504(2)200(3)
3.0	1.000(25.40)	1.875(47.63)	-277-	-278-	-279-	-280-	-281-	-282-	F24(1)J 3004(2)200(3)
4.0	1.000(25.40)	2.375(60.33)	-283-	-284-	-285-	-286-	-287-	-288-	F24(1)M 4004(2)200(3)
<b>400 VOLTS DC RATING CHR01 N,P,R PER MIL-C-39022/09</b>									
0.001	0.193(4.90)	0.562(14.27)	-001-	-002-	-003-	-004-	-005-	-006-	F24(1)A 1001(2)400(3)
0.002	0.193(4.90)	0.562(14.27)	-007-	-008-	-009-	-010-	-011-	-012-	F24(1)A 2001(2)400(3)
0.005	0.235(5.97)	0.687(17.45)	-013-	-014-	-015-	-016-	-017-	-018-	F24(1)A 5001(2)400(3)
0.01	0.235(5.97)	0.687(17.45)	-019-	-020-	-021-	-022-	-023-	-024-	F24(1)A 1002(2)400(3)
0.015	0.235(5.97)	0.813(20.65)	-025-	-026-	-027-	-028-	-029-	-030-	F24(1)A 1502(2)400(3)
0.022	0.312(7.92)	0.813(20.65)	-031-	-032-	-033-	-034-	-035-	-036-	F24(1)A 2202(2)400(3)
0.027	0.312(7.92)	0.813(20.65)	-037-	-038-	-039-	-040-	-041-	-042-	F24(1)A 2702(2)400(3)
0.033	0.312(7.92)	0.813(20.65)	-043-	-044-	-045-	-046-	-047-	-048-	F24(1)A 3302(2)400(3)
0.039	0.312(7.92)	0.813(20.65)	-049-	-050-	-051-	-052-	-053-	-054-	F24(1)A 3902(2)400(3)
0.047	0.400(10.16)	0.813(20.65)	-055-	-056-	-057-	-058-	-059-	-060-	F24(1)B 4702(2)400(3)
0.05	0.400(10.16)	0.813(20.65)	-061-	-062-	-063-	-064-	-065-	-066-	F24(1)B 5002(2)400(3)
0.068	0.400(10.16)	0.813(20.65)	-067-	-068-	-069-	-070-	-071-	-072-	F24(1)B 6802(2)400(3)
0.082	0.400(10.16)	1.063(27.00)	-073-	-074-	-075-	-076-	-077-	-078-	F24(1)B 8202(2)400(3)
0.10	0.400(10.16)	1.063(27.00)	-079-	-080-	-081-	-082-	-083-	-084-	F24(1)B 1003(2)400(3)
0.15	0.400(10.16)	1.375(34.93)	-085-	-086-	-087-	-088-	-089-	-090-	F24(1)B 1503(2)400(3)
0.22	0.500(12.70)	1.375(34.93)	-091-	-092-	-093-	-094-	-095-	-096-	F24(1)C 2203(2)400(3)
0.33	0.562(14.27)	1.375(34.93)	-097-	-098-	-099-	-100-	-101-	-102-	F24(1)D 3303(2)400(3)
0.47	0.562(14.27)	1.875(47.83)	-103-	-104-	-105-	-106-	-107-	-108-	F24(1)D 4703(2)400(3)
0.50	0.562(14.27)	1.875(47.83)	-109-	-110-	-111-	-112-	-113-	-114-	F24(1)E 5003(2)400(3)
1.0	0.750(19.05)	1.875(47.83)	-115-	-116-	-117-	-118-	-119-	-120-	F24(1)G 1004(2)400(3)
1.5	1.000(25.40)	2.375(60.33)	-121-	-122-	-123-	-124-	-125-	-126-	F24(1)L 1504(2)400(3)
2.0	1.000(25.40)	2.375(60.33)	-127-	-128-	-129-	-130-	-131-	-132-	F24(1)M 2004(2)400(3)

To complete KEMET Part Number, insert the following:

- (1) Insert 5, 6 or 7 for F245, F246 or F247 Series.
- (2) Insert proper symbol for Capacitance Tolerance: K — ±10%, J — ±5%, G — ±2%, F — ±1%, D — ±0.5%, C — ±0.25%.
- (3) Insert proper symbol for failure rate: M — 1.0%, P — 0.1%, R — 0.01% or S — 0.001%.

**MIL-C-39022/09 MARKING INFORMATION  
(F245, F246 and F247)**



For further details consult Metallized Polycarbonate Film Capacitors Catalog F-2867





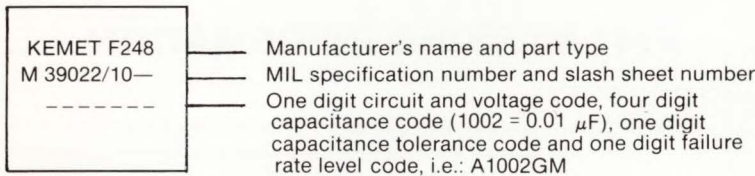
**METALLIZED POLYCARBONATE FILM CAPACITORS  
F248 (MIL-C-39022/10)**

CAPACITANCE μF	CASE SIZE		KEMET PART NUMBER
	D — +.015 -.005	L — ±.031	
<b>300 VOLTS DC RATING CHR10 PER MIL-C-39022/10 (Cont'd)</b>			
0.10	.400 (10.16)	.938 (23.83)	F248A 1003(1)300(2)
0.12	.400 (10.16)	.938 (23.83)	F248A 1203(1)300(2)
0.15	.400 (10.16)	1.125 (28.58)	F248A 1503(1)300(2)
0.18	.400 (10.16)	1.312 (33.32)	F248A 1803(1)300(2)
0.22	.400 (10.16)	1.312 (33.32)	F248A 2203(1)300(2)
0.27	.562 (14.27)	1.125 (28.58)	F248A 2703(1)300(2)
0.33	.562 (14.27)	1.125 (28.58)	F248B 3303(1)300(2)
0.39	.562 (14.27)	1.125 (28.58)	F248B 3903(1)300(2)
0.47	.562 (14.27)	1.562 (39.67)	F248B 4703(1)300(2)
0.56	.562 (14.27)	1.562 (39.67)	F248C 5603(1)300(2)
0.68	.670 (17.02)	1.312 (33.32)	F248C 6803(1)300(2)
0.82	.670 (17.02)	1.562 (39.67)	F248C 8203(1)300(2)
1.0	.670 (17.02)	1.812 (46.02)	F248C 1004(1)300(2)
1.2	.670 (17.02)	1.812 (46.02)	F248D 1204(1)300(2)
1.5	.750 (19.05)	2.062 (52.37)	F248D 1504(1)300(2)
1.8	.750 (19.05)	2.062 (52.37)	F248E 1804(1)300(2)
2.0	.750 (19.05)	2.312 (58.72)	F248E 2004(1)300(2)
2.2	1.000 (25.40)	1.812 (46.02)	F248F 2204(1)300(2)
2.5	1.000 (25.40)	1.812 (46.02)	F248F 2504(1)300(2)
2.7	1.000 (25.40)	1.812 (46.02)	F248F 2704(1)300(2)
3.0	1.000 (25.40)	2.062 (52.37)	F248G 3004(1)300(2)
3.3	1.000 (25.40)	2.312 (58.72)	F248H 3304(1)300(2)
3.9	1.000 (25.40)	2.562 (65.07)	F248H 3904(1)300(2)
<b>400 VOLTS DC RATING CHR10 PER MIL-C-39022/10</b>			
0.01	.235 (5.97)	.688 (17.48)	F248A 1002(1)400(2)
0.012	.235 (5.97)	.812 (20.62)	F248A 1202(1)400(2)
0.015	.235 (5.97)	.812 (20.62)	F248A 1502(1)400(2)
0.018	.235 (5.97)	.812 (20.62)	F248A 1802(1)400(2)
0.022	.312 (7.92)	.688 (17.48)	F248A 2202(1)400(2)
0.027	.312 (7.92)	.812 (20.62)	F248A 2702(1)400(2)
0.033	.312 (7.92)	.812 (20.62)	F248A 3302(1)400(2)
0.039	.312 (7.92)	.938 (23.83)	F248A 3902(1)400(2)
0.047	.400 (10.16)	.812 (20.62)	F248A 4702(1)400(2)
0.056	.400 (10.16)	.812 (20.62)	F248A 5602(1)400(2)
0.068	.400 (10.16)	.938 (23.83)	F248A 6802(1)400(2)
0.082	.400 (10.16)	.938 (23.83)	F248A 8202(1)400(2)
0.10	.400 (10.16)	1.125 (28.58)	F248A 1003(1)400(2)
0.12	.400 (10.16)	1.312 (33.32)	F248B 1203(1)400(2)
0.15	.400 (10.16)	1.312 (33.32)	F248B 1503(1)400(2)
0.18	.562 (14.27)	1.125 (28.58)	F248B 1803(1)400(2)
0.22	.562 (14.27)	1.125 (28.58)	F248B 2203(1)400(2)

