

CERAMIC MOLDED AXIAL & RADIAL

PERFORMANCE CHARACTERISTICS

GENERAL

Working Voltage:

C0G - 50, 100 & 200 Volts X7R - 50, 100 & 200 Volts

Temperature Characteristics:

C0G $- 0 \pm 30$ PPM/°C from -55°C to +125°C X7R $- \pm 15\%$ from -55°C to +125°C

Capacitance Tolerance:

C0G - ±0.5 pF, ±1%, ±2%, ±5%, ±10%, ±20% (±0.5 pF is tightest available tolerance) X7R - ±10%, ±20%, -0 +100%, -20% +80%

Construction:

Monolithic block of ceramic dielectric with interdigitated internal electrodes, encapsulated in a molded case, and having axial or radial leads. Meets flame test requirements of UL Standard 94V-0.

Terminal Strength:

EIA-198 Method 303 Condition A (2.2 kg)

ELECTRICAL

Capacitance:

Within specified tolerance when measured with 1 volt rms at 1 kHz (1000 pF or less at 1 MHz for C0G).

Dissipation Factor:

25°C at 1 kHz (1000 pF or less at 1 MHz for C0G). C0G – .15% maximum

X7R - 2.5% maximum

Insulation Resistance:

After 2 minutes electrification at 25°C and rated voltage

COG – 100K megohms or 1000 megohm - μF, whichever is less

X7R-100K megohms or 1000 megohm - μF , whichever is less.

Dielectric Withstanding Voltage:

250% of rated voltage for 5 seconds with current limited to 50 mA at 25°C.

Life Test:

2000 hours at 200% of rated voltage at 125°C. Post-Test limits at 25°C are:

Capacitance Change:

C0G – less than 3% or 0.25 pF, whichever is higher X7R – \pm 20% of initial value

Dissipation Factor:

C0G - .25% maximum X7R -3.0% maximum

Insulation Resistance:

COG – 10K megohms or 100 megohm - μF, whichever is less

X7R – 10K megohms or 100 megohm - μF, whichever is less

Dielectric Withstanding Voltage:

250% of rated voltage for 5 seconds with current limited to 50 mA.

ENVIRONMENTAL

Moisture Resistance:

MIL-STD-202, Method 106, or EIA-198, Method 204, Condition A, except 20 cycles.

Insulation Resistance:

COG – 10K megohms or 100 megohm - μF, whichever is less

X7R - 10K megohms or 100 megohm - μ F, whichever is less

Dielectric Withstanding Voltage:

250% of rated voltage for 5 seconds with current limited to 50 mA.

Immersion Cycling:

MIL-STD-202, Method 104, Condition B. Post-Test limits at 25°C are:

Insulation Resistance:

COG – 10K megohms or 100 megohm - μF , whichever is less

X7R – 10K megohms or 100 megohm - μF, whichever is less

Solderability:

MIL-STD-202, Method 208, Sn62 solder, 245°C for $5 \pm 1/2$ seconds.

Resistance to Soldering Heat:

MIL-STD-202, Method 210, Condition B (260°C, 10 secs). Depth of immersion — to a minimum of .050" from the capacitor body.

Lead Material:

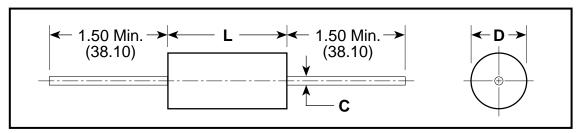
Axial: Solder-coated copper clad steel

Radial: Solder-coated copper

CERAMIC MOLDED/MIL-C-11015 (CK) & MIL-PRF-39014 (CKR) KEMET



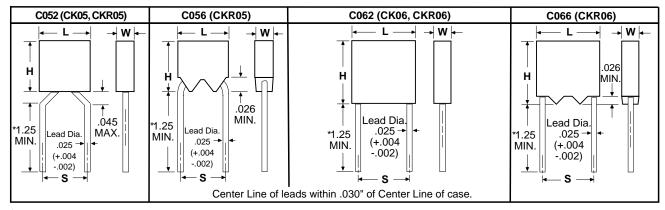
CAPACITOR OUTLINE DRAWINGS (AXIAL LEADS)



DIMENSIONS — INCHES & (MILLIMETERS)

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

CAPACITOR OUTLINE DRAWINGS (RADIAL LEADS)



^{*} Leads are .625 minimum when tape and reel packaged.

DIMENSIONS — INCHES & (MILLIMETERS)

CASE SIZE	MILITARY EQUIVALENT STYLES	H HEIGHT	L LENGTH	W WIDTH	S LEAD SPACING
C052/ C056	CK05, CKR05	.190 ± .010 (4.83 ± .25)	.190 ± .010 (4.83 ± .25)	.090 ± .010 (2.29 ± .25)	.200 ± .015 (5.08 ± .38)
C062/ C066	CK06, CKR06	.290 ± .010 (7.37 ± .25)	.290 ± .010 (7.37 ± .25)	.090 ± .010 (2.29 ± .25)	.200 ± .015 (5.08 ± .38)



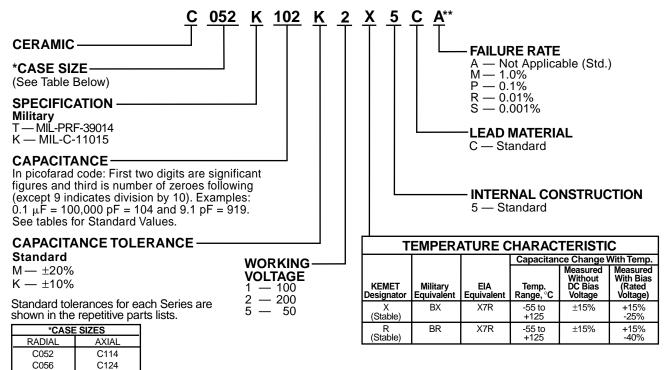
C062

C066

C192

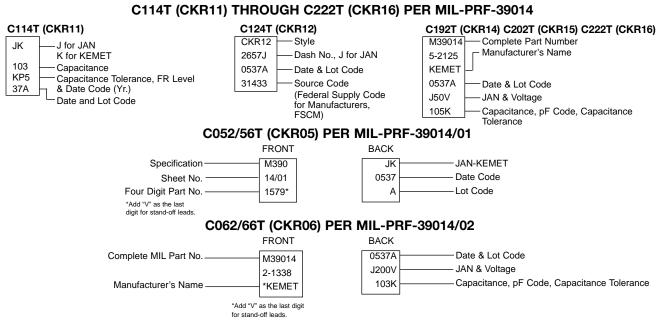
C202 C222





MARKING INFORMATION

**Part Number Example: C052K102K2X5CA (14 digits – no spaces)



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

C114K (CK12) C124K (CK13)	C192K (CK14) C202K (CK15) C222K (CK16)
KCK	KEMET, CK	K100V KEMET, Voltage
12BX	Style (12 or 13), Temp. Char. (BX or BR)	CK14BX — Style (14, 15 or 16), Temp. Char. (BX or BR)
102K	Capacitance, pF Code, Capacitance Tolerance	123K — Capacitance, pF Code, Capacitance Tolerance
0537	Date Code	0537 — Date Code

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

	FRONT	BACK	
Style ———	CK05	200V	Voltage
Temperature Characteristic —	вх	K	KEMET
Capacitance, pF Code, Capacitance Tolerance	102K	0501	Date Code

CERAMIC MOLDED/AXIAL — MIL-C-11015 & MIL-PRF-39014

STABLE TEMPERATURE CHARACTERISTICS—BX & BR (EIA-X7R)



