

GENERAL

Working Voltage:

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

Temperature Characteristics:

C0G – 0 $\pm$ 30 PPM/ $^{\circ}$ C from -55 $^{\circ}$ C to +125 $^{\circ}$ C
X7R – $\pm$ 15% from -55 $^{\circ}$ C to +125 $^{\circ}$ C

Capacitance Tolerance:

C0G – $\pm$ 0.5 pF, $\pm$ 1%, $\pm$ 2%, $\pm$ 5%, $\pm$ 10%, $\pm$ 20%
($\pm$ 0.5 pF is tightest available tolerance)
X7R – $\pm$ 10%, $\pm$ 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 $^{\circ}$ 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 $^{\circ}$ C and rated voltage
C0G – 100K megohms or 1000 megohm - μ F, whichever is less.
X7R – 100K megohms or 1000 megohm - μ F, whichever is less.

Dielectric Withstanding Voltage:

250% of rated voltage for 5 seconds with current limited to 50 mA at 25 $^{\circ}$ C.

Life Test:

2000 hours at 200% of rated voltage at 125 $^{\circ}$ C. Post-Test limits at 25 $^{\circ}$ 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:

C0G – 10K megohms or 100 megohm - μ F, 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.

ENVIRONMENTAL

Moisture Resistance:

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

Insulation Resistance:

C0G – 10K megohms or 100 megohm - μ F, 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 $^{\circ}$ C are:

Insulation Resistance:

C0G – 10K megohms or 100 megohm - μ F, whichever is less
X7R – 10K megohms or 100 megohm - μ F, whichever is less

Solderability:

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

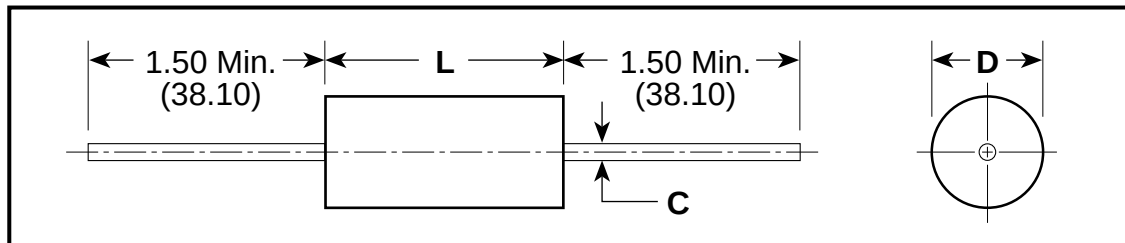
Resistance to Soldering Heat:

MIL-STD-202, Method 210, Condition B (260 $^{\circ}$ 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

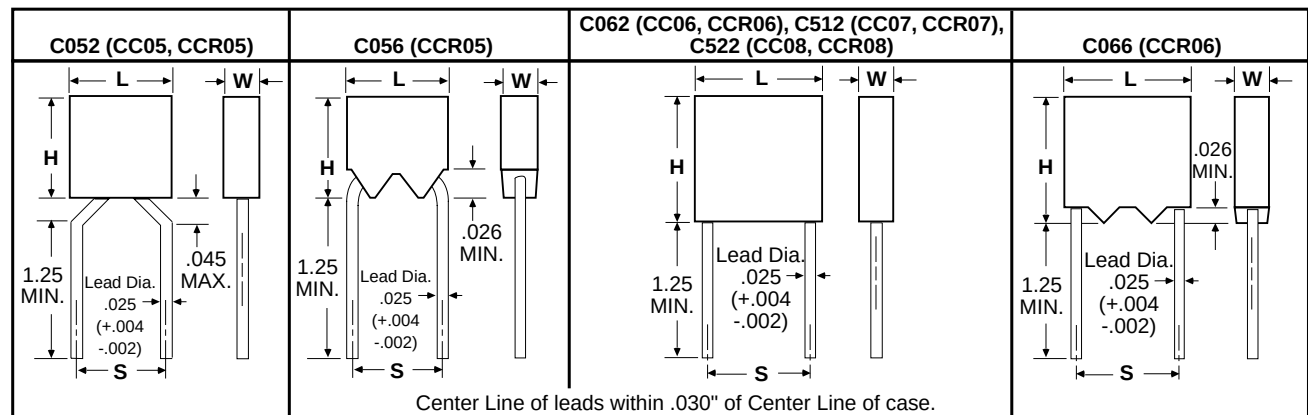
CAPACITOR OUTLINE DRAWINGS (AXIAL LEADS)



DIMENSIONS — INCHES & (MILLIMETERS)

CASE SIZE	MILITARY EQUIVALENT STYLES	L	D	C
C114	CC75, CCR75	.160 ± .010 (4.06 ± .25)	.090 ± .010 (2.29 ± .25)	.020, +.000, -.003 (.51, +.00, -.08)
C124	CC76, CCR76	.250 ± .010 (6.35 ± .25)	.090 ± .010 (2.29 ± .25)	.020, +.000, -.003 (.51, +.00, -.08)
C192	CC77, CCR77	.390 ± .010 (9.91 ± .25)	.140 ± .010 (3.56 ± .25)	.025, +.002, -.002 (.64, +.05, -.05)
C202	CC78, CCR78	.500 ± .020 (12.70 ± .51)	.250 ± .015 (6.35 ± .38)	.025, +.002, -.002 (.64, +.05, -.05)
C222	CC79, CCR79	.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