CAPACITANCE μF	CASE SIZE		KEMET PART NUMBER
	D — +.015 -.005	L — ±.031	
<b>400 VOLTS DC RATING CHR10 PER MIL-C-39022/10</b>			
0.27	.562 (14.27)	1.312 (33.32)	F248B 2703(1)400(2)
0.33	.562 (14.27)	1.562 (39.67)	F248B 3303(1)400(2)
0.39	.562 (14.27)	1.562 (39.67)	F248C 3903(1)400(2)
0.47	.562 (14.27)	1.812 (46.02)	F248C 4703(1)400(2)
0.56	.670 (17.02)	1.562 (39.67)	F248C 5603(1)400(2)
0.68	.670 (17.02)	1.812 (46.02)	F248D 6803(1)400(2)
0.82	.750 (19.05)	1.812 (46.02)	F248D 8203(1)400(2)
1.0	.750 (19.05)	2.062 (52.37)	F248D 1004(1)400(2)
1.2	1.000 (25.40)	1.812 (46.02)	F248E 1204(1)400(2)
1.5	1.000 (25.40)	1.812 (46.02)	F248F 1504(1)400(2)
1.8	1.000 (25.40)	2.062 (52.37)	F248G 1804(1)400(2)
2.0	1.000 (25.40)	2.062 (52.37)	F248G 2004(1)400(2)
2.2	1.000 (25.40)	2.312 (58.72)	F248G 2204(1)400(2)
2.5	1.000 (25.40)	2.562 (65.07)	F248G 2504(1)400(2)
2.7	1.000 (25.40)	2.562 (65.07)	F248G 2704(1)400(2)
<b>600 VOLTS DC RATING CHR10 PER MIL-C-39022/10</b>			
0.01	.312 (7.92)	.812 (20.62)	F248A 1002(1)600(2)
0.012	.312 (7.92)	.812 (20.62)	F248A 1202(1)600(2)
0.015	.400 (10.16)	.812 (20.62)	F248A 1502(1)600(2)
0.018	.400 (10.16)	.812 (20.62)	F248A 1802(1)600(2)
0.022	.400 (10.16)	.812 (20.62)	F248A 2202(1)600(2)
0.027	.400 (10.16)	.937 (23.80)	F248A 2702(1)600(2)
0.033	.400 (10.16)	.937 (23.80)	F248A 3302(1)600(2)
0.039	.400 (10.16)	1.125 (28.58)	F248A 3902(1)600(2)
0.047	.400 (10.16)	1.125 (28.58)	F248A 4702(1)600(2)
0.056	.400 (10.16)	1.312 (33.32)	F248B 5602(1)600(2)
0.068	.400 (10.16)	1.312 (33.32)	F248B 6802(1)600(2)
0.082	.562 (14.27)	1.125 (28.58)	F248B 8202(1)600(2)
0.10	.562 (14.27)	1.125 (28.58)	F248B 1003(1)600(2)
0.12	.562 (14.27)	1.312 (33.32)	F248B 1203(1)600(2)
0.15	.562 (14.27)	1.312 (33.32)	F248B 1503(1)600(2)
0.18	.562 (14.27)	1.562 (39.67)	F248B 1803(1)600(2)
0.22	.562 (14.27)	1.812 (46.02)	F248C 2203(1)600(2)
0.27	.670 (17.02)	1.562 (39.67)	F248C 2703(1)600(2)
0.33	.670 (17.02)	1.812 (46.02)	F248D 3303(1)600(2)
0.39	.670 (17.02)	1.812 (46.02)	F248D 3903(1)600(2)
0.47	.750 (19.05)	1.812 (46.02)	F248D 4703(1)600(2)
0.56	.750 (19.05)	2.062 (52.37)	F248D 5603(1)600(2)
0.68	.750 (19.05)	2.312 (58.72)	F248E 6803(1)600(2)
0.82	1.000 (25.40)	1.812 (46.02)	F248E 8203(1)600(2)
1.0	1.000 (25.40)	2.062 (52.37)	F248G 1004(1)600(2)

(1) To complete KEMET Part Number, insert K — ±10%; J — ±5%; G — ±2%; or F — ±1% for Capacitance Tolerance.  
 (2) To complete KEMET Part Number, insert M — 1.0%; P — 0.1%; R — 0.01%; or S — 0.001% for Failure Rate Level.

**MIL-C-39022/10 MARKING INFORMATION  
(F248)**



**CIRCUIT AND VOLTAGE CODES**

CODE	CIRCUIT	VOLTAGE
A	1	50
C	1	100
E	1	200
G	1	400
J	1	600
L	1	300

**CIRCUIT**



**METALLIZED POLYCARBONATE FILM CAPACITORS**  
**F141 INSTRUMENT CAPACITORS**

**1. CAPACITANCE AND TOLERANCE:** Capacitance shall be within the specified tolerance limits of the nominal rating. Capacitance shall be measured at or referred to measurements made at 1000 Hz.

**2. DC VOLTAGE RATING:** 50V, 75V, 100V, 150V, 200V, 300V, and 400V. (63V rating available on special order.)

**3. OPERATING AND STORAGE TEMPERATURE:** -55°C to +125°C.

**4. CAPACITANCE CHANGE vs. TEMPERATURE:** The capacitance change vs. temperature shall not exceed ±2% of the +25°C value over the temperature range of -55°C to +125°C.

**5. DISSIPATION FACTOR:** At 25°C, the dissipation factor of all capacitors shall not exceed 0.30%. Capacitors of 1 μF or less in capacitance shall be measured at or referred to measurements made at 1000 Hz. Capacitors greater than 1 μF shall be measured at or referred to measurements made at 100 Hz.

**6. INSULATION RESISTANCE:** At 25°C, the minimum product of insulation resistance and capacitance shall be 100,000 megohm-microfarads. Capacitance values of 0.5 μF or less need not exceed 200,000 megohms. The insulation resistance between the case and either terminal, where the case is not a terminal, shall be greater than 10,000 megohms.