RATINGS & PART NUMBER REFERENCE

CAP.	TOL.	KEMET	INGS & PART NUN		MIL-PRF-3	9014/05 Fo	r Failure Rate	e Levels (2)
pF	%	PART NUMBER	MIL-C-11015/20	MIL-PRF-39014/05	M	P	R	S
			OLT — C114 SIZE (MILI	TARY—CK12 or CKR11)			•	
10	10	C114(<u>1</u>)100K1X5C(<u>2</u>)	CK12BX100K	CKR11BX100K(2)	2601	2801	2001	2201
10	20	C114(1)100M1X5C(2)	CK12BX100M	CKR11BX100M(2)	2602	2802	2002	2202
12	10	C114(<u>1</u>)120K1X5C(<u>2</u>)	CK12BX120K	CKR11BX120K(<u>2</u>)	2603	2803	2003	2203
15	10	C114(1)150K1X5C(2)	CK12BX150K	CKR11BX150K(<u>2</u>)	2604	2804	2004	2204
15	20	C114(<u>1</u>)150M1X5C(<u>2</u>)	CK12BX150M	CKR11BX150M(<u>2</u>)	2605	2805	2005	2205
18 22	10 10	C114(<u>1</u>)180K1X5C(<u>2</u>) C114(1)220K1X5C(2)	CK12BX180K CK12BX220K	CKR11BX180K(<u>2)</u> CKR11BX220K(2)	2606 2607	2806 2807	2006 2007	2206 2207
22	20	C114(1)220K1X5C(2)	CK12BX220K CK12BX220M	CKR11BX220M(2)	2608	2808	2007	2207
27	10	C114(1)270K1X5C(2)	CK12BX270K	CKR11BX270K(2)	2609	2809	2009	2209
33	10	C114(1)330K1X5C(2)	CK12BX330K	CKR11BX330K(2)	2610	2810	2010	2210
33	20	C114(1)330M1X5C(2)	CK12BX330M	CKR11BX330M(2)	2611	2811	2011	2211
39	10	C114(<u>1</u>)390K1X5C(<u>2</u>)	CK12BX390K	CKR11BX390K(<u>2</u>)	2612	2812	2012	2212
47	10	C114(<u>1</u>)470K1X5C(<u>2</u>)	CK12BX470K	CKR11BX470K(<u>2</u>)	2613	2813	2013	2213
47	20	C114(<u>1</u>)470M1X5C(<u>2</u>)	CK12BX470M	CKR11BX470M(<u>2</u>)	2614	2814	2014	2214
56	10 10	C114(1)560K1X5C(2)	CK12BX560K	CKR11BX560K(<u>2</u>)	2615	2815	2015	2215
68 68	20	C114(1)680K1X5C(2) C114(1)680M1X5C(2)	CK12BX680K CK12BX680M	CKR11BX680K(<u>2)</u> CKR11BX680M(<u>2</u>)	2616 2617	2816 2817	2016 2017	2216 2217
82	10	C114(1)820K1X5C(2)	CK12BX820K	CKR11BX820K(2)	2618	2818	2018	2218
100	10	C114(1)101K1X5C(2)	CK12BX101K	CKR11BX101K(2)	2619	2819	2019	2219
100	20	C114(1)101M1X5C(2)	CK12BX101M	CKR11BX101M(2)	2620	2820	2020	2220
120	10	C114(<u>1</u>)121K1X5C(<u>2</u>)	CK12BX121K	CKR11BX121K(<u>2</u>)	2621	2821	2021	2221
150	10	C114(<u>1</u>)151K1X5C(<u>2</u>)	CK12BX151K	CKR11BX151K(<u>2</u>)	2622	2822	2022	2222
150	20	C114(<u>1</u>)151M1X5C(<u>2</u>)	CK12BX151M	CKR11BX151M(<u>2</u>)	2623	2823	2023	2223
180	10	C114(1)181K1X5C(2)	CK12BX181K	CKR11BX181K(<u>2</u>)	2624	2824	2024	2224
220	10	C114(1)221K1X5C(2)	CK12BX221K	CKR11BX221K(<u>2</u>)	2625	2825	2025	2225 2226
220 270	20 10	C114(<u>1</u>)221M1X5C(<u>2</u>) C114(<u>1</u>)271K1X5C(<u>2</u>)	CK12BX221M CK12BX271K	CKR11BX221M(<u>2</u>) CKR11BX271K(2)	2626 2627	2826 2827	2026 2027	2220
330	10	C114(1)331K1X5C(2)	CK12BX331K	CKR11BX331K(<u>2</u>)	2628	2828	2027	2228
330	20	C114(1)331M1X5C(2)	CK12BX331M	CKR11BX331M(2)	2629	2829	2029	2229
390	10	C114(1)391K1X5C(2)	CK12BX391K	CKR11BX391K(2)	2630	2830	2030	2230
470	10	C114(<u>1</u>)471K1X5C(<u>2</u>)	CK12BX471K	CKR11BX471K(<u>2</u>)	2631	2831	2031	2231
470	20	C114(<u>1</u>)471M1X5C(<u>2</u>)	CK12BX471M	CKR11BX471M(<u>2</u>)	2632	2832	2032	2232
560	10	C114(1)561K1X5C(2)	CK12BX561K	CKR11BX561K(<u>2</u>)	2633	2833	2033	2233
680	10	C114(1)681K1X5C(2)	CK12BX681K	CKR11BX681K(2)	2634	2834	2034	2234
680 820	20 10	C114(1)681M1X5C(2)	CK12BX681M CK12BX821K	CKR11BX681M(<u>2</u>) CKR11BX821K(2)	2635 2636	2835 2836	2035 2036	2235 2236
1,000	10	C114(<u>1</u>)821K1X5C(<u>2</u>) C114(1)102K1X5C(2)	CK12BX102K	CKR11BX102K(2)	2637	2837	2030	2237
1,000	20	C114(1)102M1X5C(2)	CK12BX102K	CKR11BX102M(<u>2</u>)	2638	2838	2038	2238
1,200	10	C114(1)122K1X5C(2)	CK12BX122K	CKR11BX122K(2)	2639	2839	2039	2239
1,500	10	C114(1)152K1X5C(2)	CK12BX152K	CKR11BX152K(2)	2640	2840	2040	2240
1,500	20	C114(<u>1</u>)152M1X5C(<u>2</u>)	CK12BX152M	CKR11BX152M(<u>2</u>)	2641	2841	2041	2241
1,800	10	C114(1)182K1X5C(2)	CK12BX182K	CKR11BX182K(<u>2</u>)	2642	2842	2042	2242
2,200	10	C114(1)222K1X5C(2)	CK12BX222K	CKR11BX222K(<u>2</u>)	2643	2843	2043	2243
2,200 2,700	20 10	C114(<u>1</u>)222M1X5C(<u>2</u>)	CK12BX222M	CKR11BX222M(<u>2</u>)	2644 2645	2844 2845	2044 2045	2244 2245
3,300	10	C114(<u>1</u>)272K1X5C(<u>2</u>) C114(1)332K1X5C(2)	CK12BX272K CK12BX332K	CKR11BX272K(<u>2)</u> CKR11BX332K(2)	2646	2846	2043	2245
3,300	20	C114(1)332M1X5C(2)	CK12BX332M	CKR11BX332M2)	2647	2847	2047	2247
3,900	10	C114(1)392K1X5C(2)	CK12BX392K	CKR11BX392K(2)	2648	2848	2048	2248
4,700	10	C114(1)472K1X5C(2)	CK12BX472K	CKR11BX472K(2)	2649	2849	2049	2249
4,700	20	C114(<u>1</u>)472M1X5C(<u>2</u>)	CK12BX472M	CKR11BX472M <u>2</u>)	2650	2850	2050	2250
		50 V	OLT — C114 SIZE (MILI)	TARY—CK12 or CKR11)				
5,600	10	C114(1)562K5X5C(2)	CK12BX562K	CKR11BX562K(<u>2</u>)	2651	2851	2051	2251
6,800	10	C114(<u>1</u>)682K5X5C(<u>2</u>)	CK12BX682K	CKR11BX682K(<u>2</u>)	2652	2852	2052	2252
6,800	20	C114(1)682M5X5C(2)	CK12BX682M	CKR11BX682M(2)	2653	2853	2053	2253
8,200	10	C114(1)822K5X5C(2)	CK12BX822K	CKR11BX822K(2)	2654	2854	2054	2254
10,000	10 20	C114(1)103K5X5C(2)	CK12BX103K	CKR11BX103K(<u>2</u>)	2655 2656	2855 2856	2055 2056	2255 2256
10,000	20	C114(<u>1</u>)103M5X5C(<u>2</u>)	CK12BX103M	CKR11BX103M(<u>2</u>)	2000	2000	2000	2200
5 600	10			TARY—CK13 or CKR12)	0657	0057	2057	2057
5,600 6,800	10 10	C124(1)562K1X5C(2) C124(1)682K1X5C(2)	CK13BX562K CK13BX682K	CKR12BX562K(<u>2)</u> CKR12BX682K(2)	2657 2658	2857 2858	2057 2058	2257 2258
6,800	20	C124(1)682M1X5C(2)	CK13BX682K CK13BX682M	CKR12BX682M(2)	2659	2859	2056	2256
8,200	10	C124(1)822K1X5C(2)	CK13BX822K	CKR12BX822K(<u>2</u>)	2660	2860	2060	2260
10,000	10	C124(1)103K1X5C(2)	CK13BX103K	CKR12BX103K(2)	2661	2861	2061	2261
10,000	20	C124(1)103M1X5C(2)	CK13BX103M	CKR12BX103M(2)	2662	2862	2062	2262
		50 V	OLT — C124 SIZE (MILI)	TARY—CK13 or CKR12)				
12,000	10	C124(1)123K5X5C(2)	CK13BX123K	CKR12BX123K(<u>2</u>)	2663	2863	2063	2263
15,000	10	C124(1)153K5X5C(2)	CK13BX153K	CKR12BX153K(<u>2</u>)	2664	2864	2064	2264
15,000	20	C124(1)153M5X5C(2)	CK13BX153M	CKR12BX153M(<u>2</u>)	2665	2865	2065	2265
18,000	10	C124(1)183K5X5C(2)	CK13BX183K	CKR12BX183K(<u>2</u>)	2666	2866	2066	2266
22,000	10	C124(1)223K5X5C(2)	CK13BX223K	CKR12BX223K(<u>2</u>)	2667	2867	2067	2267
22,000 27,000	20 10	C124(<u>1)</u> 223M5X5C(<u>2)</u> C124K273K5R5CA	CK13BX223M CK13BR273K	CKR12BX223M(<u>2</u>)	2668	2868	2068	2268
33,000	10	C124K273K5R5CA C124K333K5R5CA	CK13BR333K					
33,000	20	C124K333M5R5CA	CK13BR333M					
39,000	10	C124K393K5R5CA	CK13BR393K					
47,000	10	C124K473K5R5CA	CK13BR473K					
47,000	20	C124K473M5R5CA	CK13BR473M					
		l.		l				