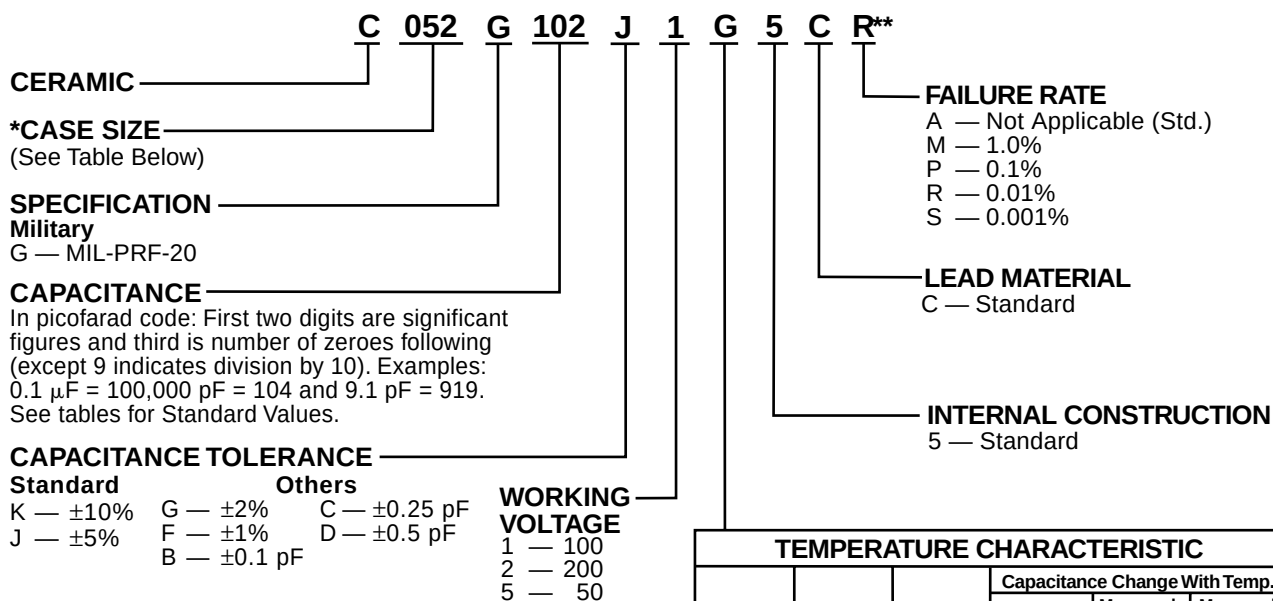
DIMENSIONS — INCHES & (MILLIMETERS)

CASE SIZE	MILITARY EQUIVALENT STYLES	H HEIGHT	L LENGTH	W WIDTH	S LEAD SPACING
C052/ C056	CC05, CCR05	.190 ± .010 (4.83 ± .25)	.190 ± .010 (4.83 ± .25)	.090 ± .010 (2.29 ± .25)	.200 ± .015 (5.08 ± .38)
C062/ C066	CC06, CCR06	.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)

* 0.200 (5.08) maximum for 100,000 pF only.

For packaging information, see pages 39, 40, and 41.

ORDERING INFORMATION



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

*CASE SIZES	
RADIAL	AXIAL
C052	C114
C056	C124
C062	C192
C066	C202
C512	C222
C522	

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 (See below)	C0G (NPO)	-55 to +125	± 30 ppm/°C*	± 30 ppm/°C*

*CH — ± 60 ppm/°C 8.2 pF-18.0 pF

*CJ — ± 120 ppm/°C 4.3 pF-7.5 pF

*CK — ± 250 ppm/°C 2.2 pF-3.9 pF

*CX — not measurable 0.1 pF-2.0 pF

****Part Number Example: C052G102J1G5CR (14 digits – no spaces)**

CAPACITOR MARKING

CC(R) 75, 76

JCK	— "J" Brand (CCR only), Temperature Characteristic
2R2	— Capacitance
CM5	— Capacitance Tolerance, Failure Rate (CCR only), Year Code
11AK	— Lot Code, Trademark (K)

CC(R) 77

CCR77C	— Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate)
G102JM	— "J" Brand (CCR only), FSCM (Federal Source Code)
J31433	— Date/Lot Code

CC(R) 78

CCR78CG	— Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate)
103FR	— "JAN" Brand (CCR only), Trademark (K)
JAN K	— FSCM (Federal Source Code)
31433	— Voltage
100V	— Date/Lot Code
0504A	

CC(R) 79

CCR79CG	— Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate)
103KM	— "JAN" Brand (CCR only), Trademark
JAN K	— FSCM (Federal Source Code)
31433	— Voltage
200V	— Date/Lot Code
0504A	

CC(R) 05

FRONT	
CCR0	— Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate)
5CH1	— ** For the standoff style, a "V" is added after the failure rate, or last character.
00FR	
REAR	
0504	— Date Code
AJ3	— Lot Code, "J" Brand (CCR only), FSCM (Federal Source Code)
1433	

CC(R) 06

FRONT	
CCR06	— Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate)
CG102	— ** For the standoff style, a "V" is added after the failure rate, or last character.
JS	
REAR	
0504A	— Date/Lot Code
J100V	— "J" Brand (CCR only), Voltage
31433	— FSCM (Federal Source Code)

CC(R) 07

CCR07CG	— Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate)
472KM	— "JAN" Brand, Trademark
JAN KEMET	— FSCM (Federal Source Code)
31433	— Voltage, Date/Lot Code
200V 0504A	

CC(R) 08

CCR08CG	— Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate)
472KM	— "JAN" Brand, Trademark
JAN KEMET	— FSCM (Federal Source Code)
31433	— Voltage, Date/Lot Code
200V 0509A	