At 85°C, the minimum product of insulation resistance and capacitance shall be 6000 megohms-microfarads. Capacitance values of .05 μF or less need not exceed 12,000 megohms.

At 125°C, the minimum product of insulation resistance and capacitance shall be 1000 megohm-microfarads. Capacitance values of 0.5 μF or less need not exceed 2000 megohms.

Measurements shall be made after a five (5) minute charge at rated DC voltage.

**7. DIELECTRIC WITHSTANDING VOLTAGE:** At 25°C capacitors shall withstand 200% of rated DC voltage for one (1) minute without permanent breakdown. When the case is not a terminal, the capacitors shall withstand 200% of rated DC voltage applied between the case and the terminals. Test voltage must be applied and discharged through a resistance of 1 ohm per volt, minimum.

**8. LIFE TEST:** When tested at 100°C, the capacitors shall withstand 140% of rated DC voltage for a period of 250 hours. Only one failure in 18 tested shall be permitted. Subsequent to testing, the capacitors shall meet the following requirements:

**Insulation Resistance:** At 25°C, no less than 60% of the initial value specified in INSULATION RESISTANCE.

**Capacitance Change:** Not more than 5% of the initial value obtained when measured as specified in CAPACITANCE AND TOLERANCE.

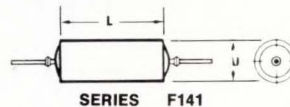
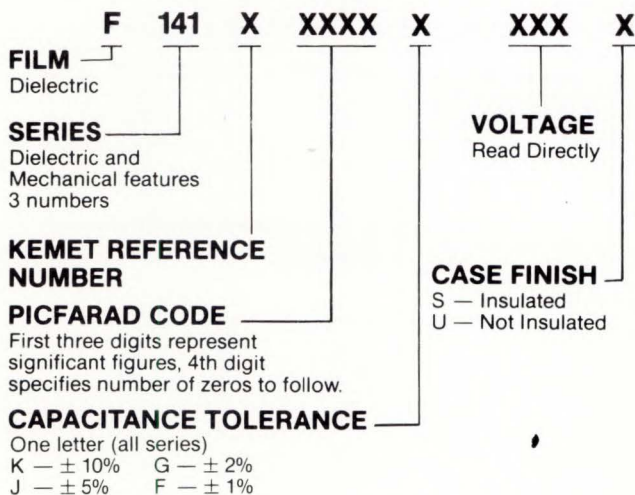
**Dissipation Factor:** Not greater than 0.60% when measured as specified in DISSIPATION FACTOR.

**9. AC VOLTAGE RATING:** (-55°C to +105°C Ambient)

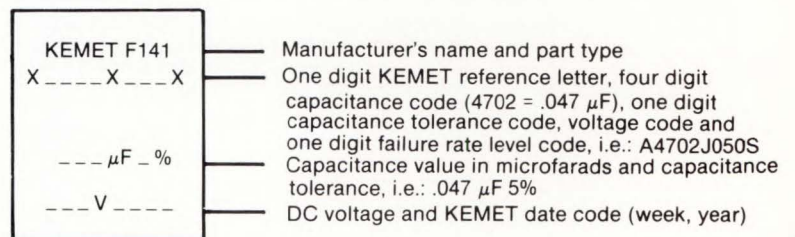
DC VOLTAGE RATING	Equivalent VAC RMS Ratings at				
	400 Hz	800 Hz	1200 Hz	1600 Hz	2000 Hz
50 (0.047 μF thru 5.6 μF) (5.8 μF thru 12.0 μF) (15.0 μF thru 22.0 μF)	30	25	20	15	12
75 (0.01 μF thru 5.6 μF) (6.8 μF thru 12.0 μF) (15.0 μF thru 47.0 μF)	50	35	30	25	20
100 (0.01 μF thru 5.6 μF) (6.0 μF thru 12.0 μF) (15.0 μF thru 30.0 μF)	65	45	40	35	30
150 (0.01 μF thru 3.3 μF) (3.9 μF thru 5.6 μF) (6.8 μF thru 15.0 μF)	90	65	55	45	40
200 (0.10 μF thru 2.0 μF) (2.2 μF thru 5.6 μF) (6.0 μF thru 12.0 μF) (15.0 μF thru 39.0 μF)	120	95	80	70	60
300 (0.10 μF thru 1.5 μF) (1.8 μF thru 3.9 μF)	200	140	115	100	90
400 (0.10 μF thru 1.0 μF) (1.2 μF thru 2.7 μF)	240	170	140	120	110

**METALLIZED POLYCARBONATE F141 SERIES**

**ORDERING INFORMATION**



**F141 MARKING INFORMATION**



For further details consult Metallized Polycarbonate Film Capacitors Catalog F-2867

**F141 SERIES CAPACITORS**

CAPACITANCE μF	CASE SIZE		KEMET CATALOG NUMBER
	DIA. +.020 -.00	L. ±.03	
<b>50 VOLT DC RATING</b>			
0.047	.170	.531	F141A 4702(1)050(2)
0.056	.170	.531	F141A 5602(1)050(2)
0.068	.170	.625	F141A 6802(1)050(2)
0.082	.170	.625	F141A 8202(1)050(2)
0.10	.170	.625	F141A 1003(1)050(2)
0.12	.170	.625	F141A 1203(1)050(2)
0.15	.193	.625	F141A 1503(1)050(2)
0.18	.193	.625	F141A 1803(1)050(2)
0.22	.235	.625	F141A 2203(1)050(2)
0.27	.235	.625	F141A 2703(1)050(2)
0.33	.312	.625	F141B 3303(1)050(2)
0.39	.312	.625	F141B 3903(1)050(2)
0.47	.312	.625	F141B 4703(1)050(2)
0.56	.312	.625	F141C 5603(1)050(2)
0.68	.312	.843	F141C 6803(1)050(2)
0.82	.312	.843	F141C 8203(1)050(2)
1.0	.312	.843	F141C 1004(1)050(2)
1.2	.400	.843	F141D 1204(1)050(2)
1.5	.400	.843	F141D 1504(1)050(2)
1.8	.400	.843	F141E 1804(1)050(2)
2.0	.400	.843	F141E 2004(1)050(2)
2.2	.400	1.125	F141F 2204(1)050(2)
2.7	.400	1.125	F141F 2704(1)050(2)
3.0	.400	1.125	F141F 3004(1)050(2)
3.3	.400	1.125	F141G 3304(1)050(2)
3.9	.500	1.125	F141G 3904(1)050(2)
4.7	.500	1.125	F141H 4704(1)050(2)
5.0	.500	1.125	F141H 5004(1)050(2)
5.6	.500	1.125	F141K 5604(1)050(2)
6.8	.562	1.125	F141K 6804(1)050(2)
8.2	.562	1.312	F141M 8204(1)050(2)
10.0	.670	1.312	F141M 1005(1)050(2)
12.0	.670	1.312	F141N 1205(1)050(2)
15.0	.750	1.375	F141Q 1505(1)050(2)
18.0	.750	1.375	F141T 1805(1)050(2)
20.0	.750	1.625	F141W 2005(1)050(2)
22.0	.750	1.625	F141W 2205(1)050(2)
<b>75 VOLT DC RATING</b>			
0.01	.170	.531	F141A 1002(1)075(2)
0.012	.170	.531	F141A 1202(1)075(2)
0.015	.170	.531	F141A 1502(1)075(2)
0.018	.170	.531	F141A 1802(1)075(2)
0.022	.170	.531	F141A 2202(1)075(2)
0.027	.170	.531	F141A 2702(1)075(2)
0.033	.170	.531	F141A 3302(1)075(2)
0.039	.170	.625	F141A 3902(1)075(2)
0.047	.170	.625	F141A 4702(1)075(2)
0.056	.170	.625	F141A 5602(1)075(2)
0.068	.170	.625	F141A 6802(1)075(2)
0.082	.193	.625	F141A 8202(1)075(2)
0.10	.193	.625	F141A 1003(1)075(2)
0.12	.235	.625	F141A 1203(1)075(2)
0.15	.235	.625	F141A 1503(1)075(2)
0.18	.312	.625	F141A 1803(1)075(2)
0.22	.312	.625	F141A 2203(1)075(2)
0.27	.312	.625	F141A 2703(1)075(2)
0.33	.312	.625	F141B 3303(1)075(2)
0.39	.312	.843	F141B 3903(1)075(2)
0.47	.312	.843	F141B 4703(1)075(2)
0.56	.312	.843	F141C 5603(1)075(2)
0.68	.312	.843	F141C 6803(1)075(2)
0.82	.400	.843	F141C 8203(1)075(2)
1.0	.400	.843	F141C 1004(1)075(2)
1.2	.400	1.125	F141D 1204(1)075(2)
1.5	.400	1.125	F141D 1504(1)075(2)
1.8	.400	1.125	F141E 1804(1)075(2)
2.0	.500	1.125	F141E 2004(1)075(2)
2.2	.500	1.125	F141F 2204(1)075(2)
2.7	.500	1.125	F141F 2704(1)075(2)
3.0	.500	1.125	F141F 3004(1)075(2)
3.3	.562	1.125	F141G 3304(1)075(2)