(1) Insert proper letter for specification: K — MIL-C-11015; T — MIL-PRF-39014 (2) Failure Rate Designator: A — Not applicable (MIL-C-11015); M — 1%/1000 Hours, P — .1%/1000 Hours, R — .01%/1000 Hours, S — .001%/1000 Hours (MIL-PRF-39014)



CERAMIC MOLDED/AXIAL — MIL-C-11015 & MIL-PRF-39014

STABLE TEMPERATURE CHARACTERISTICS—BX & BR (EIA-X7R)

RATINGS & PART NUMBER REFERENCE

		1	TINGS & PART NUM	IDER REFERENCE	NAU:	0044/07 =	- " -	, ,1
CAP. pF	TOL. %	KEMET PART NUMBER	MIL-C-11015/20	MIL-PRF-39014/05	MIL-PRF-3	9014/05 Fo	r Failure Rat	e Levels (2)
1,4	70		— C124 SIZE (MILITARY		1	F	<u> </u>	_ 3
27,000	10	C124T273K5X5C(<u>2</u>)	. ,	CKR12BX273K(<u>2</u>)	2669	2869	2069	2269
33,000	10	C124T333K5X5C(2)		CKR12BX333K(<u>2</u>)	2670	2870	2070	2270
33,000	20	C124T333M5X5C(2)		CKR12BX333M(<u>2</u>)	2671	2871	2071	2271
39,000	10	C124T393K5X5C(2)		CKR12BX393K(<u>2</u>)	2672	2872	2072	2272
47,000 47,000	10 20	C124T473K5X5C(<u>2</u>) C124T473M5X5C(2)		CKR12BX473K(<u>2</u>)	2673 2674	2873 2874	2073 2074	2273 2274
47,000	20	\—/	(OLT 0400 CIZE (MILL)	CKR12BX473M(<u>2</u>)	2074	2014	2074	2214
12,000	10	C192(<u>1</u>)123K1X5C(<u>2</u>)	OLT — C192 SIZE (MILI CK14BX123K	CKR14BX123K(2)	2675	2875	2075	2275
15,000	10	C192(1)123K1X5C(2)	CK14BX153K	CKR14BX123K(<u>2</u>) CKR14BX153K(2)	2676	2876	2075	2276
15,000	20	C192(1)153M1X5C(2)	CK14BX153M	CKR14BX153M(2)	2677	2877	2077	2277
18,000	10	C192(1)183K1X5C(2)	CK14BX183K	CKR14BX183K(<u>2</u>)	2678	2878	2078	2278
22,000	10	C192(<u>1</u>)223K1X5C(<u>2</u>)	CK14BX223K	CKR14BX223K(<u>2</u>)	2679	2879	2079	2279
22,000	20	C192(<u>1</u>)223M1X5C(<u>2</u>)	CK14BX223M	CKR14BX223M(<u>2</u>)	2680	2880	2080	2280
27,000	10	C192(1)273K1X5C(2)	CK14BX273K	CKR14BX273K(<u>2</u>)	2681	2881	2081	2281 2282
33,000 33,000	10 20	C192(<u>1</u>)333K1X5C(<u>2</u>) C192(<u>1</u>)333M1X5C(<u>2</u>)	CK14BX333K CK14BX333M	CKR14BX333K(<u>2)</u> CKR14BX333M(<u>2</u>)	2682 2683	2882 2883	2082 2083	2283
39,000	10	C192(1)393K1X5C(2)	CK14BX393K	CKR14BX393K(<u>2</u>)	2684	2884	2084	2284
47,000	10	C192(1)473K1X5C(2)	CK14BX473K	CKR14BX473K(2)	2685	2885	2085	2285
47,000	20	C192(<u>1</u>)473M1X5C(<u>2</u>)	CK14BX473M	CKR14BX473M(<u>2</u>)	2686	2886	2086	2286
56,000	10	C192(<u>1</u>)563K1R5C(<u>2</u>)	CK14BR563K	CKR14BR563K(<u>2</u>)	2693	2893	2093	2293
68,000	10	C192(<u>1</u>)683K1R5C(<u>2</u>)	CK14BR683K	CKR14BR683K(<u>2</u>)	2694	2894	2094	2294
68,000	20 10	C192(<u>1</u>)683M1R5C(<u>2</u>) C192(<u>1</u>)823K1R5C(<u>2</u>)	CK14BR683M CK14BR823K	CKR14BR683M(<u>2</u>) CKR14BR823K(2)	2695	2895 2896	2095 2096	2295 2296
82,000 100,000	10	C192(1)104K1R5C(2)	CK14BR104K	CKR14BR104K(<u>2</u>)	2696 2697	2897	2090	2290
100,000	20	C192(1)104M1R5C(2)	CK14BR104M	CKR14BR104M(2)	2698	2898	2098	2298
155,555			OLT — C192 SIZE (MILIT	\				
56,000	10	C192T563K5X5C(2)	OLI — O 132 GIZE (IVIIEI)	CKR14BX563K(2)	2687	2887	2087	2287
68,000	10	C192T683K5X5C(2)		CKR14BX683K(2)	2688	2888	2088	2288
68,000	20	C192T683M5X5C(2)		CKR14BX683M(2)	2689	2889	2089	2289
82,000	10	C192T823K5X5C(2)		CKR14BX823K(<u>2</u>)	2690	2890	2090	2290
100,000	10	C192T104K5X5C(<u>2</u>)		CKR14BX104K(<u>2</u>)	2691	2891	2091	2291
100,000 120,000	20 10	C192T104M5X5C(<u>2</u>) C192(<u>1</u>)124K5R5C(<u>2</u>)	CK14BR124K	CKR14BX104M(<u>2)</u> CKR14BR124K(<u>2</u>)	2692 2699	2892 2899	2092 2099	2292 2299
150,000	10	C192(1)154K5R5C(2)	CK14BR154K	CKR14BR124K(<u>2)</u> CKR14BR154K(2)	2700	2900	2100	2300
150,000	20	C192(1)154M5R5C(2)	CK14BR154M	CKR14BR154M(2)	2701	2901	2101	2301
180,000	10	C192(1)184K5R5C(2)	CK14BR184K	CKR14BR184K(<u>2</u>)	2702	2902	2102	2302
220,000	10	C192(<u>1</u>)224K5R5C(<u>2</u>)	CK14BR224K	CKR14BR224K(<u>2</u>)	2703	2903	2103	2303
220,000	20	C192(<u>1</u>)224M5R5C(<u>2</u>)	CK14BR224M	CKR14BR224M(<u>2</u>)	2704	2904	2104	2304
270,000	10	C192(<u>1</u>)274K5R5C(<u>2</u>)	CK14BR274K	CKR14BR274K(<u>2</u>)	2705	2905	2105	2305
50,000	10		OLT — C202 SIZE (MILI		0700	0000	0100	0000
56,000 68,000	10 10	C202T563K1X5C(<u>2</u>) C202T683K1X5C(<u>2</u>)		CKR15BX563K(<u>2)</u> CKR15BX683K(2)	2706 2707	2906 2907	2106 2107	2306 2307
68,000	20	C202T683M1X5C(<u>2</u>)		CKR15BX683M(<u>2</u>)	2707	2908	2108	2308
82,000	10	C202T823K1X5C(2)		CKR15BX823K(<u>2</u>)	2709	2909	2109	2309
100,000	10	C202(<u>1</u>)104K1X5C(<u>2</u>)	CK15BX104K	CKR15BX104K(2)	2710	2910	2110	2310
100,000	20	C202(1)104M1X5C(2)	CK15BX104M	CKR15BX104M(<u>2</u>)	2711	2911	2111	2311
120,000	10	C202(<u>1</u>)124K1R5C(<u>2</u>)	CK15BR124K	CKR15BR124K(<u>2</u>)	2712	2912	2112	2312
150,000 150,000	10 20	C202(<u>1</u>)154K1R5C(<u>2</u>) C202(1)154M1R5C(2)	CK15BR154K CK15BR154M	CKR15BR154K(<u>2)</u> CKR15BR154M(2)	2713 2714	2913 2914	2113 2114	2313 2314
180,000	10	C202(1)134W1R3C(2)	CK15BR184K	CKR15BR184K(2)	2715	2915	2115	2314
220,000	10	C202(1)224K1R5C(2)	CK15BR224K	CKR15BR224K(<u>2</u>)	2716	2916	2116	2316
220,000	20	C202(1)224M1R5C(2)	CK15BR224M	CKR15BR224M(<u>2</u>)	2717	2917	2117	2317
270,000	10	C202(1)274K1R5C(2)	CK15BR274K	CKR15BR274K(2)	2718	2918	2118	2318
330,000	10	C202(1)334K1R5C(2)	CK15BR334K	CKR15BR334K(<u>2</u>)	2719	2919	2119	2319
330,000	20	C202(<u>1</u>)334M1R5C(<u>2</u>)	CK15BR334M	CKR15BR334M(<u>2</u>)	2720	2920	2120	2320
4=2 === 1			OLT — C202 SIZE (MILIT	<u> </u>	T ==:		6.5.	
470,000	10	C202(<u>1</u>)474K5R5C(<u>2</u>)	CK15BR474K	CKR15BR474K(<u>2</u>)	2721	2921	2121	2321
470,000 680,000	20 10	C202(<u>1</u>)474M5R5C(<u>2</u>) C202T684K5R5C(2)	CK15BR474M	CKR15BR474M(<u>2)</u> CKR15BR684K(2)	2722 2723	2922 2923	2122 2123	2322 2323
680,000	20	C202T684M5R5C(<u>2</u>)		CKR15BR684M(<u>2)</u> CKR15BR684M(<u>2</u>)	2723	2923	2123	2323
1,000,000	10	C202(1)105K5R5C(2)	CK15BR105K	CKR15BR004W(<u>2)</u> CKR15BR105K(<u>2</u>)	2725	2925	2125	2325
1,000,000	20	C202(<u>1</u>)105M5R5C(<u>2</u>)	CK15BR105M	CKR15BR105M(<u>2</u>)	2726	2926	2126	2326
		100 V	OLT — C222 SIZE (MILI	TARY—CK16 or CKR16)	-1	1	1	'
470,000	10	C222(1)474K1R5C(2)	CK16BR474K	CKR16BR474K(<u>2</u>)	2727	2927	2127	2327
470,000	20	C222(<u>1</u>)474M1R5C(<u>2</u>)	CK16BR474M	CKR16BR474M(2)	2728	2928	2128	2328
680,000	10	C222T684K1R5C(2)		CKR16BR684K(2)	2729	2929	2129	2329
680,000	20	C222T684M1R5C(<u>2</u>)	OKTOBBTOEK	CKR16BR684M(<u>2</u>)	2730	2930	2130	2330
1,000,000 1,000,000	10 20	C222(<u>1</u>)105K1R5C(<u>2</u>)	CK16BR105K	CKR16BR105K(<u>2</u>)	2731	2931 2932	2131	2331 2332
1,000,000	20	C222(<u>1</u>)105M1R5C(<u>2</u>)	CK16BR105M	CKR16BR105M(<u>2</u>)	2732	2932	2132	2002
2 200 000	10		OLT — C222 SIZE (MILIT	CKR16 or CKR16) CKR16BR225K(2)	0700	2022	0100	0000
2,200,000 2,200,000	10 20	C222(<u>1</u>)225K5R5C(<u>2</u>) C222(<u>1</u>)225M5R5C(<u>2</u>)	CK16BR225K CK16BR225M	CKR16BR225K(<u>2)</u> CKR16BR225M(<u>2</u>)	2733 2734	2933 2934	2133 2134	2333 2334
3,300,000	10	C222(1)335K5R5C(2)	CK16BR335M	CKR16BR335K(<u>2</u>)	2735	2935	2135	2335
3,300,000	20	C222(1)335M5R5C(2)	CK16BR335M	CKR16BR335M(<u>2</u>)	2736	2936	2136	2336
				·				