RATINGS & PART NUMBER REFERENCE

CAP. pF	KEMET PART NUMBER	MILITARY STYLE CC	MILITARY STYLE CCR
200 VOLT — C114 (CC(R)75 PER MIL-PRF-20/27)			
1.0	C114G109(2)2G5C(1)	CC75CX1R0(2)	CCR75CX1R0(2)(1)
1.1	C114G119(2)2G5C(1)	CC75CX1R1(2)	CCR75CX1R1(2)(1)
1.2	C114G129(2)2G5C(1)	CC75CX1R2(2)	CCR75CX1R2(2)(1)
1.3	C114G139(2)2G5C(1)	CC75CX1R3(2)	CCR75CX1R3(2)(1)
1.5	C114G159(2)2G5C(1)	CC75CX1R5(2)	CCR75CX1R5(2)(1)
1.6	C114G169(2)2G5C(1)	CC75CX1R6(2)	CCR75CX1R6(2)(1)
1.8	C114G189(2)2G5C(1)	CC75CX1R8(2)	CCR75CX1R8(2)(1)
2.0	C114G209(2)2G5C(1)	CC75CX2R0(2)	CCR75CX2R0(2)(1)
2.2	C114G229(2)2G5C(1)	CC75CX2R2(2)	CCR75CX2R2(2)(1)
2.4	C114G249(2)2G5C(1)	CC75CX2R4(2)	CCR75CX2R4(2)(1)
2.7	C114G279(3)2G5C(1)	CC75CX2R7(3)	CCR75CX2R7(3)(1)
3.0	C114G309(3)2G5C(1)	CC75CX3R0(3)	CCR75CX3R0(3)(1)
3.3	C114G339(3)2G5C(1)	CC75CX3R3(3)	CCR75CX3R3(3)(1)
3.6	C114G369(3)2G5C(1)	CC75CX3R6(3)	CCR75CX3R6(3)(1)
3.9	C114G399(3)2G5C(1)	CC75CX3R9(3)	CCR75CX3R9(3)(1)
4.3	C114G439(3)2G5C(1)	CC75CX4R3(3)	CCR75CX4R3(3)(1)
4.7	C114G479(3)2G5C(1)	CC75CX4R7(3)	CCR75CX4R7(3)(1)
5.1	C114G519(3)2G5C(1)	CC75CX5R1(3)	CCR75CX5R1(3)(1)
5.6	C114G569(3)2G5C(1)	CC75CX5R6(3)	CCR75CX5R6(3)(1)
6.2	C114G629(3)2G5C(1)	CC75CX6R2(3)	CCR75CX6R2(3)(1)
6.8	C114G689(3)2G5C(1)	CC75CX6R8(3)	CCR75CX6R8(3)(1)
7.5	C114G759(3)2G5C(1)	CC75CX7R5(3)	CCR75CX7R5(3)(1)
8.2	C114G829(3)2G5C(1)	CC75CX8R2(3)	CCR75CX8R2(3)(1)
9.1	C114G919(3)2G5C(1)	CC75CX9R1(3)	CCR75CX9R1(3)(1)
10.0	C114G100(4)2G5C(1)	CC75CH100(4)	CCR75CH100(4)(1)
11.0	C114G110(4)2G5C(1)	CC75CH110(4)	CCR75CH110(4)(1)
12.0	C114G120(4)2G5C(1)	CC75CH120(4)	CCR75CH120(4)(1)
13.0	C114G130(4)2G5C(1)	CC75CH130(4)	CCR75CH130(4)(1)
15.0	C114G150(4)2G5C(1)	CC75CH150(4)	CCR75CH150(4)(1)
16.0	C114G160(4)2G5C(1)	CC75CH160(4)	CCR75CH160(4)(1)
18.0	C114G180(4)2G5C(1)	CC75CH180(4)	CCR75CH180(4)(1)
20.0	C114G200(4)2G5C(1)	CC75CG200(4)	CCR75CG200(4)(1)
22.0	C114G220(4)2G5C(1)	CC75CG220(4)	CCR75CG220(4)(1)
24.0	C114G240(4)2G5C(1)	CC75CG240(4)	CCR75CG240(4)(1)
27.0	C114G270(4)2G5C(1)	CC75CG270(4)	CCR75CG270(4)(1)
30.0	C114G300(4)2G5C(1)	CC75CG300(4)	CCR75CG300(4)(1)
33.0	C114G330(4)2G5C(1)	CC75CG330(4)	CCR75CG330(4)(1)
36.0	C114G360(4)2G5C(1)	CC75CG360(4)	CCR75CG360(4)(1)
39.0	C114G390(4)2G5C(1)	CC75CG390(4)	CCR75CG390(4)(1)
43.0	C114G430(4)2G5C(1)	CC75CG430(4)	CCR75CG430(4)(1)
47.0	C114G470(4)2G5C(1)	CC75CG470(4)	CCR75CG470(4)(1)
51.0	C114G510(4)2G5C(1)	CC75CG510(4)	CCR75CG510(4)(1)
56.0	C114G560(4)2G5C(1)	CC75CG560(4)	CCR75CG560(4)(1)
62.0	C114G620(4)2G5C(1)	CC75CG620(4)	CCR75CG620(4)(1)
68.0	C114G680(4)2G5C(1)	CC75CG680(4)	CCR75CG680(4)(1)
75.0	C114G750(4)2G5C(1)	CC75CG750(4)	CCR75CG750(4)(1)

To complete Part Number, insert the following letters:

(1) Available Failure Rates: A (CC styles only); M, P, R & S (CCR styles only).

(2) Available Capacitance Tolerances: B, C.

(3) Available Capacitance Tolerances: B, C, D.