CAPACITANCE μF	CASE SIZE		KEMET CATALOG NUMBER
	DIA. +.020 -.00	L. ±.03	
<b>75 VOLT DC RATING</b>			
3.9	.562	1.125	F141G 3904(1)075(2)
4.7	.562	1.312	F141H 4704(1)075(2)
5.0	.562	1.312	F141H 5004(1)075(2)
5.6	.670	1.312	F141K 5604(1)075(2)
6.8	.670	1.312	F141K 6804(1)075(2)
8.2	.670	1.625	F141M 8204(1)075(2)
10.0	.670	1.625	F141M 1005(1)075(2)
12.0	.670	1.875	F141N 1205(1)075(2)
15.0	.750	1.875	F141Q 1505(1)075(2)
18.0	.750	2.125	F141T 1805(1)075(2)
22.0	.750	2.125	F141W 2205(1)075(2)
27.0	1.0	1.875	F141X 2705(1)075(2)
30.0	1.0	2.125	F141X 3005(1)075(2)
33.0	1.0	2.125	F141X 3305(1)075(2)
47.0	1.0	2.875	F141X 4705(1)075(2)
<b>100 VOLT DC RATING</b>			
0.01	.170	.625	F141A 1002(1)100(2)
0.012	.170	.625	F141A 1202(1)100(2)
0.015	.170	.625	F141A 1502(1)100(2)
0.018	.170	.625	F141A 1802(1)100(2)
0.022	.170	.625	F141A 2202(1)100(2)
0.027	.170	.625	F141A 2702(1)100(2)
0.033	.170	.625	F141A 3302(1)100(2)
0.039	.170	.625	F141A 3902(1)100(2)
0.047	.193	.625	F141A 4702(1)100(2)
0.056	.193	.625	F141A 5602(1)100(2)
0.068	.235	.625	F141A 6802(1)100(2)
0.082	.235	.625	F141A 8202(1)100(2)
0.10	.235	.688	F141A 1003(1)100(2)
0.12	.235	.688	F141A 1203(1)100(2)
0.15	.312	.625	F141A 1503(1)100(2)
0.18	.312	.625	F141A 1803(1)100(2)
0.22	.312	.688	F141A 2203(1)100(2)
0.27	.312	.688	F141A 2703(1)100(2)
0.33	.312	.812	F141B 3303(1)100(2)
0.39	.312	.812	F141B 3903(1)100(2)
0.47	.400	.688	F141B 4703(1)100(2)
0.56	.400	.812	F141C 5603(1)100(2)
0.68	.400	.812	F141C 6803(1)100(2)
0.82	.400	.938	F141C 8203(1)100(2)
1.0	.400	.938	F141C 1004(1)100(2)
1.2	.500	.938	F141D 1204(1)100(2)
1.5	.500	.938	F141D 1504(1)100(2)
1.8	.500	1.125	F141E 1804(1)100(2)
2.0	.500	1.125	F141E 2004(1)100(2)
2.2	.500	1.125	F141F 2204(1)100(2)
2.7	.562	1.312	F141F 2704(1)100(2)
3.0	.562	1.312	F141F 3004(1)100(2)
3.3	.562	1.312	F141G 3304(1)100(2)
4.0	.562	1.562	F141H 4004(1)100(2)
4.7	.670	1.312	F141H 4704(1)100(2)
5.0	.670	1.312	F141H 5004(1)100(2)
5.6	.670	1.312	F141K 5604(1)100(2)
6.8	.670	1.562	F141K 6804(1)100(2)
8.2	.670	1.812	F141M 8204(1)100(2)
10.0	.750	1.812	F141M 1005(1)100(2)
12.0	.750	1.812	F141N 1205(1)100(2)
15.0	1.0	1.875	F141Q 1505(1)100(2)
18.0	1.0	1.875	F141S 1805(1)100(2)
20.0	1.0	1.875	F141W 2005(1)100(2)
22.0	1.0	1.875	F141W 2205(1)100(2)
27.0	1.0	2.125	F141X 2705(1)100(2)
30.0	1.0	2.375	F141X 3005(1)100(2)
<b>150 VOLT DC RATING</b>			
0.01	.170	.625	F141A 1002(1)150(2)
0.012	.170	.625	F141A 1202(1)150(2)
0.015	.170	.625	F141A 1502(1)150(2)
0.018	.170	.625	F141A 1802(1)150(2)
0.022	.170	.625	F141A 2202(1)150(2)
0.027	.193	.625	F141A 2702(1)150(2)

To complete KEMET Part Number, insert the following:  
 (1) For Capacitance Tolerance insert K — ±10%, J — ±5%, G — ±2%, or F — ±1%.  
 (2) For Case Finish insert S — Insulated or U — Not Insulated.

For further details consult Metallized Polycarbonate Film Capacitors Catalog F-2867

