

### 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 -  $\mu$ F, whichever is less.  
X7R – 100K megohms or 1000 megohm -  $\mu$ 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 -  $\mu$ F, whichever is less  
X7R – 10K megohms or 100 megohm -  $\mu$ 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 -  $\mu$ F, whichever is less  
X7R – 10K megohms or 100 megohm -  $\mu$ 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 -  $\mu$ F, whichever is less  
X7R – 10K megohms or 100 megohm -  $\mu$ F, whichever is less

#### Solderability:

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

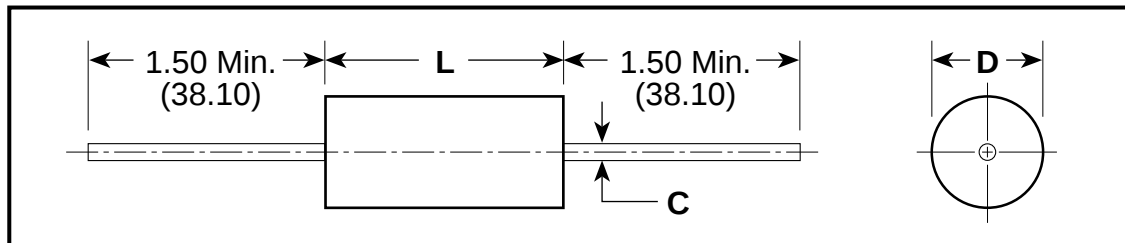
#### Resistance to Soldering Heat:

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

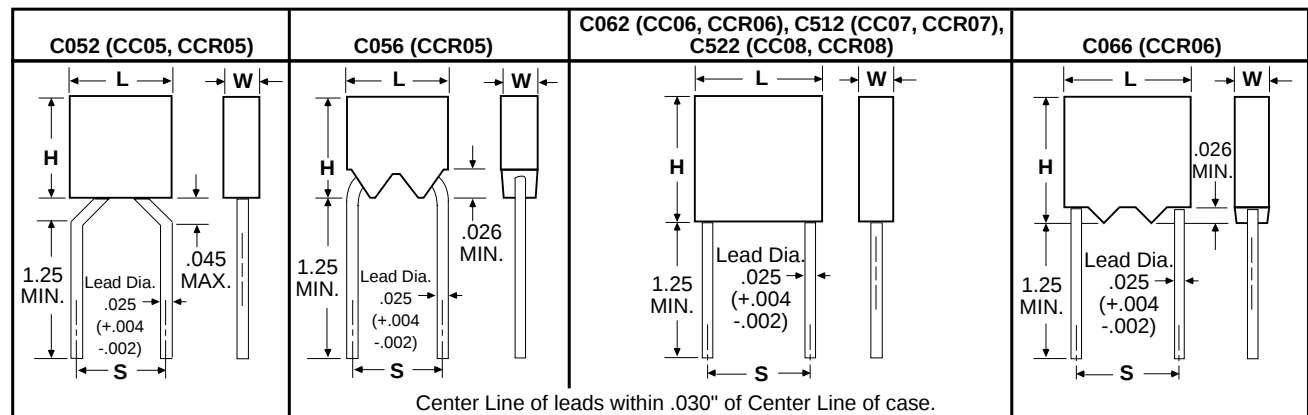
## CAPACITOR OUTLINE DRAWINGS (AXIAL LEADS)



## DIMENSIONS — INCHES &amp; (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

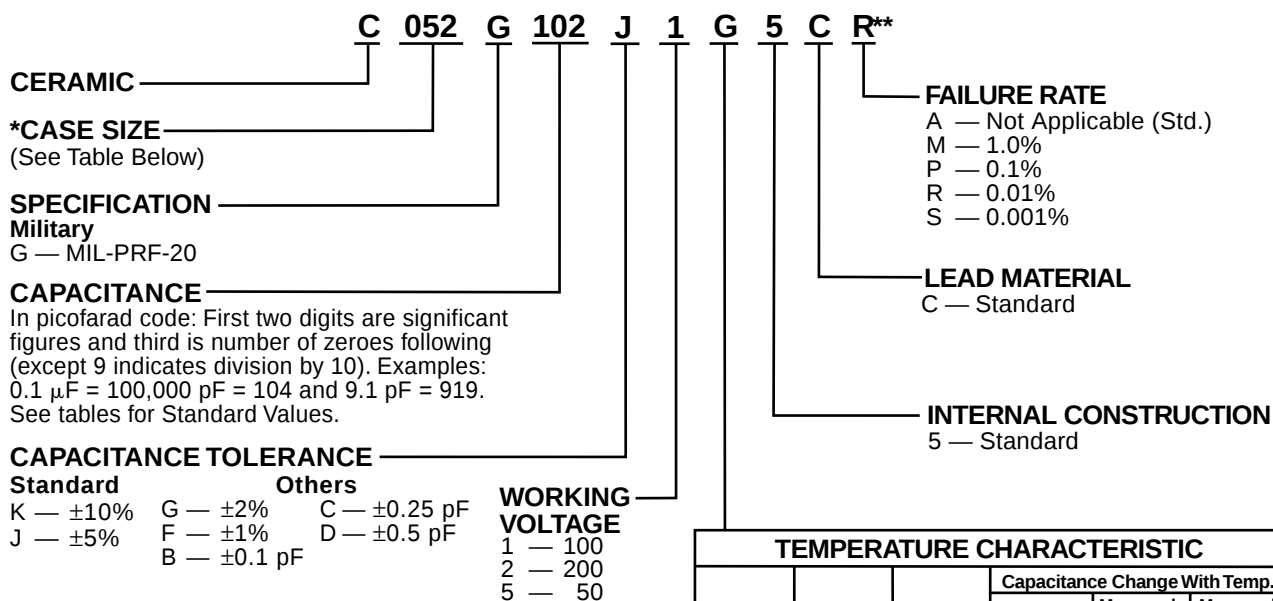
## DIMENSIONS — INCHES &amp; (MILLIMETERS)