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

CAP. pF	KEMET PART NUMBER	MILITARY STYLE CC	MILITARY STYLE CCR
100 VOLT — C114 (CC(R)75 PER MIL-PRF-20/27)			
82.0	C114G820(4)1G5C(1)	CC75CG820(4)	CCR75CG820(4)(1)
91.0	C114G910(4)1G5C(1)	CC75CG910(4)	CCR75CG910(4)(1)
100.0	C114G101(4)1G5C(1)	CC75CG101(4)	CCR75CG101(4)(1)
110.0	C114G111(4)1G5C(1)	CC75CG111(4)	CCR75CG111(4)(1)
120.0	C114G121(4)1G5C(1)	CC75CG121(4)	CCR75CG121(4)(1)
130.0	C114G131(4)1G5C(1)	CC75CG131(4)	CCR75CG131(4)(1)
150.0	C114G151(4)1G5C(1)	CC75CG151(4)	CCR75CG151(4)(1)
160.0	C114G161(4)1G5C(1)	CC75CG161(4)	CCR75CG161(4)(1)
180.0	C114G181(4)1G5C(1)	CC75CG181(4)	CCR75CG181(4)(1)
200.0	C114G201(4)1G5C(1)	CC75CG201(4)	CCR75CG201(4)(1)
220.0	C114G221(4)1G5C(1)	CC75CG221(4)	CCR75CG221(4)(1)
240.0	C114G241(4)1G5C(1)	CC75CG241(4)	CCR75CG241(4)(1)
50 VOLT — C114 (CC(R)75 PER MIL-PRF-20/27)			
270.0	C114G271(4)5G5C(1)	CC75CG271(4)	CCR75CG271(4)(1)
300.0	C114G301(4)5G5C(1)	CC75CG301(4)	CCR75CG301(4)(1)
330.0	C114G331(4)5G5C(1)	CC75CG331(4)	CCR75CG331(4)(1)
360.0	C114G361(4)5G5C(1)	CC75CG361(4)	CCR75CG361(4)(1)
390.0	C114G391(4)5G5C(1)	CC75CG391(4)	CCR75CG391(4)(1)
430.0	C114G431(4)5G5C(1)	CC75CG431(4)	CCR75CG431(4)(1)
470.0	C114G471(4)5G5C(1)	CC75CG471(4)	CCR75CG471(4)(1)
510.0	C114G511(4)5G5C(1)	CC75CG511(4)	CCR75CG511(4)(1)
560.0	C114G561(4)5G5C(1)	CC75CG561(4)	CCR75CG561(4)(1)
620.0	C114G621(4)5G5C(1)	CC75CG621(4)	CCR75CG621(4)(1)
680.0	C114G681(4)5G5C(1)	CC75CG681(4)	CCR75CG681(4)(1)
200 VOLT — C124 (CC(R)76 PER MIL-PRF-20/28)			
82.0	C124G820(4)2G5C(1)	CC76CG820(4)	CCR76CG820(4)(1)
91.0	C124G910(4)2G5C(1)	CC76CG910(4)	CCR76CG910(4)(1)
100.0	C124G101(4)2G5C(1)	CC76CG101(4)	CCR76CG101(4)(1)
110.0	C124G111(4)2G5C(1)	CC76CG111(4)	CCR76CG111(4)(1)
120.0	C124G121(4)2G5C(1)	CC76CG121(4)	CCR76CG121(4)(1)
130.0	C124G131(4)2G5C(1)	CC76CG131(4)	CCR76CG131(4)(1)
100 VOLT — C124 (CC(R)76 PER MIL-PRF-20/28)			
270.0	C124G271(4)1G5C(1)	CC76CG271(4)	CCR76CG271(4)(1)
300.0	C124G301(4)1G5C(1)	CC76CG301(4)	CCR76CG301(4)(1)
330.0	C124G331(4)1G5C(1)	CC76CG331(4)	CCR76CG331(4)(1)
360.0	C124G361(4)1G5C(1)	CC76CG361(4)	CCR76CG361(4)(1)
390.0	C124G391(4)1G5C(1)	CC76CG391(4)	CCR76CG391(4)(1)
430.0	C124G431(4)1G5C(1)	CC76CG431(4)	CCR76CG431(4)(1)
470.0	C124G471(4)1G5C(1)	CC76CG471(4)	CCR76CG471(4)(1)
510.0	C124G511(4)1G5C(1)	CC76CG511(4)	CCR76CG511(4)(1)
560.0	C124G561(4)1G5C(1)	CC76CG561(4)	CCR76CG561(4)(1)
620.0	C124G621(4)1G5C(1)	CC76CG621(4)	CCR76CG621(4)(1)
680.0	C124G681(4)1G5C(1)	CC76CG681(4)	CCR76CG681(4)(1)
50 VOLT — C124 (CC(R)76 PER MIL-PRF-20/28)			
750.0	C124G751(4)5G5C(1)	CC76CG751(4)	CCR76CG751(4)(1)
820.0	C124G821(4)5G5C(1)	CC76CG821(4)	CCR76CG821(4)(1)
910.0	C124G911(4)5G5C(1)	CC76CG911(4)	CCR76CG911(4)(1)
1,000.0	C124G102(4)5G5C(1)	CC76CG102(4)	CCR76CG102(4)(1)
200 VOLT — C192 (CC(R)77 PER MIL-PRF-20/29)			
150.0	C192G151(4)2G5C(1)	CC77CG151(4)	CCR77CG151(4)(1)
160.0	C192G161(4)2G5C(1)	CC77CG161(4)	CCR77CG161(4)(1)
180.0	C192G181(4)2G5C(1)	CC77CG181(4)	CCR77CG181(4)(1)
200.0	C192G201(4)2G5C(1)	CC77CG201(4)	CCR77CG201(4)(1)
220.0	C192G221(4)2G5C(1)	CC77CG221(4)	CCR77CG221(4)(1)
240.0	C192G241(4)2G5C(1)	CC77CG241(4)	CCR77CG241(4)(1)
270.0	C192G271(4)2G5C(1)	CC77CG271(4)	CCR77CG271(4)(1)
300.0	C192G301(4)2G5C(1)	CC77CG301(4)	CCR77CG301(4)(1)
330.0	C192G331(4)2G5C(1)	CC77CG331(4)	CCR77CG331(4)(1)
360.0	C192G361(4)2G5C(1)	CC77CG361(4)	CCR77CG361(4)(1)
390.0	C192G391(4)2G5C(1)	CC77CG391(4)	CCR77CG391(4)(1)
430.0	C192G431(4)2G5C(1)	CC77CG431(4)	CCR77CG431(4)(1)
470.0	C192G471(4)2G5C(1)	CC77CG471(4)	CCR77CG471(4)(1)
510.0	C192G511(4)2G5C(1)	CC77CG511(4)	CCR77CG511(4)(1)
560.0	C192G561(4)2G5C(1)	CC77CG561(4)	CCR77CG561(4)(1)
620.0	C192G621(4)2G5C(1)	CC77CG621(4)	CCR77CG621(4)(1)
680.0	C192G681(4)2G5C(1)	CC77CG681(4)	CCR77CG681(4)(1)



CERAMIC MOLDED/AXIAL — MIL-PRF-20 ULTRA-STABLE TEMPERATURE CHARACTERISTIC — CG (EIA-C0G)

RATINGS & PART NUMBER REFERENCE

CAP. pF	KEMET PART NUMBER	MILITARY STYLE CC	MILITARY STYLE CCR
100 VOLT — C192 (CC(R)77 PER MIL-PRF-20/29)			
750.0	C192G751(4)1G5C(1)	CC77CG751(4)	CCR77CG751(4)(1)
820.0	C192G821(4)1G5C(1)	CC77CG821(4)	CCR77CG821(4)(1)
910.0	C192G911(4)1G5C(1)	CC77CG911(4)	CCR77CG911(4)(1)
1,000.0	C192G102(4)1G5C(1)	CC77CG102(4)	CCR77CG102(4)(1)
1,100.0	C192G112(4)1G5C(1)	CC77CG112(4)	CCR77CG112(4)(1)
1,200.0	C192G122(4)1G5C(1)	CC77CG122(4)	CCR77CG122(4)(1)
1,300.0	C192G132(4)1G5C(1)	CC77CG132(4)	CCR77CG132(4)(1)
1,500.0	C192G152(4)1G5C(1)	CC77CG152(4)	CCR77CG152(4)(1)
1,600.0	C192G162(4)1G5C(1)	CC77CG162(4)	CCR77CG162(4)(1)
1,800.0	C192G182(4)1G5C(1)	CC77CG182(4)	CCR77CG182(4)(1)
2,000.0	C192G202(4)1G5C(1)	CC77CG202(4)	CCR77CG202(4)(1)
2,200.0	C192G222(4)1G5C(1)	CC77CG222(4)	CCR77CG222(4)(1)
50 VOLT — C192 (CC(R)77 PER MIL-PRF-20/29)			
2,400.0	C192G242(4)5G5C(1)	CC77CG242(4)	CCR77CG242(4)(1)
2,700.0	C192G272(4)5G5C(1)	CC77CG272(4)	CCR77CG272(4)(1)
3,000.0	C192G302(4)5G5C(1)	CC77CG302(4)	CCR77CG302(4)(1)
3,300.0	C192G332(4)5G5C(1)	CC77CG332(4)	CCR77CG332(4)(1)
3,600.0	C192G362(4)5G5C(1)	CC77CG362(4)	CCR77CG362(4)(1)
3,900.0	C192G392(4)5G5C(1)	CC77CG392(4)	CCR77CG392(4)(1)
4,300.0	C192G432(4)5G5C(1)	CC77CG432(4)	CCR77CG432(4)(1)
4,700.0	C192G472(4)5G5C(1)	CC77CG472(4)	CCR77CG472(4)(1)
5,100.0	C192G512(5)5G5C(1)	CC77CG512(5)	CCR77CG512(5)(1)
5,600.0	C192G562(5)5G5C(1)	CC77CG562(5)	CCR77CG562(5)(1)
200 VOLT — C202 (CC(R)78 PER MIL-PRF-20/30)			
820.0	C202G821(5)2G5C(1)	CC78CG821(5)	CCR78CG821(5)(1)
1,000.0	C202G102(5)2G5C(1)	CC78CG102(5)	CCR78CG102(5)(1)
1,200.0	C202G122(5)2G5C(1)	CC78CG122(5)	CCR78CG122(5)(1)
1,500.0	C202G152(5)2G5C(1)	CC78CG152(5)	CCR78CG152(5)(1)
1,800.0	C202G182(5)2G5C(1)	CC78CG182(5)	CCR78CG182(5)(1)
2,200.0	C202G222(5)2G5C(1)	CC78CG222(5)	CCR78CG222(5)(1)
2,700.0	C202G272(5)2G5C(1)	CC78CG272(5)	CCR78CG272(5)(1)
3,300.0	C202G332(5)2G5C(1)	CC78CG332(5)	CCR78CG332(5)(1)