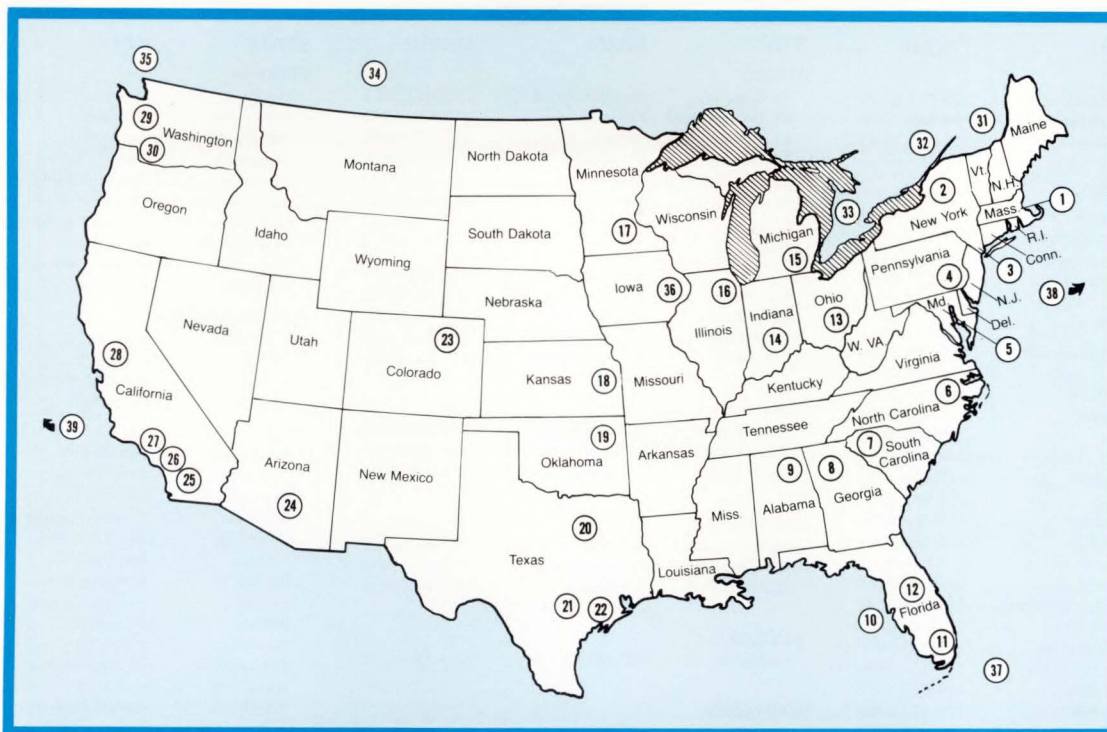
F141 SERIES CAPACITORS

CAPACITANCE µF	CASE SIZE		KEMET CATALOG NUMBER
	DIA. +.020 -.00	L. ±.03	
<b>150 VOLT DC RATING (Cont'd)</b>			
0.033	.193	.683	F141A 3302(1)150(2)
0.039	.193	.683	F141A 3902(1)150(2)
0.047	.235	.625	F141A 4702(1)150(2)
0.056	.235	.688	F141A 5602(1)150(2)
0.068	.235	.688	F141A 6802(1)150(2)
0.082	.312	.625	F141A 8202(1)150(2)
0.10	.312	.688	F141A 1003(1)150(2)
0.12	.312	.688	F141A 1203(1)150(2)
0.15	.312	.812	F141A 1503(1)150(2)
0.18	.312	.812	F141A 1803(1)150(2)
0.22	.312	.812	F141A 2203(1)150(2)
0.27	.400	.812	F141A 2703(1)150(2)
0.33	.400	.812	F141B 3303(1)150(2)
0.39	.400	.812	F141B 3903(1)150(2)
0.47	.400	.812	F141B 4703(1)150(2)
0.56	.400	.812	F141C 5603(1)150(2)
0.68	.400	.812	F141C 6803(1)150(2)
0.82	.500	.938	F141C 8203(1)150(2)
1.0	.500	1.125	F141C 1004(1)150(2)
1.2	.500	1.125	F141D 1204(1)150(2)
1.5	.500	1.312	F141D 1504(1)150(2)
1.8	.562	1.312	F141E 1804(1)150(2)
2.0	.562	1.312	F141E 2004(1)150(2)
2.2	.562	1.562	F141F 2204(1)150(2)
2.7	.562	1.812	F141F 2704(1)150(2)
3.0	.562	1.812	F141F 3004(1)150(2)
3.3	.562	1.812	F141G 3304(1)150(2)
4.0	.670	1.812	F141H 4004(1)150(2)
4.7	.670	1.812	F141H 4704(1)150(2)
5.0	.750	1.562	F141H 5004(1)150(2)
5.6	.750	1.812	F141K 5604(1)150(2)
6.8	.750	2.063	F141K 6804(1)150(2)
8.2	.750	2.375	F141M 8204(1)150(2)
12.0	1.0	1.875	F141N 1205(1)150(2)
15.0	1.0	2.125	F141Q 1505(1)150(2)
<b>200 VOLT DC RATING</b>			
0.01	.170	.625	F141A 1002(1)200(2)
0.012	.170	.625	F141A 1202(1)200(2)
0.015	.170	.625	F141A 1502(1)200(2)
0.018	.193	.625	F141A 1802(1)200(2)
0.022	.193	.625	F141A 2202(1)200(2)
0.027	.235	.625	F141A 2702(1)200(2)
0.033	.235	.625	F141A 3302(1)200(2)
0.039	.235	.688	F141A 3902(1)200(2)
0.047	.235	.688	F141A 4702(1)200(2)
0.056	.312	.625	F141A 5602(1)200(2)
0.068	.312	.625	F141A 6802(1)200(2)
0.082	.312	.688	F141A 8202(1)200(2)
0.10	.312	.688	F141A 1003(1)200(2)
0.12	.312	.812	F141A 1203(1)200(2)
0.15	.312	.812	F141A 1503(1)200(2)
0.18	.400	.688	F141A 1803(1)200(2)
0.22	.400	.812	F141A 2203(1)200(2)
0.27	.400	.812	F141A 2703(1)200(2)
0.33	.400	.938	F141B 3303(1)200(2)
0.39	.400	.938	F141B 3903(1)200(2)
0.47	.400	1.125	F141B 4703(1)200(2)
0.56	.400	1.312	F141C 5603(1)200(2)
0.68	.500	1.125	F141C 6803(1)200(2)
0.82	.500	1.125	F141C 8203(1)200(2)
1.0	.562	1.125	F141C 1004(1)200(2)
1.2	.562	1.312	F141D 1204(1)200(2)
1.5	.562	1.312	F141D 1504(1)200(2)
1.8	.562	1.812	F141E 1804(1)200(2)
2.0	.562	1.812	F141E 2004(1)200(2)
2.2	.562	1.812	F141F 2204(1)200(2)
2.7	.670	1.562	F141F 2704(1)200(2)
3.0	.750	1.562	F141F 3004(1)200(2)
3.3	.750	1.812	F141G 3304(1)200(2)
4.0	.750	1.812	F141H 4004(1)200(2)
4.7	.750	2.062	F141H 4704(1)200(2)