(1) Insert proper letter for specification: K — MIL-C-11015; T — MIL-PRF-39014 (2) Failure Rate Designator: A — Not applicable (MIL-C-11015); M — 1%/1000 Hours, P — .1%/1000 Hours, R — .01%/1000 Hours, S — .001%/1000 Hours (MIL-PRF-39014)

CERAMIC MOLDED/RADIAL — MIL-C-11015 & MIL-PRF-39014

STABLE TEMPERATURE CHARACTERISTICS—BX & BR (EIA-X7R)



BATINGS & PART NUMBER REFERENCE

		RAT	INGS & PART NUM	IBER REFERENCE				
CAP.	TOL.	KEMET	MIL-C-11015/18	MIL-PRF-39014/01		9014/01 For		
pF	%	PART NUMBER 200 VOL	T C052/C056 SIZE /M	LILITARY—CK05 or CKR0	M M	Р	R	S
10	10	C05(4)(1)100K2X5C(2)	CK05BX100K	CKR05BX100K(2)(3)	1201(<u>3</u>)	1241(<u>3</u>)	1281(<u>3</u>)	1321(<u>3</u>)
10	20	C05(4)(1)100M2X5C(2)	CK05BX100K	CKR05BX100M(<u>2)(3)</u> CKR05BX100M(<u>2)(3)</u>	1202(3)	1241(3)	1282(3)	1322(<u>3</u>)
12	10	C05(4)(1)120K2X5C(2)	CK05BX120K	CKR05BX120K(<u>2</u>)(<u>3</u>)	1203(3)	1243(<u>3</u>)	1283(<u>3</u>)	1323(<u>3</u>)
15	10	C05(4)(1)150K2X5C(2)	CK05BX150K	CKR05BX150K(2)(3)	1204(<u>3</u>)	1244(3)	1284(<u>3</u>)	1324(<u>3</u>)
15	20	C05(4)(1)150M2X5C(2)	CK05BX150M	CKR05BX150M(2)(3)	1205(3)	1245(3)	1285(3)	1325(<u>3</u>)
18	10	C05(4)(1)180K2X5C(2)	CK05BX180K	CKR05BX180K(2)(3)	1206(3)	1246(3)	1286(3)	1326(3)
22	10	C05(4)(1)220K2X5C(2)	CK05BX220K	CKR05BX220K(2)(3)	1207(3)	1247(<u>3</u>)	1287(<u>3</u>)	1327(<u>3</u>)
22	20	C05(4)(1)220M2X5C(2)	CK05BX220M	CKR05BX220M(2)(3)	1208(<u>3</u>)	1248(<u>3</u>)	1288(<u>3</u>)	1328(<u>3</u>)
27	10	C05(4)(1)270K2X5C(2)	CK05BX270K	CKR05BX270K(2)(3)	1209(<u>3</u>)	1249(<u>3</u>)	1289(<u>3</u>)	1329(<u>3</u>)
33	10	C05(4)(1)330K2X5C(2)	CK05BX330K	CKR05BX330K(<u>2</u>)(<u>3</u>)	1210(<u>3</u>)	1250(<u>3</u>)	1290(<u>3</u>)	1330(<u>3</u>)
33	20	C05(4)(1)330M2X5C(2)	CK05BX330M	CKR05BX330M(2)(3)	1211(3)	1251(<u>3</u>)	1291(3)	1331(3)
39	10	C05(4)(1)390K2X5C(2)	CK05BX390K	CKR05BX390K(2)(3)	1212(<u>3</u>) 1213(3)	1252(3)	1292(3)	1332(3)
47 47	10 20	C05(4)(1)470K2X5C(2) C05(4)(1)470M2X5C(2)	CK05BX470K CK05BX470M	CKR05BX470K(<u>2)(3)</u> CKR05BX470M(<u>2)(3)</u>	1213(3)	1253(<u>3</u>) 1254(<u>3</u>)	1293(<u>3</u>) 1294(<u>3</u>)	1333(<u>3</u>) 1334(<u>3</u>)
56	10	C05(4)(1)560K2X5C(2)	CK05BX560K	CKR05BX560K(2)(3)	1215(3)	1255(3)	1295(3)	1335(3)
68	10	C05(4)(1)680K2X5C(2)	CK05BX680K	CKR05BX680K(2)(3)	1216(3)	1256(<u>3</u>)	1296(3)	1336(3)
68	20	C05(4)(1)680M2X5C(2)	CK05BX680M	CKR05BX680M(2)(3)	1217(3)	1257(3)	1297(3)	1337(3)
82	10	C05(4)(1)820K2X5C(2)	CK05BX820K	CKR05BX820K(2)(3)	1218(3)	1258(<u>3</u>)	1298(<u>3</u>)	1338(<u>3</u>)
100	10	C05(4)(1)101K2X5C(2)	CK05BX101K	CKR05BX101K(2)(3)	1219(<u>3</u>)	1259(<u>3</u>)	1299(<u>3</u>)	1339(<u>3</u>)
100	20	C05(4)(1)101M2X5C(2)	CK05BX101M	CKR05BX101M(2)(3)	1220(<u>3</u>)	1260(<u>3</u>)	1300(<u>3</u>)	1340(<u>3</u>)
120	10	C05(4)(1)121K2X5C(2)	CK05BX121K	CKR05BX121K(<u>2</u>)(<u>3</u>)	1221(<u>3</u>)	1261(<u>3</u>)	1301(<u>3</u>)	1341(<u>3</u>)
150	10	C05(4)(1)151K2X5C(2)	CK05BX151K	CKR05BX151K(2)(3)	1222(<u>3</u>)	1262(<u>3</u>)	1302(<u>3</u>)	1342(<u>3</u>)
150	20	C05(4)(1)151M2X5C(2)	CK05BX151M	CKR05BX151M(2)(3)	1223(<u>3</u>)	1263(<u>3</u>)	1303(<u>3</u>)	1343(<u>3</u>)
180	10	C05(4)(1)181K2X5C(2)	CK05BX181K	CKR05BX181K(2)(3)	1224(3)	1264(<u>3</u>)	1304(3)	1344(<u>3</u>)
220	10	C05(4)(1)221K2X5C(2)	CK05BX221K	CKR05BX221K(<u>2</u>)(<u>3</u>)	1225(3)	1265(<u>3</u>)	1305(<u>3</u>)	1345(3)
220 270	20 10	C05(4)(1)221M2X5C(2)	CK05BX221M	CKR05BX221M(<u>2</u>)(<u>3</u>)	1226(3)	1266(3)	1306(<u>3</u>)	1346(<u>3</u>) 1347(3)
330	10	C05(4)(1)271K2X5C(2) C05(4)(1)331K2X5C(2)	CK05BX271K CK05BX331K	CKR05BX271K(<u>2)(3)</u> CKR05BX331K(2)(3)	1227(<u>3</u>) 1228(3)	1267(<u>3</u>) 1268(3)	1307(<u>3</u>) 1308(3)	1347(<u>3</u>)
330	20	C05(4)(1)331M2X5C(2)	CK05BX331M	CKR05BX331M(2)(3)	1229(3)	1269(<u>3</u>)	1309(3)	1349(<u>3</u>)
390	10	C05(4)(1)391K2X5C(2)	CK05BX391K	CKR05BX391K(2)(3)	1230(3)	1270(3)	1310(3)	1350(3)
470	10	C05(4)(1)471K2X5C(2)	CK05BX471K	CKR05BX471K(2)(3)	1231(3)	1271(3)	1311(3)	1351(3)
470	20	C05(4)(1)471M2X5C(2)	CK05BX471M	CKR05BX471M(2)(3)	1232(3)	1272(3)	1312(3)	1352(<u>3</u>)
560	10	C05(4)(1)561K2X5C(2)	CK05BX561K	CKR05BX561K(2)(3)	1233(3)	1273(<u>3</u>)	1313(<u>3</u>)	1353(<u>3</u>)
680	10	C05(4)(1)681K2X5C(2)	CK05BX681K	CKR05BX681K(2)(3)	1234(3)	1274(<u>3</u>)	1314(<u>3</u>)	1354(<u>3</u>)
680	20	C05(4)(1)681M2X5C(2)	CK05BX681M	CKR05BX681M(<u>2</u>)(<u>3</u>)	1235(<u>3</u>)	1275(<u>3</u>)	1315(<u>3</u>)	1355(<u>3</u>)
820	10	C05(4)(1)821K2X5C(2)	CK05BX821K	CKR05BX821K(<u>2</u>)(<u>3</u>)	1236(<u>3</u>)	1276(<u>3</u>)	1316(<u>3</u>)	1356(<u>3</u>)
1,000	10	C05(4)(1)102K2X5C(2)	CK05BX102K	CKR05BX102K(2)(3)	1237(<u>3</u>)	1277(<u>3</u>)	1317(<u>3</u>)	1357(<u>3</u>)
1,000	20	C05(<u>4</u>)(<u>1</u>)102M2X5C(<u>2</u>)	CK05BX102M	CKR05BX102M(2)(3)	1238(<u>3</u>)	1278(<u>3</u>)	1318(<u>3</u>)	1358(<u>3</u>)