CAP. pF	KEMET PART NUMBER	MILITARY STYLE CC	MILITARY STYLE CCR
100 VOLT — C202 (CC(R)78 PER MIL-PRF-20/30)			
3,900.0	C202G392(5)1G5C(1)	CC78CG392(5)	CCR78CG392(5)(1)
4,700.0	C202G472(5)1G5C(1)	CC78CG472(5)	CCR78CG472(5)(1)
5,600.0	C202G562(5)1G5C(1)	CC78CG562(5)	CCR78CG562(5)(1)
6,800.0	C202G682(5)1G5C(1)	CC78CG682(5)	CCR78CG682(5)(1)
8,200.0	C202G822(5)1G5C(1)	CC78CG822(5)	CCR78CG822(5)(1)
10,000.0	C202G103(5)1G5C(1)	CC78CG103(5)	CCR78CG103(5)(1)
12,000.0	C202G123(5)1G5C(1)	CC78CG123(5)	CCR78CG123(5)(1)
50 VOLT — C202 (CC(R)78 PER MIL-PRF-20/30)			
15,000.0	C202G153(5)5G5C(1)	CC78CG153(5)	CCR78CG153(5)(1)
18,000.0	C202G183(5)5G5C(1)	CC78CG183(5)	CCR78CG183(5)(1)
22,000.0	C202G223(5)5G5C(1)	CC78CG223(5)	CCR78CG223(5)(1)
27,000.0	C202G273(5)5G5C(1)	CC78CG273(5)	CCR78CG273(5)(1)
200 VOLT — C222 (CC(R)79 PER MIL-PRF-20/31)			
3,900.0	C222G392(5)2G5C(1)	CC79CG392(5)	CCR79CG392(5)(1)
4,700.0	C222G472(5)2G5C(1)	CC79CG472(5)	CCR79CG472(5)(1)
5,600.0	C222G562(5)2G5C(1)	CC79CG562(5)	CCR79CG562(5)(1)
6,800.0	C222G682(5)2G5C(1)	CC79CG682(5)	CCR79CG682(5)(1)
8,200.0	C222G822(5)2G5C(1)	CC79CG822(5)	CCR79CG822(5)(1)
10,000.0	C222G103(5)2G5C(1)	CC79CG103(5)	CCR79CG103(5)(1)
100 VOLT — C222 (CC(R)79 PER MIL-PRF-20/31)			
15,000.0	C222G153(5)1G5C(1)	CC79CG153(5)	CCR79CG153(5)(1)
18,000.0	C222G183(5)1G5C(1)	CC79CG183(5)	CCR79CG183(5)(1)
22,000.0	C222G223(5)1G5C(1)	CC79CG223(5)	CCR79CG223(5)(1)
27,000.0	C222G273(5)1G5C(1)	CC79CG273(5)	CCR79CG273(5)(1)
33,000.0	C222G333(5)1G5C(1)	CC79CG333(5)	CCR79CG333(5)(1)
39,000.0	C222G393(5)1G5C(1)	CC79CG393(5)	CCR79CG393(5)(1)
50 VOLT — C222 (CC(R)79 PER MIL-PRF-20/31)			
47,000.0	C222G473(5)5G5C(1)	CC79CG473(5)	CCR79CG473(5)(1)
56,000.0	C222G563(5)5G5C(1)	CC79CG563(5)	CCR79CG563(5)(1)
68,000.0	C222G683(5)5G5C(1)	CC79CG683(5)	CCR79CG683(5)(1)
82,000.0	C222G823(5)5G5C(1)	CC79CG823(5)	CCR79CG823(5)(1)

To complete Part Number, insert the following letters:

(1) Available Failure Rates: A (CC styles only); M, P, R & S (CCR styles only).

(2) Available Capacitance Tolerances: B, C.

(3) Available Capacitance Tolerances: B, C, D.

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

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



CERAMIC MOLDED/RADIAL — MIL-PRF-20 ULTRA-STABLE TEMPERATURE CHARACTERISTIC — CG (EIA-C0G)