CAPACITANCE µF	CASE SIZE		KEMET CATALOG NUMBER
	DIA. +.020 -.00	L. ±.03	
<b>200 VOLT DC RATING</b>			
5.0	.750	2.062	F141H 5004(1)200(2)
5.6	.750	2.312	F141K 5604(1)200(2)
6.0	.750	2.312	F141K 6004(1)200(2)
7.0	1.0	1.812	F141M 7004(1)200(2)
8.2	1.0	2.062	F141M 8204(1)200(2)
10.0	1.0	2.312	F141M 1005(1)200(2)
<b>300 VOLT DC RATING</b>			
0.01	.193	.688	F141A 1002(1)300(2)
0.012	.235	.688	F141A 1202(1)300(2)
0.015	.235	.688	F141A 1502(1)300(2)
0.018	.235	.812	F141A 1802(1)300(2)
0.022	.235	.812	F141A 2202(1)300(2)
0.027	.312	.688	F141A 2702(1)300(2)
0.033	.312	.688	F141A 3302(1)300(2)
0.039	.312	.812	F141A 3902(1)300(2)
0.047	.312	.812	F141A 4702(1)300(2)
0.056	.312	.938	F141A 5602(1)300(2)
0.068	.312	.938	F141A 6802(1)300(2)
0.082	.400	.812	F141A 8202(1)300(2)
0.10	.400	.938	F141A 1003(1)300(2)
0.12	.400	.938	F141B 1203(1)300(2)
0.15	.400	1.125	F141B 1503(1)300(2)
0.18	.400	1.312	F141B 1803(1)300(2)
0.22	.400	1.312	F141B 2203(1)300(2)
0.27	.562	1.125	F141B 2703(1)300(2)
0.33	.562	1.125	F141B 3303(1)300(2)
0.39	.562	1.125	F141B 3903(1)300(2)
0.47	.562	1.562	F141B 4703(1)300(2)
0.56	.562	1.562	F141C 5603(1)300(2)
0.68	.670	1.312	F141C 6803(1)300(2)
0.82	.670	1.562	F141C 8203(1)300(2)
1.0	.670	1.812	F141D 1004(1)300(2)
1.2	.670	1.812	F141D 1204(1)300(2)
1.5	.750	2.062	F141D 1504(1)300(2)
1.8	.750	2.062	F141E 1804(1)300(2)
2.0	.750	2.312	F141E 2004(1)300(2)
2.2	1.0	1.812	F141E 2204(1)300(2)
2.7	1.0	1.812	F141F 2704(1)300(2)
3.0	1.0	2.062	F141G 3004(1)300(2)
3.3	1.0	2.312	F141H 3304(1)300(2)
<b>400 VOLT DC RATING</b>			
0.01	.235	.688	F141A 1002(1)400(2)
0.012	.235	.812	F141A 1202(1)400(2)
0.015	.235	.812	F141A 1502(1)400(2)
0.018	.235	.812	F141A 1802(1)400(2)
0.022	.312	.688	F141A 2202(1)400(2)
0.027	.312	.812	F141A 2702(1)400(2)
0.033	.312	.812	F141A 3302(1)400(2)
0.039	.312	.938	F141A 3902(1)400(2)
0.047	.400	.812	F141A 4702(1)400(2)
0.056	.400	.812	F141A 5602(1)400(2)
0.068	.400	.938	F141A 6802(1)400(2)
0.082	.400	.938	F141A 8202(1)400(2)
0.10	.400	1.125	F141A 1003(1)400(2)
0.12	.400	1.312	F141B 1203(1)400(2)
0.15	.400	1.312	F141B 1503(1)400(2)
0.18	.562	1.125	F141B 1803(1)400(2)
0.22	.562	1.125	F141B 2203(1)400(2)
0.27	.562	1.312	F141B 2703(1)400(2)
0.33	.562	1.562	F141B 3303(1)400(2)
0.39	.562	1.562	F141C 3903(1)400(2)
0.47	.562	1.812	F141C 4703(1)400(2)
0.56	.670	1.562	F141C 5603(1)400(2)
0.68	.670	1.812	F141D 6803(1)400(2)
0.82	.750	1.812	F141D 8203(1)400(2)
1.0	.750	2.062	F141D 1004(1)400(2)
1.2	1.0	1.812	F141E 1204(1)400(2)
1.5	1.0	1.812	F141F 1504(1)400(2)
1.8	1.0	2.062	F141G 1804(1)400(2)
2.0	1.0	2.062	F141G 2004(1)400(2)
2.2	1.0	2.312	F141G 2204(1)400(2)

To complete KEMET Part Number, insert the following:  
 (1) For Capacitance Tolerance insert K — ±10%, J — ±5%, G — ±2%, or F — ±1%.  
 (2) For Case Finish insert S — Insulated or U — Not Insulated.

For further details consult Metallized Polycarbonate Film Capacitors Catalog F-2867



**KEMET® CAPACITOR OEM SALES REPRESENTATIVES**

**UNION CARBIDE—ELECTRONICS DIVISION**

1. 91 Montvale Avenue  
Stoneham, MA 02180  
Phone: (617) 279-0400
2. 300 Tulip Street  
Liverpool, NY 13088  
Phone: (315) 451-0720
3. 150 White Plains Road, Room 207  
Tarrytown, NY 10591  
Phone: (914) 332-4000  
TWX: 710-567-1222
4. 504 Exton Commons  
Exton, PA 19341  
Phone: (215) 363-8310
5. Grosvenor Century Plaza, Suite 126  
10630 Little Patuxent Parkway  
Columbia, MD 21044  
Phone: (301) 992-5600
6. 3109 Poplarwood Court, Suite 217  
Box 95100  
Raleigh, NC 27625  
Phone: (919) 872-2877
7. Piedmont Center, Suite 406  
23 Villa Road  
Greenville, SC 29615  
Phone: (803) 242-5789  
TWX: 810-281-2235
8. 6525 The Corners Parkway  
Suite 304  
Norcross, GA 30092  
Phone: (404) 441-7701
9. 500 Wynn Drive, Suite 301C  
Huntsville, AL 35805  
Phone: (205) 830-1090
10. 4950 West Kennedy Blvd., Suite 400  
Tampa, FL 33609  
Phone: (813) 872-1861
11. 3441 N. W. 55th St., Bldg. 7  
Ft. Lauderdale, FL 33309  
Phone: (305) 731-2187
12. 7600 Southland Blvd., Suite 109  
Orlando, FL 32809  
Phone: (305) 855-8886
13. Suite 102  
229 Huber Village Blvd.  
Westerville, OH 43081  
Phone: (614) 890-8688
14. Fidelity Bank Plaza, Suite 260  
11550 North Meridian St.  
Carmel, IN 46032  
Phone: (317) 844-7756
15. 39201 Seven Mile Road, Suite 300  
Livonia, MI 48152  
Phone: (313) 591-0555

16. Schaumburg Corporate Center, Suite 207W.  
1501 Woodfield Rd.  
Schaumburg, IL 60195  
Phone: (312) 843-1030
17. 6600 France Avenue, South, Suite 420  
Edina, MN 55435  
Phone: (612) 929-4642
18. Cloverleaf II Bldg., Suite 102  
6901 W. 63rd Street  
Shawnee Mission, KS 66202  
Phone: (913) 362-8004
19. Exchange Bank Tower, Suite 914  
4500 South Garnett Road  
Tulsa, OK 74145  
Phone: (918) 664-8592
20. Waterway Office Tower, Suite 700  
433 East Las Colinas Blvd.  
Irving, TX 75039  
Phone: (214) 556-0009  
TWX: 910-860-5750
21. 111 West Anderson Lane, Suite 221  
Austin, TX 78752  
Phone: (512) 458-3181
22. 10601 Grant Rd.  
Suite 115A  
Houston, TX 77070  
Phone: (713) 890-0106
23. 10 Inverness Drive, East  
Suite 232  
Englewood, CO 80112  
Phone: (303) 790-0494
24. 40 West Baseline Road, Suite 201  
Tempe, AZ 85283  
Phone: (602) 831-2151  
TWX: 910-951-0125
25. 8840 Complex Dr., Suite 125  
San Diego, CA 92123  
Phone: (619) 560-0768
26. One Civic Plaza  
Suite 280  
Newport Beach, CA 92660  
Phone: (714) 640-9320
27. 6133 Bristol Parkway, Suite 250  
Culver City, CA 90230  
Phone: (213) 568-8384
28. 4677 Old Ironsides Drive, Suite 210  
Marriott Business Park  
Santa Clara, CA 95054  
Phone: (408) 986-0424
29. 401 Parkplace, Suite 219  
Kirkland, WA 98033  
Phone: (206) 828-4853
30. 1300 Esther Street  
Vancouver, WA 98660  
Phone: (206) 695-1500