		100 VOL		ILITARY—CK05 or CKR0				
1,200	10	C05(4)(1)122K1X5C(2)	CK05BX122K	CKR05BX122K(2)(3)	1239(<u>3</u>)	1279(<u>3</u>)	1319(<u>3</u>)	1359(<u>3</u>)
1,500	10	C05(4)(1)152K1X5C(2)	CK05BX152K	CKR05BX152K(2)(3)	1240(<u>3</u>)	1280(<u>3</u>)	1320(<u>3</u>)	1360(<u>3</u>)
1,500	20	C05(4)(1)152M1X5C(2)	CK05BX152M	CKR05BX152M(2)(3)	1441(3)	1481(<u>3</u>)	1521(3)	1561(3)
1,800	10	C05(4)(1)182K1X5C(2)	CK05BX182K	CKR05BX182K(<u>2</u>)(<u>3</u>)	1442(3)	1482(<u>3</u>)	1522(3)	1562(<u>3</u>)
2,200 2,200	10 20	C05(4)(1)222K1X5C(2) C05(4)(1)222M1X5C(2)	CK05BX222K CK05BX222M	CKR05BX222K(<u>2</u>)(<u>3</u>) CKR05BX222M(<u>2</u>)(<u>3</u>)	1443(<u>3)</u> 1444(<u>3</u>)	1483(<u>3</u>) 1484(3)	1523(<u>3</u>) 1524(<u>3</u>)	1563(<u>3</u>) 1564(<u>3</u>)
2,700	10	C05(4)(1)272K1X5C(2)	CK05BX272K	CKR05BX272K(<u>2)(3)</u> CKR05BX272K(<u>2)(3)</u>	1445(3)	1485(<u>3</u>)	1525(<u>3</u>)	1565(<u>3</u>)
3,300	10	C05(4)(1)332K1X5C(2)	CK05BX332K	CKR05BX332K(2)(3)	1446(3)	1486(3)	1526(3)	1566(3)
3,300	20	C05(4)(1)332M1X5C(2)	CK05BX332M	CKR05BX332M(2)(3)	1447(3)	1487(<u>3</u>)	1527(3)	1567(3)
3,900	10	C05(4)(1)392K1X5C(2)	CK05BX392K	CKR05BX392K(2)(3)	1448(3)	1488(3)	1528(3)	1568(3)
4,700	10	C05(4)(1)472K1X5C(2)	CK05BX472K	CKR05BX472K(2)(3)	1449(3)	1489(3)	1529(<u>3</u>)	1569(3)
4,700	20	C05(<u>4</u>)(<u>1</u>)472M1X5C(<u>2</u>)	CK05BX472M	CKR05BX472M(2)(3)	1450(<u>3</u>)	1490(<u>3</u>)	1530(<u>3</u>)	1570(<u>3</u>)
5,600	10	C05(4)(1)562K1X5C(2)	CK05BX562K	CKR05BX562K(2)(3)	1451(<u>3</u>)	1491(<u>3</u>)	1531(<u>3</u>)	1571(<u>3</u>)
6,800	10	C05(4)(1)682K1X5C(2)	CK05BX682K	CKR05BX682K(2)(3)	1452(<u>3</u>)	1492(3)	1532(<u>3</u>)	1572(3)
6,800	20	C05(4)(1)682M1X5C(2)	CK05BX682M	CKR05BX682M(<u>2</u>)(<u>3</u>)	1453(3)	1493(3)	1533(3)	1573(3)
8,200 10,000	10 10	C05(4)(1)822K1X5C(2) C05(4)(1)103K1X5C(2)	CK05BX822K CK05BX103K	CKR05BX822K(<u>2</u>)(<u>3</u>) CKR05BX103K(<u>2</u>)(<u>3</u>)	1454(<u>3)</u> 1455(<u>3</u>)	1494(<u>3</u>) 1495(<u>3</u>)	1534(<u>3</u>) 1535(<u>3</u>)	1574(<u>3</u>) 1575(<u>3</u>)
10,000	20	C05(4)(1)103K1X5C(2) C05(4)(1)103M1X5C(2)	CK05BX103K CK05BX103M	CKR05BX103K(<u>2)(3)</u> CKR05BX103M(<u>2)(3)</u>	1455(<u>3</u>)	1495(<u>3</u>) 1496(<u>3</u>)	1536(3)	1575(<u>3</u>)
10,000	20					1430(<u>0</u>)	1330(<u>3</u>)	1370(<u>3</u>)
10,000	10			LITARY—CK05 or CKR0		1.407(0)	1507(0)	1577(0)
12,000	10 10	C05(4)(1)123K5X5C(2) C05(4)(1)153K5X5C(2)	CK05BX123K CK05BX153K	CKR05BX123K(<u>2)(3)</u>	1457(<u>3</u>) 1458(3)	1497(<u>3)</u> 1498(<u>3</u>)	1537(<u>3</u>) 1538(3)	1577(<u>3</u>)
15,000 15,000	20	C05(4)(1)153M5X5C(2)	CK05BX153M	CKR05BX153K(<u>2</u>)(<u>3</u>) CKR05BX153M(2)(3)	1459(3)	1490(<u>3)</u>	1539(<u>3</u>)	1578(<u>3</u>) 1579(<u>3</u>)
18,000	10	C05(4)(1)183K5X5C(2)	CK05BX183K	CKR05BX183K(2)(3)	1460(3)	1500(3)	1540(3)	1580(<u>3</u>)
22,000	10	C05(4)(1)223K5X5C(2)	CK05BX223K	CKR05BX223K(2)(3)	1461(3)	1500(<u>3</u>)	1541(3)	1581(3)
22,000	20	C05(4)(1)223M5X5C(2)	CK05BX223M	CKR05BX223M(2)(3)	1462(3)	1502(<u>3</u>)	1542(<u>3</u>)	1582(3)
27,000	10	C05(4)(1)273K5X5C(2)	CK05BX273K	CKR05BX273K(2)(3)	1463(<u>3</u>)	1503(<u>3</u>)	1543(<u>3</u>)	1583(<u>3</u>)
33,000	10	C05(4)(1)333K5X5C(2)	CK05BX333K	CKR05BX333K(<u>2</u>)(<u>3</u>)	1464(<u>3</u>)	1504(<u>3</u>)	1544(<u>3</u>)	1584(<u>3</u>)
33,000	20	C05(4)(1)333M5X5C(2)	CK05BX333M	CKR05BX333M(<u>2</u>)(<u>3</u>)	1465(<u>3</u>)	1505(<u>3</u>)	1545(<u>3</u>)	1585(<u>3</u>)
39,000	10	C05(4)(1)393K5X5C(2)	CK05BX393K	CKR05BX393K(2)(3)	1466(<u>3</u>)	1506(<u>3</u>)	1546(<u>3</u>)	1586(<u>3</u>)
47,000	10	C05(4)(1)473K5X5C(2)	CK05BX473K	CKR05BX473K(<u>2</u>)(<u>3</u>)	1467(<u>3</u>)	1507(<u>3</u>)	1547(<u>3</u>)	1587(<u>3</u>)
47,000	20	C05(4)(1)473M5X5C(2)	CK05BX473M	CKR05BX473M(<u>2</u>)(<u>3</u>)	1468(3)	1508(<u>3</u>)	1548(<u>3</u>)	1588(3)
56,000	10	C05(4)(1)563K5X5C(2)	CK05BX563K	CKR05BX563K(<u>2</u>)(<u>3</u>)	1469(3)	1509(<u>3</u>)	1549(3)	1589(3)
68,000	10	C05(4)(1)683K5X5C(2)	CK05BX683K	CKR05BX683K(<u>2</u>)(<u>3</u>)	1470(<u>3</u>)	1510(<u>3</u>)	1550(3)	1590(3)
68,000 82,000	20 10	C05(<u>4</u>)(<u>1</u>)683M5X5C(<u>2</u>) C05(4)(1)823K5X5C(2)	CK05BX683M CK05BX823K	CKR05BX683M(<u>2)(3)</u> CKR05BX823K(<u>2)(3)</u>	1471(<u>3)</u> 1472(<u>3</u>)	1511(<u>3</u>) 1512(<u>3</u>)	1551(<u>3</u>) 1552(<u>3</u>)	1591(<u>3)</u> 1592(<u>3</u>)
100,000	10	C05(4)(1)104K5X5C(2)	CK05BX104K	CKR05BX623K(2)(3) CKR05BX104K(2)(3)	1472(3)	1512(<u>3)</u>	1552(<u>3)</u> 1553(3)	1592(<u>3)</u> 1593(<u>3</u>)
100,000	20	C05(4)(1)104N5X5C(2)	CK05BX104K	CKR05BX104M(<u>2)(3)</u> CKR05BX104M(<u>2)(3)</u>	1474(3)	1513(<u>3</u>) 1514(<u>3</u>)	1554(3)	1594(<u>3</u>)
. 55,500	<u>-</u>	<u>\</u> , <u></u> ,	2002,0 1111		,(⊆)	(<u>u</u>)	. 30 .(0)	· - • · (<u>•</u> /