RATINGS & PART NUMBER REFERENCE

CAP. pF	KEMET PART NUMBER	MILITARY STYLE CC	MILITARY STYLE CCR
200 VOLT — C062/C066 SIZE (CC(R)06 PER MIL-PRF-20/36)			
360.0	C06(6)G361(4)2G5C(1)	CC06CG361(4)	CCR06CG361(4)(1)(7)
390.0	C06(6)G391(4)2G5C(1)	CC06CG391(4)	CCR06CG391(4)(1)(7)
430.0	C06(6)G431(4)2G5C(1)	CC06CG431(4)	CCR06CG431(4)(1)(7)
470.0	C06(6)G471(4)2G5C(1)	CC06CG471(4)	CCR06CG471(4)(1)(7)
510.0	C06(6)G511(4)2G5C(1)	CC06CG511(4)	CCR06CG511(4)(1)(7)
560.0	C06(6)G561(4)2G5C(1)	CC06CG561(4)	CCR06CG561(4)(1)(7)
620.0	C06(6)G621(4)2G5C(1)	CC06CG621(4)	CCR06CG621(4)(1)(7)
680.0	C06(6)G681(4)2G5C(1)	CC06CG681(4)	CCR06CG681(4)(1)(7)
750.0	C06(6)G751(4)2G5C(1)	CC06CG751(4)	CCR06CG751(4)(1)(7)
820.0	C06(6)G821(4)2G5C(1)	CC06CG821(4)	CCR06CG821(4)(1)(7)
910.0	C06(6)G911(4)2G5C(1)	CC06CG911(4)	CCR06CG911(4)(1)(7)
1,000.0	C06(6)G102(4)2G5C(1)	CC06CG102(4)	CCR06CG102(4)(1)(7)
1,100.0	C06(6)G112(4)2G5C(1)	CC06CG112(4)	CCR06CG112(4)(1)(7)
1,200.0	C06(6)G122(4)2G5C(1)	CC06CG122(4)	CCR06CG122(4)(1)(7)
1,300.0	C06(6)G132(4)2G5C(1)	CC06CG132(4)	CCR06CG132(4)(1)(7)
1,500.0	C06(6)G152(4)2G5C(1)	CC06CG152(4)	CCR06CG152(4)(1)(7)
1,600.0	C06(6)G162(4)2G5C(1)	CC06CG162(4)	CCR06CG162(4)(1)(7)
1,800.0	C06(6)G182(4)2G5C(1)	CC06CG182(4)	CCR06CG182(4)(1)(7)
100 VOLT — C062/C066 SIZE (CC(R)06 PER MIL-PRF-20/36)			
2,000.0	C06(6)G202(4)1G5C(1)	CC06CG202(4)	CCR06CG202(4)(1)(7)
2,200.0	C06(6)G222(4)1G5C(1)	CC06CG222(4)	CCR06CG222(4)(1)(7)
2,400.0	C06(6)G242(4)1G5C(1)	CC06CG242(4)	CCR06CG242(4)(1)(7)
2,700.0	C06(6)G272(4)1G5C(1)	CC06CG272(4)	CCR06CG272(4)(1)(7)
3,000.0	C06(6)G302(4)1G5C(1)	CC06CG302(4)	CCR06CG302(4)(1)(7)
3,300.0	C06(6)G332(4)1G5C(1)	CC06CG332(4)	CCR06CG332(4)(1)(7)
3,600.0	C06(6)G362(4)1G5C(1)	CC06CG362(4)	CCR06CG362(4)(1)(7)
3,900.0	C06(6)G392(4)1G5C(1)	CC06CG392(4)	CCR06CG392(4)(1)(7)
4,300.0	C06(6)G432(4)1G5C(1)	CC06CG432(4)	CCR06CG432(4)(1)(7)
4,700.0	C06(6)G472(4)1G5C(1)	CC06CG472(4)	CCR06CG472(4)(1)(7)
50 VOLT — C062/C066 SIZE (CC(R)06 PER MIL-PRF-20/36)			
5,100.0	C06(6)G512(5)5G5C(1)	CC06CG512(5)	CCR06CG512(5)(1)(7)
5,600.0	C06(6)G562(5)5G5C(1)	CC06CG562(5)	CCR06CG562(5)(1)(7)
6,200.0	C06(6)G622(5)5G5C(1)	CC06CG622(5)	CCR06CG622(5)(1)(7)
6,800.0	C06(6)G682(5)5G5C(1)	CC06CG682(5)	CCR06CG682(5)(1)(7)
7,500.0	C06(6)G752(5)5G5C(1)	CC06CG752(5)	CCR06CG752(5)(1)(7)

CAP. pF	KEMET PART NUMBER	MILITARY STYLE CC	MILITARY STYLE CCR
50 VOLT — C062/C066 SIZE (CC(R)06 PER MIL-PRF-20/36)			
8,200.0	C06(6)G822(5)5G5C(1)	CC06CG822(5)	CCR06CG822(5)(1)(7)
9,100.0	C06(6)G912(5)5G5C(1)	CC06CG912(5)	CCR06CG912(5)(1)(7)
10,000.0	C06(6)G103(5)5G5C(1)	CC06CG103(5)	CCR06CG103(5)(1)(7)
12,000.0	C06(6)G123(5)5G5C(1)	CC06CG123(5)	CCR06CG123(5)(1)(7)
15,000.0	C06(6)G153(5)5G5C(1)	CC06CG153(5)	CCR06CG153(5)(1)(7)
18,000.0	C06(6)G183(5)5G5C(1)	CC06CG183(5)	CCR06CG183(5)(1)(7)
200 VOLT — C512 SIZE (CC(R)07 PER MIL-PRF-20/37)			
2,200.0	C512G222(5)2G5C(1)	CC07CG222(5)	CCR07CG222(5)(1)
2,700.0	C512G272(5)2G5C(1)	CC07CG272(5)	CCR07CG272(5)(1)
3,300.0	C512G332(5)2G5C(1)	CC07CG332(5)	CCR07CG332(5)(1)
3,900.0	C512G392(5)2G5C(1)	CC07CG392(5)	CCR07CG392(5)(1)
4,700.0	C512G472(5)2G5C(1)	CC07CG472(5)	CCR07CG472(5)(1)
100 VOLT — C512 SIZE (CC(R)07 PER MIL-PRF-20/37)			
5,600.0	C512G562(5)1G5C(1)	CC07CG562(5)	CCR07CG562(5)(1)
6,800.0	C512G682(5)1G5C(1)	CC07CG682(5)	CCR07CG682(5)(1)
8,200.0	C512G822(5)1G5C(1)	CC07CG822(5)	CCR07CG822(5)(1)
10,000.0	C512G103(5)1G5C(1)	CC07CG103(5)	CCR07CG103(5)(1)
12,000.0	C512G123(5)1G5C(1)	CC07CG123(5)	CCR07CG123(5)(1)
50 VOLT — C512 SIZE (CC(R)07 PER MIL-PRF-20/37)			
15,000.0	C512G153(5)5G5C(1)	CC07CG153(5)	CCR07CG153(5)(1)
18,000.0	C512G183(5)5G5C(1)	CC07CG183(5)	CCR07CG183(5)(1)
22,000.0	C512G223(5)5G5C(1)	CC07CG223(5)	CCR07CG223(5)(1)
27,000.0	C512G273(5)5G5C(1)	CC07CG273(5)	CCR07CG273(5)(1)
33,000.0	C512G333(5)5G5C(1)	CC07CG333(5)	CCR07CG333(5)(1)
39,000.0	C512G393(5)5G5C(1)	CC07CG393(5)	CCR07CG393(5)(1)
47,000.0	C512G473(5)5G5C(1)	CC07CG473(5)	CCR07CG473(5)(1)
56,000.0	C512G563(5)5G5C(1)	CC07CG563(5)	CCR07CG563(5)(1)
68,000.0	C512G683(5)5G5C(1)	CC07CG683(5)	CCR07CG683(5)(1)
83,000.0	C512G823(5)5G5C(1)	CC07CG823(5)	CCR07CG823(5)(1)
100,000.0	C512G104(5)5G5C(1)	CC07CG104(5)	CCR07CG104(5)(1)
200 VOLT — C522 SIZE (CC(R)08 PER MIL-PRF-20/38)			
3,900.0	C522G392(8)2G5C(1)	CC08CG392(8)	CCR08CG392(8)(1)
4,700.0	C522G472(8)2G5C(1)	CC08CG472(8)	CCR08CG472(8)(1)
100 VOLT — C522 SIZE (CC(R)08 PER MIL-PRF-20/38)			
15,000.0	C522G153(8)1G5C(1)	CC08CG153(8)	CCR08CG153(8)(1)
18,000.0	C522G183(8)1G5C(1)	CC08CG183(8)	CCR08CG183(8)(1)
50 VOLT — C522 SIZE (CC(R)08 PER MIL-PRF-20/38)			
56,000.0	C522G563(8)5G5C(1)	CC08CG563(8)	CCR08CG563(8)(1)
68,000.0	C522G683(8)5G5C(1)	CC08CG683(8)	CCR08CG683(8)(1)