**DESKIN SALES CORPORATION**

31. 290 Benjamin Hudson Street  
Montreal, Quebec  
H4N 1J4  
Phone: (514) 331-2860  
TWX: 610-421-3793  
Telex: 05-827584
32. 880 Lady Ellen Place, Suite 106  
Ottawa, Ontario  
K1Z 5L9  
Phone: (613) 729-1099  
Telex: 610-421-3793
33. 77D Steelcase Road, West  
Markham, Ontario  
L3R 2M4  
Phone: (416) 475-1412  
TWX: 610-492-5113
34. 3504 78th Avenue  
Edmonton, Alberta  
T6B 2X9  
Phone: (403) 466-2106  
TWX: 610-831-1660
35. 105-3930 Jacombs Road  
Richmond, B.C.  
V6V 1Y6  
Phone: (604) 273-4963  
TWX: 610-922-5036

**SELTEC SALES CORPORATION**

36. 1930 St. Andrews Drive, N.E.  
P.O. Box 2172  
Cedar Rapids, IA 52406  
Phone: (319) 393-1114  
TWX: 910-525-1329

**CARIBBEAN AREA INQUIRIES  
 ISLA CARIBE ELECTRO SALES**

37. Camino Alejandro C5  
Villa Clementina  
Guaynabo, P.R. 00657  
Phone: (809) 720-4430, 31,  
32, 33, 34, 35

**EUROPEAN INQUIRIES  
 UNION CARBIDE EUROPE, S.A.**

38. 15 Chemin Louis - Dunant  
1211 Beneva 20  
Switzerland  
Phone: 41-22-396511  
Telex: 845-911302

**ASIAN INQUIRIES  
 UNION CARBIDE ASIA LIMITED**

39. Mandarin Plaza, Tower A, 11th Floor  
14 Science Museum Road  
P.O. Box 98530 Tsimshatsui  
Tsimshatsui East, Kowloon, Hong Kong  
Phone: 852-372-31211  
Telex: 780-45162