⁽³⁾ Insert "2" for standard design (C056). Leave blank for the flat bottom design (C052). Insert "6" for stand-off design (Style C056) with the CKR, not the CK.



CERAMIC MOLDED/RADIAL — MIL-C-11015 & MIL-PRF-39014

STABLE TEMPERATURE CHARACTERISTICS—BX & BR (EIA-X7R)

RATINGS & PART NUMBER REFERENCE

CAP.	TOL.	KEMET	MII. C 44045/40	MIL DDE 20044/22	MIL-PRF-3	9014/02 For	Failure Rat	e Levels (2)
pF	%	PART NUMBER	MIL-C-11015/19	MIL-PRF-39014/02	М	Р	R	S
		200 VOL	T — C062/C066 SIZE (M	IILITARY—CK06 or CKR0	6)			
1,200	10	C06(4)(1)122K2X5C(2)	CK06BX122K	CKR06BX122K(<u>2</u>)(<u>3</u>)	1201(<u>3</u>)	1241(<u>3</u>)	1281(<u>3</u>)	1321(<u>3</u>)
1,500	10	C06(4)(1)152K2X5C(2)	CK06BX152K	CKR06BX152K(<u>2</u>)(<u>3</u>)	1202(<u>3</u>)	1242(<u>3</u>)	1282(<u>3</u>)	1322(<u>3</u>)
1,500	20	C06(4)(1)152M2X5C(2)	CK06BX152M	CKR06BX152M(<u>2</u>)(<u>3</u>)	1203(<u>3</u>)	1243(<u>3</u>)	1283(<u>3</u>)	1323(<u>3</u>)
1,800	10	C06(4)(1)182K2X5C(2)	CK06BX182K	CKR06BX182K(2)(3)	1204(<u>3</u>)	1244(<u>3</u>)	1284(<u>3</u>)	1324(<u>3</u>)
2,200	10	C06(<u>4</u>)(<u>1</u>)222K2X5C(<u>2</u>)	CK06BX222K	CKR06BX222K(<u>2</u>)(<u>3</u>)	1206(<u>3</u>)	1246(<u>3</u>)	1286(<u>3</u>)	1326(<u>3</u>)
2,200	20	C06(4)(1)222M2X5C(2)	CK06BX222M	CKR06BX222M(<u>2</u>)(<u>3</u>)	1207(<u>3</u>)	1247(<u>3</u>)	1287(<u>3</u>)	1327(<u>3</u>)
2,700	10	C06(4)(1)272K2X5C(2)	CK06BX272K	CKR06BX272K(<u>2</u>)(<u>3</u>)	1208(<u>3</u>)	1248(<u>3</u>)	1288(<u>3</u>)	1328(<u>3</u>)
3,300	10	C06(4)(1)332K2X5C(2)	CK06BX332K	CKR06BX332K(<u>2</u>)(<u>3</u>)	1209(<u>3</u>)	1249(<u>3</u>)	1289(<u>3</u>)	1329(<u>3</u>)
3,300	20	C06(4)(1)332M2X5C(2)	CK06BX332M	CKR06BX332M(<u>2</u>)(<u>3</u>)	1210(<u>3</u>)	1250(<u>3</u>)	1290(<u>3</u>)	1330(<u>3</u>)
3,900	10	C06(4)(1)392K2X5C(2)	CK06BX392K	CKR06BX392K(<u>2</u>)(<u>3</u>)	1211(<u>3</u>)	1251(<u>3</u>)	1291(<u>3</u>)	1331(<u>3</u>)
4,700	10	C06(4)(1)472K2X5C(2)	CK06BX472K	CKR06BX472K(2)(3)	1212(<u>3</u>)	1252(<u>3</u>)	1292(<u>3</u>)	1332(<u>3</u>)
4,700	20	C06(4)(1)472M2X5C(2)	CK06BX472M	CKR06BX472M(<u>2</u>)(<u>3</u>)	1213(<u>3</u>)	1253(<u>3</u>)	1293(<u>3</u>)	1333(<u>3</u>)
5,600	10	C06(4)(1)562K2X5C(2)	CK06BX562K	CKR06BX562K(<u>2</u>)(<u>3</u>)	1214(<u>3</u>)	1254(<u>3</u>)	1294(<u>3</u>)	1334(<u>3</u>)
6,800	10	C06(4)(1)682K2X5C(2)	CK06BX682K	CKR06BX682K(<u>2</u>)(<u>3</u>)	1215(<u>3</u>)	1255(<u>3</u>)	1295(<u>3</u>)	1335(<u>3</u>)
6,800	20	C06(4)(1)682M2X5C(2)	CK06BX682M	CKR06BX682M(<u>2</u>)(<u>3</u>)	1216(<u>3</u>)	1256(<u>3</u>)	1296(<u>3</u>)	1336(<u>3</u>)
8,200	10	C06(4)(1)822K2X5C(2)	CK06BX822K	CKR06BX822K(2)(3)	1217(<u>3</u>)	1257(<u>3</u>)	1297(<u>3</u>)	1337(<u>3</u>)
10,000	10	C06(4)(1)103K2X5C(2)	CK06BX103K	CKR06BX103K(2)(3)	1218(<u>3</u>)	1258(<u>3</u>)	1298(<u>3</u>)	1338(<u>3</u>)
10,000	20	C06(4)(1)103M2X5C(2)	CK06BX103M	CKR06BX103M(<u>2</u>)(<u>3</u>)	1219(<u>3</u>)	1259(<u>3</u>)	1299(<u>3</u>)	1339(<u>3</u>)
				IILITARY—CK06 or CKR0				
12,000	10	C06(4)(1)123K1X5C(2)	CK06BX123K	CKR06BX123K(<u>2</u>)(<u>3</u>)	1231(<u>3</u>)	1271(<u>3</u>)	1311(<u>3)</u> 1300(<u>3</u>)	1351(<u>3</u>)
15,000	10	C06(4)(1)153K1X5C(2)	CK06BX153K	CKR06BX153K(<u>2)(3)</u>	1220(<u>3</u>)	1260(<u>3</u>)	1300(<u>3</u>)	1340(<u>3</u>)
15,000	20	C062K153M1X5CA	CK06BX153M					
18,000	10	C06(4)(1)183K1X5C(2)	CK06BX183K	CKR06BX183K(<u>2</u>)(<u>3</u>)	1221(<u>3</u>)	1261(<u>3</u>)	1301(<u>3</u>)	1341(<u>3</u>)
22,000	10	C06(4)(1)223K1X5C(2)	CK06BX223K	CKR06BX223K(<u>2</u>)(<u>3</u>)	1222(<u>3</u>)	1262(<u>3</u>)	1302(<u>3</u>)	1342(<u>3</u>)
22,000	20	C062K223M1X5CA	CK06BX223M					