To complete Part Number, insert the following letters:

(1) Available Failure Rates: A (CC styles only); M, P, R & S (CCR styles only).

(2) Available Capacitance Tolerances: B, C.

(3) Available Capacitance Tolerances: B, C, D.

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

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

(6) Insert "2" for standard design, Style C062G } Stand-offs are available
Insert "6" for stand-off design, Style C066G } only as CCR's, not available as CC.

(7) Add "V" for stand-off design, Style C066G

And leave blank for the flat bottom design (C062G)

(8) Available Capacitance Tolerances: G, J, K

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 ± 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.

Figure 1

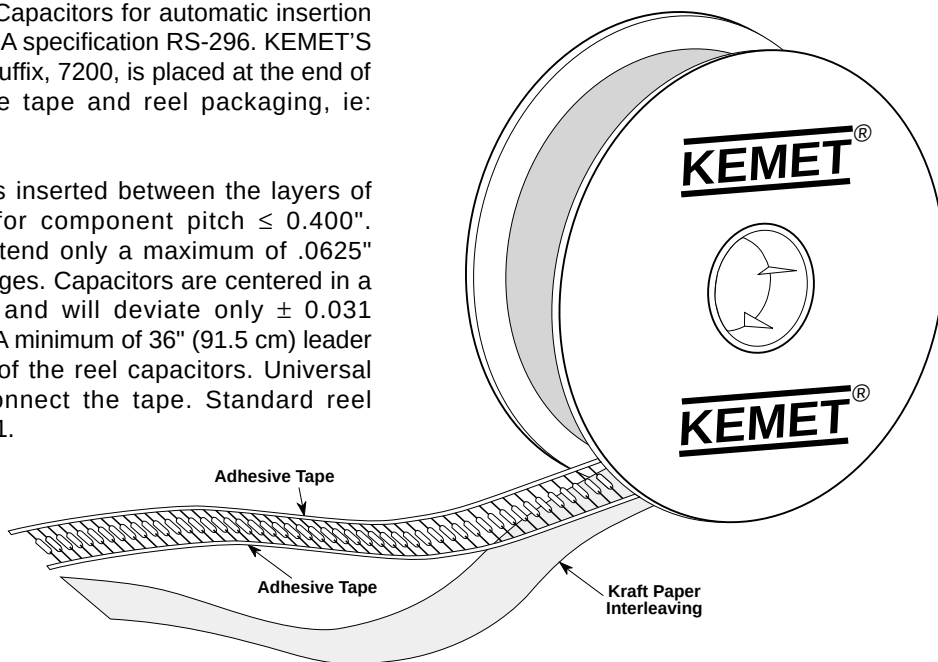


Figure 2

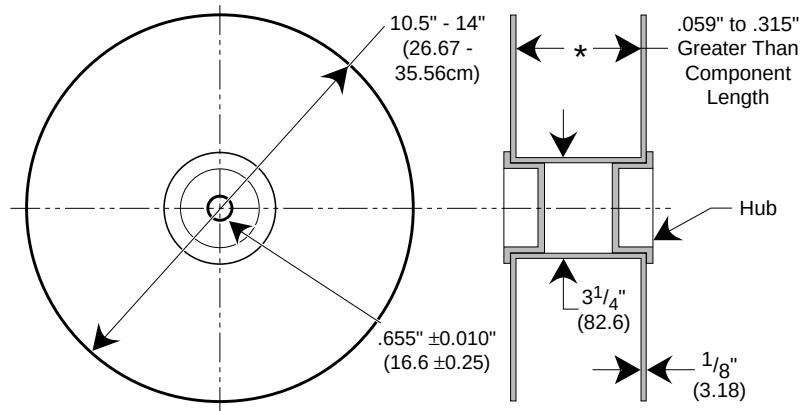


Figure 3

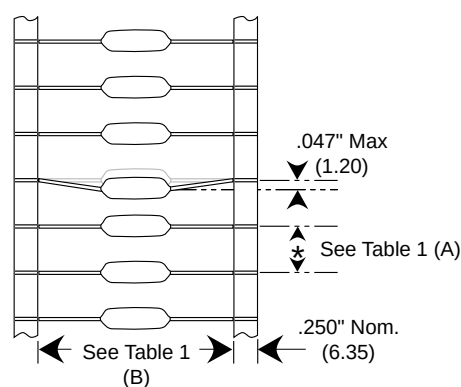


Table 1 Dimensions in Inches & (Millimeters)

Component Body Diameter	Component Pitch "A"	Inside Tape Spacing "B" $\pm 1.5\text{mm}$ (0.059")	
		I	III*
0" (0mm) to 0.197" (5mm)	0.197" or (5mm)	2.062" (52.4mm)	
0.197" (5.01mm) to 0.394" (10mm)	0.394" or (10mm)		2.874" (73mm)

* 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.