ELECTRONICS			ELECTRONICS			ELECTRONICS		
STATE	NAME	PHONE	STATE	NAME	PHONE	STATE	NAME	PHONE
<b>ALABAMA</b>			<b>ILLINOIS</b>			<b>NEW YORK</b>		
Huntsville	Hall-Mark	205-837-8700	Bensenville	Hamilton-Avnet	312-860-8524	Buffalo	Summit Distributors	716-884-3450
Huntsville	Hamilton-Avnet	205-837-7210	Elk Grove Village	Bell Industries	312-640-1910	Central Islip	Semi Cap	516-582-4400
Huntsville	Schweber	205-882-2200	Elk Grove Village	Pioneer/Chicago	312-437-9680	Hauppauge	Jaco	516-273-5500
<b>ARIZONA</b>			Elk Grove Village	Schweber	312-364-3750	Hauppauge	Time	516-273-0100
Phoenix	Hall-Mark	602-437-1200	Hoffman Estates	Integrated	312-843-2040	Rochester	Hamilton-Avnet	716-475-9130
Phoenix	Schweber	602-997-4874	Wooddale	Hall-Mark	312-860-3800	Rochester	Schweber	716-424-2222
Tempe	Bell Industries	602-966-7800	<b>INDIANA</b>			Rochester	Summit Distributors	716-334-8110
Tempe	Fisher-Brownell	602-967-1464	Carmel	Hamilton-Avnet	317-844-9333	Ronkonkoma	Hall-Mark	516-737-0600
Tempe	Hamilton-Avnet	602-231-5100	Fort Wayne	Bell/Graham	219-423-3422	Syracuse	Hamilton-Avnet	315-437-2641
Tempe	Time	602-967-2000	Indianapolis	Bell/Graham	317-634-8202	Westbury	Schweber	516-334-7474
<b>CALIFORNIA</b>			Indianapolis	Pioneer/Indianapolis	317-849-7300	<b>NORTH CAROLINA</b>		
Alhambra	Fisher-Brownell	818-289-0255	Lafayette	Bell/Graham	317-423-5564	Greensboro	Golden	919-373-0038
Anaheim	Time	714-937-0911	<b>IOWA</b>			Raleigh	Hall-Mark	919-872-0712
Canoga Park	Hall-Mark	818-716-7300	Cedar Rapids	Bell Industries	319-395-0730	Raleigh	Hamilton-Avnet	919-878-0819
Canoga Park	Schweber	818-999-4702	Cedar Rapids	Hamilton-Avnet	319-362-4757	Raleigh	Schweber	919-876-0000
Chatsworth	Avnet	818-700-2600	Cedar Rapids	Schweber	319-373-1417	<b>OHIO</b>		
Chatsworth	Hamilton Electro Sales	818-700-6500	<b>KANSAS</b>			Beachwood	Schweber	216-464-2970
Chatsworth	Integrated	818-998-2200	Lenexa	Hall-Mark	913-888-4747	Cincinnati	Bell/Graham	513-772-1661
Chatsworth	Time	818-998-7200	Overland Park	Hamilton-Avnet	913-541-7922	Cincinnati	Hall-Mark	513-563-5980
Citrus Heights	Hall-Mark	916-722-8600	Overland Park	Schweber	913-492-2921	Cleveland	Pioneer/Cleveland	216-587-3600
Costa Mesa	Avnet	714-754-6111	<b>KENTUCKY</b>			Columbus	Bell/Graham	614-895-1590
Costa Mesa	Hamilton-Avnet	714-641-4112	Lexington	Hamilton-Avnet	606-259-1475	Dayton	Bell Industries	513-434-8231
Culver City	Hamilton-Avnet	213-558-2883	<b>MARYLAND</b>			Dayton	Hamilton-Avnet	513-433-0610
Culver City	Hamilton Electro Sales	213-558-2662	Columbia	Hall-Mark	301-988-9800	Dayton	Pioneer/Dayton	513-236-9900
El Segundo	Hall-Mark	213-643-9101	Columbia	Hamilton-Avnet	301-995-3526	Dayton	Schweber	513-439-1800
Gardena	Bell Industries	213-515-1800	Columbia	Time	301-964-3090	Dayton	Hall-Mark	216-349-4632
Garden Grove	Bell Industries	714-220-0681	Gaithersburg	Schweber	301-840-5900	Solon	Hill-Mark	216-831-3500
Irvine	Integrated	714-660-1055	<b>MASSACHUSETTS</b>			Warrensburg	Hamilton-Avnet	614-891-4555
Irvine	Schweber	714-863-0256	Bedford	Schweber	617-275-5100	Westerville	Hall-Mark	614-891-4555
Ontario	Hamilton-Avnet	714-989-8801	Billerica	Hall-Mark	617-935-9777	Westerville	Hamilton-Avnet	614-436-5851
Roseville	Bell Industries	916-969-3100	Wilmington	J.V. Electr./Boston	617-273-4300	<b>OKLAHOMA</b>		
Sacramento	Hamilton-Avnet	916-648-3227	Woburn	Hamilton-Avnet	617-935-9700	Tulsa	Hall-Mark	918-665-3200
Sacramento	Integrated	916-424-5297	Woburn	Time	617-935-8080	Tulsa	Schweber	918-622-8000
Sacramento	Schweber	916-929-9732	<b>MICHIGAN</b>			<b>OREGON</b>		
San Diego	Bell Industries	619-268-1277	Ann Arbor	Bell/Graham	313-971-9093	Lake Oswego	Bell Industries	503-241-4115
San Diego	Fisher-Brownell	619-560-8545	Grand Rapids	Hamilton-Avnet	616-243-8805	Lake Oswego	Hamilton-Avnet	503-635-7850
San Diego	Hall-Mark	619-268-1201	Livonia	Hamilton-Avnet	313-522-4700	Portland	Time	503-684-3780
San Diego	Hamilton-Avnet	619-571-7500	Livonia	Pioneer/Michigan	313-525-1800	<b>PENNSYLVANIA</b>		
San Diego	Schweber	619-450-0454	Livonia	Schweber	313-525-8100	Horsham	Schweber	215-441-0600
San Diego	Time	619-586-1331	<b>MINNESOTA</b>			King of Prussia	Time	215-337-0900
San Jose	Hall-Mark	408-946-0900	Bloomington	Hall-Mark	612-854-3223	Pittsburgh	Hamilton-Avnet	412-281-4150
San Jose	Integrated	408-263-1100	Bloomington	Time	612-944-9192	Pittsburgh	Pioneer/Pittsburgh	412-782-2300
San Jose	Schweber	408-748-4700	Edina	Schweber	612-941-5280	Pittsburgh	Schweber	412-782-1600
Santa Clara	Fisher-Brownell	408-988-6041	Minneapolis	Merit	612-546-5383	<b>TENNESSEE</b>		
Sunnyvale	Bell Industries	408-734-8570	Minnetonka	Hamilton-Avnet	612-932-0600	Nashville	Bell/Graham	615-242-2682
Sunnyvale	Hamilton-Avnet	408-743-3355	Minnetonka	Pioneer/Twin Cities	612-935-5444	<b>TEXAS</b>		
Sunnyvale	Time	408-734-9888	<b>MISSOURI</b>			Austin	Hall-Mark	512-258-8848
Thousand Oaks	Bell Industries	805-499-6821	Earth City	Hall-Mark	314-291-5350	Austin	Hamilton-Avnet	512-837-8911
Torrance	Time	213-320-0880	Earth City	Hamilton-Avnet	314-344-1200	Austin	Schweber	512-458-8253
Tustin	Hall-Mark	714-669-4700	Earth City	Schweber	314-739-0526	Carrollton	Time	214-241-7441
<b>COLORADO</b>			St. Louis	Time	314-391-6444	Dallas	Hall-Mark	214-343-5000
Denver	Integrated	303-292-6121	<b>NEW HAMPSHIRE</b>			Dallas	Hall-Mark	214-341-1147
Englewood	Hall-Mark	303-694-1662	Manchester	Hamilton-Avnet	603-624-9400	Dallas	Pioneer/Dallas	214-386-7300
Englewood	Hamilton-Avnet	303-740-1000	Manchester	Schweber	603-625-2250	Dallas	Schweber	214-661-5010
Englewood	Schweber	303-799-0258	<b>NEW JERSEY</b>			Houston	Hall-Mark	713-781-6100
Englewood	Time	303-799-8851	Cherry Hill	Hamilton-Avnet	609-424-0100	Houston	Hamilton-Avnet	713-975-3516
Wheatridge	Bell Industries	303-424-1985	Fairfield	Hall-Mark	201-575-4415	Houston	Schweber	713-784-3600
<b>CONNECTICUT</b>			Fairfield	Hamilton-Avnet	201-575-3390	Irving	Hamilton-Avnet	214-659-4111
Cheshire	Time	203-271-3200	Fairfield	Schweber	201-227-7880	Richardson	Fisher-Brownell	214-235-3177
Danbury	Hamilton-Avnet	203-797-1100	Mt. Laurel	Hall-Mark	609-235-1900	Richardson	Jaco	214-235-9575
Danbury	Schweber	203-748-7080	Perth Amboy	Arm Bar Industries	201-442-0990	<b>UTAH</b>		
Wallingford	Hall-Mark	203-269-0100	Pine Brook	Pioneer/Harvey	201-227-1262	N. Salt Lake City	Integrated	801-298-1869
<b>FLORIDA</b>			<b>NEW MEXICO</b>			Salt Lake City	Bell Industries	801-972-6969
Altamonte Springs	Schweber	305-331-7555	Albuquerque	Alliance	505-292-3360	Salt Lake City	Hamilton-Avnet	801-972-2800
Clearwater	Hall-Mark	813-530-4543	Albuquerque	Bell Industries	505-292-2700	<b>WASHINGTON</b>		
Ft. Lauderdale	Hamilton-Avnet	305-971-2900	Albuquerque	Hamilton-Avnet	505-765-1500	Bellevue	Bell Industries	206-747-1515
Ft. Lauderdale	Time	305-974-4800	<b>NEW YORK</b>			Bellevue	Hamilton-Avnet	206-453-5845
Hollywood	Schweber	305-927-0511	Cherry Hill	Hamilton-Avnet	609-424-0100	Bellevue	Integrated	206-455-2727
Largo	Bell/Graham	813-541-4434	Fairfield	Hall-Mark	201-575-4415	Redmond	Time	206-882-1600
Orlando	Hall-Mark	305-855-4020	Fairfield	Hamilton-Avnet	201-227-7880	<b>WISCONSIN</b>		
Orlando	Time	305-841-6565	Fairfield	Schweber	201-227-7880	Brookfield	Schweber	414-784-9020
Pompano Beach	Hall-Mark	305-971-9280	Mt. Laurel	Hall-Mark	609-235-1900	New Berlin	Hall-Mark	414-797-7844
St. Petersburg	Hamilton-Avnet	813-576-3930	Perth Amboy	Arm Bar Industries	201-442-0990	New Berlin	Hamilton-Avnet	414-784-4510
Winter Park	Hamilton-Avnet	305-628-3888	Pine Brook	Pioneer/Harvey	201-227-1262	Waukesha	Bell Industries	414-547-8879
<b>GEORGIA</b>			<b>CANADA</b>			Calgary	Hamilton-Avnet	403-230-3586
Norcross	Time	404-448-4448	Calgary	Hamilton-Avnet	403-230-3586	Montreal	Hamilton-Avnet	514-331-6443
Norcross	Bell/Graham	404-662-0923	Ottawa	Hamilton-Avnet	613-226-1700	Ottawa	Hamilton-Avnet	613-226-1700
Norcross	Hall-Mark	404-447-8000	Toronto	Hamilton-Avnet	416-677-7432	Toronto	Hamilton-Avnet	416-677-7432
Norcross	Hamilton-Avnet	404-447-7500						
Norcross	Schweber	404-449-9170						

## THE KEMET QUALITY COMMITMENT

Kemet's growth and success was built upon the quality of our capacitors. We are maintaining and extending our quality leadership position with a formalized Quality Improvement Program through which annual quality improvements are assured. We are committed on a company-wide basis to a product which always conforms to specifications. Last year's objectives were achieved and this year's objectives are even more ambitious.

In addition to increased emphasis on problem prevention, training, and statistical process control methods, our program encourages employee participation through Quality Circles and management participation through Quality Improvement Teams. All management and technical personnel have completed an extensive course on quality improvement. The entire Quality Improvement Program is coordinated by top management through the Kemet Quality Council.

Our continuing commitment to excellence is evidenced by our past performance and by our dedication to further improvement through the Kemet Quality Improvement Program. The name KEMET will always be synonymous with the highest quality products.



B. G. Hawthornthwaite  
Director of Quality

**KEMET  
OFFERS YOU  
MORE  
IN THE  
90'S**

NOTE...UNION CARBIDE reserves the right to modify minor details of internal and external construction at any time in the interest of product improvement. UNION CARBIDE does not assume responsibility for infringement that might result from the use of KEMET Capacitors in potential circuit designs.

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**KEMET**<sup>®</sup>

**UNION  
CARBIDE**

ELECTRONICS DIVISION  
COMPONENTS DEPARTMENT