27,000	10	C06(4)(1)273K1X5C(2)	CK06BX273K	CKR06BX273K(2)(3)	1232(<u>3</u>)	1272(<u>3</u>)	1312(<u>3</u>)	1352(<u>3</u>)
33,000	10	C06(4)(1)333K1X5C(2)	CK06BX333K	CKR06BX333K(<u>2</u>)(<u>3</u>)	1223(<u>3</u>)	1263(<u>3</u>)	1303(<u>3</u>)	1343(<u>3</u>)
33,000	20	C062K333M1X5CA	CK06BX333M	01(D00D)(0001((0)(0)	1001(0)	1001(0)	1001(0)	40.44(0)
39,000	10	C06(4)(1)393K1X5C(2)	CK06BX393K	CKR06BX393K(2)(3)	1224(<u>3</u>)	1264(<u>3</u>)	1304(<u>3</u>)	1344(<u>3</u>)
47,000	10	C06(4)(1)473K1X5C(2)	CK06BX473K	CKR06BX473K(<u>2</u>)(<u>3</u>)	1225(<u>3</u>)	1265(<u>3</u>)	1305(<u>3</u>)	1345(<u>3</u>)
47,000	20	C062K473M1X5CA	CK06BX473M	01/0000\/5001/(0)/0)	1000(0)	1000(0)	1000(0)	10.10(0)
56,000	10	C06(4)(1)563K1X5C(2)	CK06BX563K	CKR06BX563K(2)(3)	1226(<u>3</u>)	1266(<u>3</u>)	1306(<u>3</u>)	1346(<u>3</u>)
68,000	10	C06(4)(1)683K1X5C(2)	CK06BX683K	CKR06BX683K(<u>2</u>)(<u>3</u>)	1227(<u>3</u>)	1267(<u>3</u>)	1307(<u>3</u>)	1347(<u>3</u>)
68,000	20	C062K683M1X5CA	CK06BX683M	OK DOOD VOOOL (O) (O)	1000(0)	1000(0)	4000(0)	40.40(0)
82,000	10	C06(4)(1)823K1X5C(2)	CK06BX823K	CKR06BX823K(<u>2)(3)</u>	1229(<u>3</u>)	1269(<u>3</u>)	1309(<u>3</u>)	1349(<u>3</u>)
100,000	10	C06(<u>4</u>)(<u>1</u>)104K1X5C(<u>2</u>)	CK06BX104K	CKR06BX104K(<u>2</u>)(<u>3</u>)	1230(<u>3</u>)	1270(<u>3</u>)	1310(<u>3</u>)	1350(<u>3</u>)
100,000	20	C062K104M1X5CA	CK06BX104M					
100.000	40	50 VOL		ILITARY—CK06 or CKR06		4070(0)	4040(0)	4050(0)
120,000	10	C06(4)(1)124K5X5C(2)	CK06BX124K	CKR06BX124K(<u>2</u>)(<u>3</u>)	1233(<u>3</u>)	1273(<u>3</u>)	1313(<u>3</u>)	1353(<u>3</u>)
150,000	10	C06(4)(1)154K5X5C(2)	CK06BX154K	CKR06BX154K(<u>2)(3)</u>	1234(<u>3</u>)	1274(<u>3</u>)	1314(<u>3</u>)	1354(<u>3</u>)
150,000	20 10	C062K154M5X5CA	CK06BX154M	CKD06DV194K(0)(0)	1005(0)	1075(0)	1015(0)	1055(0)
180,000		C06(4)(1)184K5X5C(2)	CK06BX184K	CKR06BX184K(<u>2</u>)(<u>3</u>)	1235(<u>3</u>)	1275(<u>3</u>)	1315(<u>3</u>)	1355(<u>3</u>)
220,000 220,000	10 20	C06(<u>4</u>)(<u>1</u>)224K5X5C(<u>2</u>) C062K224M5X5CA	CK06BX224K	CKR06BX224K(<u>2</u>)(<u>3</u>)	1236(<u>3</u>)	1276(<u>3</u>)	1316(<u>3</u>)	1356(<u>3</u>)
	20 10		CK06BX224M	CKD06DV074K(0\(0\)	1007(0)	1077(0)	1017/0\	1257(2)
270,000	10	C06(4)(1)274K5X5C(2) C06(4)(1)334K5X5C(2)	CK06BX274K CK06BX334K	CKR06BX274K(<u>2</u>)(<u>3</u>)	1237(<u>3</u>)	1277(<u>3</u>)	1317(<u>3)</u> 1318(<u>3</u>)	1357(<u>3</u>)
330,000 330,000	20	C06(4)(1)334K5X5C(2) C062K334M5X5CA	CK06BX334K CK06BX334M	CKR06BX334K(2)(3)	1238(<u>3</u>)	1278(<u>3</u>)	1010(<u>0</u>)	1358(<u>3</u>)
390,000	10	C062K334M5X5CA C06(4)(1)394K5X5C(2)	CK06BX334M CK06BX394K	CKR06BX394K(2)(3)	1239(3)	1279(3)	1319(<u>3</u>)	1359(3)
470,000	10	C06(4)(1)474K5X5C(2)	CK06BX474K	CKR06BX474K(2)(3)	1239(<u>3)</u>	1279(3)	1320(3)	1360(3)
470,000	20	C06(4)(1)474K5X5C(2) C062K474M5X5CA	CK06BX474K CK06BX474M		1240(0)	1200(<u>0</u>)	1020(0)	1000(<u>0</u>)
560,000	10	C06(4)(1)564K5X5C(2)	CK06BX564K	CKR06BX564K(2)(3)	1404(3)	1408(3)	1412(3)	1416(3)
680,000	10	C06(4)(1)684K5X5C(2)	CK06BX684K	CKR06BX684K(2)(3)	1404(<u>3</u>)	1400(<u>3</u>)	1412(<u>3)</u>	1417(<u>3</u>)
680,000	20	C06(4)(1)064K3X3C(2) C062K684M5X5CA	CK06BX684M		1403(<u>3</u>)	1409(2)	1413(2)	1417(2)
820,000	10	C06(4)(1)824K5X5C(2)	CK06BX824K	CKR06BX824K(<u>2</u>)(<u>3</u>)	1406(<u>3</u>)	1410(3)	1414(3)	1418(<u>3</u>)
1,000,000	10	C06(4)(1)105K5X5C(2)	CK06BX024K CK06BX105K	CKR06BX105K(2)(3)	1400(<u>3)</u>	1411(3)	1415(3)	1419(3)
1,000,000	20	C062K105M5X5CA	CK06BX105M		1707(<u>0</u>)	'-''(<u>0</u>)	1710(0)	1713(<u>0</u>)
1,000,000	20	COOLITIOONIOAGA	CINCODATION					

⁽¹⁾ Insert proper letter for specification: K — MIL-C-11015; T — MIL-PRF-39014.