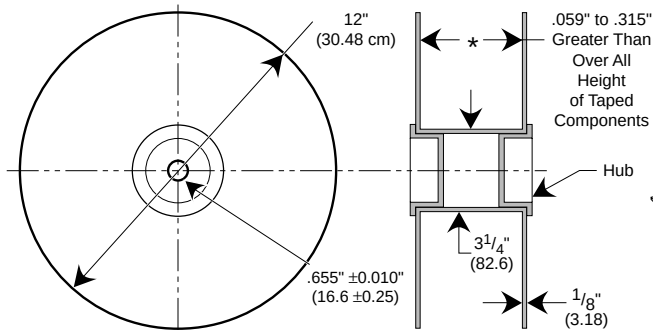


Figure 3: Standard Reel

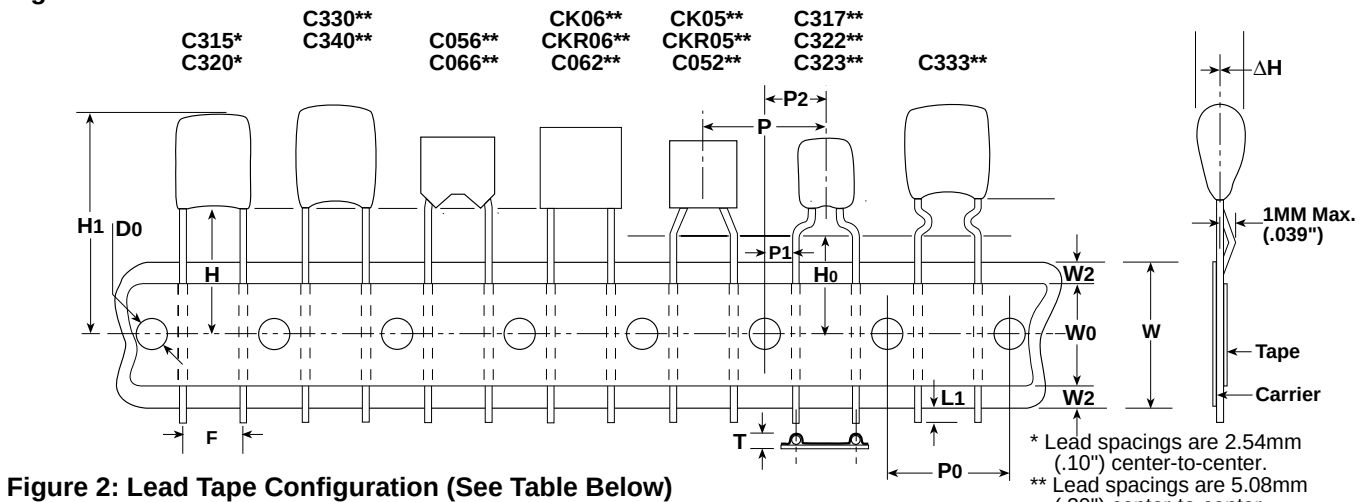
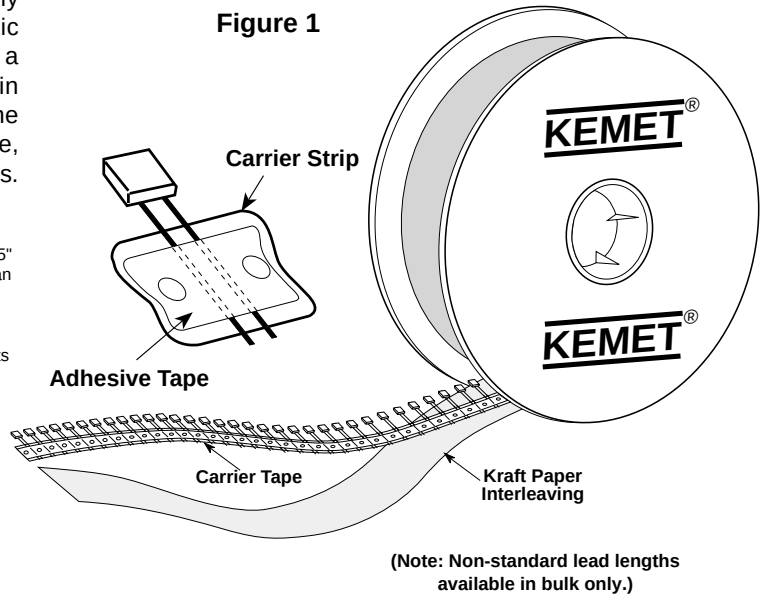


Figure 2: Lead Tape Configuration (See Table Below)

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

Dimension	Symbol	Nominal mm (inch)	Tolerance mm (inch)	Dimension	Symbol	Nominal mm (inch)	Tolerance mm (inch)
Sprocket Hole Diameter	D0	4.0 (.157)	± 0.2 (.008)	Height to Seating Plane (formed leads) (2)	H0	7301 7303 16.0 (.630) 18.0 (.709)	7301 7303 ±0.5 (.020) Minimum
Sprocket Hole Pitch	P0	12.7 (.500)	± 0.3 (.012)	Component Alignment	Δh	4.0 (.157)	±0.2 (.008)
Component Pitch	P	12.7 (.500)	± 0.3 (.012)	Lead Protrusion	L1	1.0 (.039)	Maximum
Lead Spacing (1)	F	5.08 (.20) 2.54 (.10)	+0.6 -0.2 (+.024 -.008)	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	T	1.5 (.059)	Maximum
Sprocket Hole Center to Component Center	P2	6.35 (.250)	± 1.3 (.051)	Carrier Tape Width	W	18.0 (.709)	+1.0 - 0.5 (+.039 -.020)
Height to Seating Plane (straight leads) (2)	H	7301 7303 16.0 (.630) 18.0 (.709)	7301 7303 ±0.5 (.020) Minimum	Hold-Down Tape Width	W0	5.0 (.197)	Minimum
Component Height Above Tape Center	H1	32.2 (1.27)	Maximum	Hold-Down Tape Location	W2	3.0 (.118)	Maximum

(1) Measured at the egress from the carrier tape, on the component side.

(2) Determined by a 4 digit suffix placed at the end of the part number, as follows:

7301 = Recommended for parts with formed leads. Example: C322C104K5R5CA7301
7303 = Recommended for parts with straight leads. Example: C320C104K5R5CA7303

CERAMIC PACKAGING						
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/ MIL-PRF-20	200/Box		5000	12"
C124C-K-G	CK13, CC76		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			

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

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