⁽²⁾ Failure Rate Designator: A — Not applicable (MIL-C-11015); M — 1%/1000 Hours, P — .1%/1000 Hours, R — .01%/1000 Hours, S — .001%/1000 Hours (MIL-PRF-39014) (3) Add "V" for stand-off design (C066). Leave blank for the flat bottom design (C062). (4) Insert "2" for standard design (Style C062). Insert "6" for stand-off design (Style C066). Note: Stand-offs are available only with the CKR, not the CK.

CERAMIC LEADED PACKAGING INFORMATION

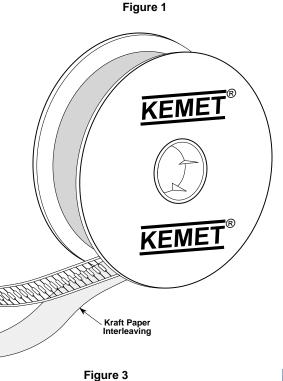


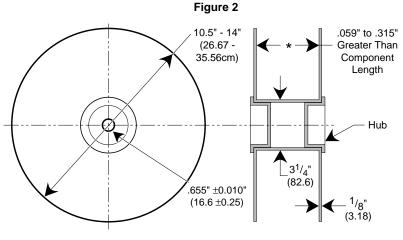
Ceramic Axial

Lead Tape and Reel Packaging

KEMET offers standard reeling of Molded and Conformally Coated Axial Leaded Ceramic Capacitors for automatic insertion or lead forming machines per EIA specification RS-296. KEMET'S internal specification four-digit suffix, 7200, is placed at the end of the part number to designate tape and reel packaging, ie: C410C104Z5U5CA7200.

Paper (50 lb.) test minimum is inserted between the layers of capacitors wound on reels for component pitch $\leq 0.400".$ Capacitor lead length may extend only a maximum of .0625" (1.59mm) beyond the tapes' edges. Capacitors are centered in a row between the two tapes and will deviate only \pm 0.031 (0.79mm) from the row center. A minimum of 36" (91.5 cm) leader tape is provided at each end of the reel capacitors. Universal splicing clips are used to connect the tape. Standard reel quantities are shown on page 41.





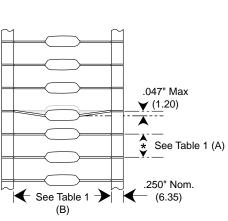


Table 1 Dimensions in Inches & (Millimeters)

Component Body Diameter	Component Pitch "A"	Inside Tape ± 1.5mm	Spacing "B" (0.059")
	0.020" or (±0.5mm)	I	III*
0" (0mm) to 0.197" (5mm) 0.197" (5.01mm) to 0.394: (10mm)	0.197" or (5mm) 0.394" or (10mm)	2.062" (52.4mm)	2.874" (73mm)

Adhesive Tape

Adhesive Tape

^{*} Not Available for Conformally Coated Parts.

Ceramic Radial

Lead Tape and Reel Packaging

KEMET offers standard reeling of Molded and Conformally Coated Radial Leaded Ceramic Capacitors for automatic insertion per EIA specification RS-468. Parts are taped to a tagboard carrier strip, and wound on a reel as shown in Figure 1. Kraft paper interleaving is inserted between the layers of capacitors on the reel. Ammopack is also available, with the same lead tape configuration and package quantities.

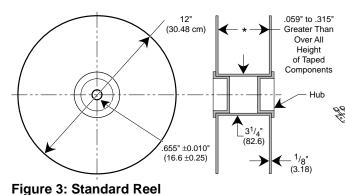
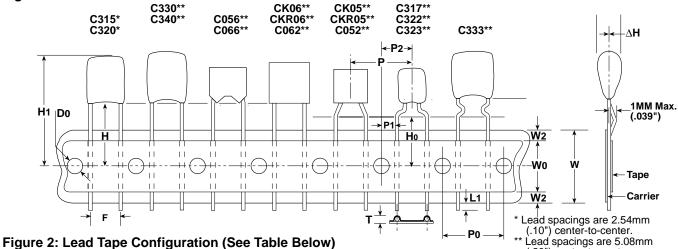


Figure 1 **KEMET Carrier Strip** KEMET Adhesive Tape Kraft Paper Interleaving Carrier Tape

(Note: Non-standard lead lengths available in bulk only.)



configuration for Series.

(.20") center-to-center. # See page 15 for exact lead

Ceramic Radial Tape and Reel Dimensions in Millimeters & (Inches)

Dimension	Symbol	Nom mm	inal (inch)	Tolera mm (ir		Dimension	Symbol	Nomi mm (Tolera mm (
Sprocket Hole Diameter	Do	4.0 (.157)	± 0.2 (.008)		Height to Seating Plane (formed leads) (2)	H ₀	7301 16.0 (.630)	7303 18.0 (.709)	7301 ±0.5 (.020)	7303 Minimum
Sprocket Hole Pitch	P0	12.7	(.500)	± 0.3 ((.012)	Component Alignment	Δh	4.0 (.157)	±0.2 (.008)
Component Pitch	Р	12.7	(.500)	± 0.3 ((.012)	Lead Protrusion	L1	1.0 (.039)	Maxir	num
Lead Spacing (1)	F	5.08 (.20)	2.54 (.10)	+0.6 (+.024		Composite Tape Thickness	t	0.7 (.051)	±0.2 (.008)
Sprocket Hole Center to Lead Center (1)	P1	3.81 (.150)	5.08 (.200)	± 0.7 ((.028)	Overall Tape and Lead Thickness	Т	1.5 (.059)	Maxir	num
Sprocket Hole Center to Component Center	P2	6.35	(.250)	± 1.3 ((.051)	Carrier Tape Width	W	18.0	(.709)	+1.0 (+.039	
Height to Seating Plane (straight leads) (2)	Н	7301 16.0 (.630)	7303 18.0 (.709)	7301 ±0.5 (.020)	7303 Minimum	Hold-Down Tape Width	W0	5.0 (.197)	Minin	num
Component Height Above Tape Center	H1	32.2	(1.27)	Maxir	mum	Hold-Down Tape Location	W2	3.0 (.118)	Maxir	mum

Measured at the egress from the carrier tape, on the component side

Determined by a 4 digit suffix placed at the end of the part number, as follows:
7301 = Recommended for parts with formed leads.
7303 = Recommended for parts with straight leads.
Example: C322C104K5R5CA7303
Example: C320C104K5R5CA7303

CERAMIC LEADED PACKAGING INFORMATION



KEMET Series	Military Style	Military Specification	Standard (1) Bulk Quantity	Ammo Pack Quantity Maximum	Maximum Reel Quantity	Reel Size
C114C-K-G	CK12, CC75	MIL-C-11015/	200/Box		5000	12"
C124C-K-G	CK13, CC76	MIL-PRF-20	200/Box		5000	12"
C192C-K-G	CK14, CC77		100/Box		3000	12"
C202C-K	CK15		25/Box		500	12"
C222C-K	CK16		10/Tray		300	12"
C052C-K-G	CK05, CC05		100/Bag	2000	2000	12"
C062C-K-G	CK06, CC06		100/Bag	1500	1500	12"
C114G	CCR75	MIL-PRF-20	200/Box		5000	12"
C124G	CCR76		200/Box		5000	12"
C192G	CCR77		100/Box		3000	12"
C202G	CC78-CCR78		25/Box		500	12"
C222G	CC79-CCR79		10/Tray		300	12"
C052/56G	CCR05		100/Bag		1700	12"
C062/66G	CCR06		100/Bag		1500	12"
C512G	CC07-CCR07		Footnote (2)		N/A	N/A
C522G	CC08-CCR08		Footnote (2)		N/A	N/A
C114T	CKR11	MIL-PRF-39014	200/Box		5000	12"
C124T	CKR12		200/Box		5000	12'
C192T	CKR14		100/Box		3000	12'
C202T	CKR15		25/Box		500	12'
C222T	CKR16		10/Tray		300	12'
C052/56T	CKR05		100/Bag		1700	12'
C062/66T	CKR06		100/Bag		1500	12'
C31X			500/Bag	2500	2500	12"
C32X			500/Bag	2500	2500	12"
C33X			250/Bag	1500	1500	12"
C340			100/Bag	1000	1000	12"
C350			50/Bag	N/A	N/A	N/A
C410			300/Box	4000	5000	12'
C412			200/Box	4000	5000	12'
C420			300/Box	4000	5000	12'
C430			200/Box	2000	2500	12'
C440			200/Box	2000	2500	12'
C512	N/A	N/A	Footnote (2)		N/A	N/A
C522	N/A	N/A	Footnote (2)		N/A	N/A
C617			500/Bag			
C622/C623			500/Bag			
C627/C628			500/Bag			
C630/C631			250/Bag			
C637/C638			250/Bag			
C640/C641			100/Bag			
C642/C643			100/Bag			
C647/C648			100/Bag			
C657/C658			50/Bag			
C667/C668			50/Bag	1		

NOTE: (1) Standard packaging refers to number of pieces per bag, tray or vial.

⁽²⁾ Quantity varies. For further details, please consult the factory.