| CASE SIZE     | MILITARY EQUIVALENT STYLES | H HEIGHT                  | L LENGTH                  | W WIDTH                   | S LEAD SPACING            |
|---------------|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| C052/<br>C056 | CC05, CCR05                | .190 ± .010 (4.83 ± .25)  | .190 ± .010 (4.83 ± .25)  | .090 ± .010 (2.29 ± .25)  | .200 ± .015 (5.08 ± .38)  |
| C062/<br>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                   | $\pm 30$ ppm/°C*                 | $\pm 30$ ppm/°C*                   |

\*CH —  $\pm 60$  ppm/°C 8.2 pF-18.0 pF

\*CJ —  $\pm 120$  ppm/°C 4.3 pF-7.5 pF

\*CK —  $\pm 250$  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 | — FSCM (Federal Source Code)                                                                    |
| 0504A  | — 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   | — FSCM (Federal Source Code)                                                                    |
| 100V    | — Voltage                                                                                       |
| 0504A   | — Date/Lot Code                                                                                 |

#### 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   | — FSCM (Federal Source Code)                                                                    |
| 200V    | — Voltage                                                                                       |
| 0504A   | — Date/Lot Code                                                                                 |

#### CC(R) 05

|       |      |                                                                                                 |
|-------|------|-------------------------------------------------------------------------------------------------|
| FRONT | CCR0 | — Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate) |
|       | 5CH1 | — "J" Brand (CCR only), FSCM (Federal Source Code)                                              |
|       | 00FR | — Date/Lot Code                                                                                 |
| REAR  | 0504 | — Date Code                                                                                     |
|       | AJ3  | — Lot Code, "J" Brand (CCR only), FSCM (Federal Source Code)                                    |
|       | 1433 | — FSCM (Federal Source Code)                                                                    |

#### CC(R) 06

|       |       |                                                                                                 |
|-------|-------|-------------------------------------------------------------------------------------------------|
| FRONT | CCR06 | — Military Designation (Type, Temperature Characteristic, Capacitance, Tolerance, Failure Rate) |
|       | CG102 | — "J" Brand (CCR only), FSCM (Federal Source Code)                                              |
|       | JS    | — Date/Lot Code                                                                                 |
| 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      | — FSCM (Federal Source Code)                                                                    |
| 200V 0504A | — Voltage, Date/Lot Code                                                                        |

#### CC(R) 08

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

**RATINGS & PART NUMBER REFERENCE**

| CAP.<br>pF                                         | KEMET<br>PART NUMBER | MILITARY STYLE<br>CC | MILITARY STYLE<br>CCR |
|----------------------------------------------------|----------------------|----------------------|-----------------------|
| <b>200 VOLT — C114 (CC(R)75 PER MIL-PRF-20/27)</b> |                      |                      |                       |
| 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)      |

| CAP.<br>pF                                         | KEMET<br>PART NUMBER | MILITARY STYLE<br>CC | MILITARY STYLE<br>CCR |
|----------------------------------------------------|----------------------|----------------------|-----------------------|
| <b>100 VOLT — C114 (CC(R)75 PER MIL-PRF-20/27)</b> |                      |                      |                       |
| 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)      |
| <b>50 VOLT — C114 (CC(R)75 PER MIL-PRF-20/27)</b>  |                      |                      |                       |
| 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)      |
| <b>200 VOLT — C124 (CC(R)76 PER MIL-PRF-20/28)</b> |                      |                      |                       |
| 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)      |
| <b>100 VOLT — C124 (CC(R)76 PER MIL-PRF-20/28)</b> |                      |                      |                       |
| 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)      |
| <b>50 VOLT — C124 (CC(R)76 PER MIL-PRF-20/28)</b>  |                      |                      |                       |
| 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)      |
| <b>200 VOLT — C192 (CC(R)77 PER MIL-PRF-20/29)</b> |                      |                      |                       |
| 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)      |

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.



# CERAMIC MOLDED/AXIAL — MIL-PRF-20

## ULTRA-STABLE TEMPERATURE CHARACTERISTIC — CG (EIA-C0G)

### RATINGS & PART NUMBER REFERENCE

| CAP.<br>pF                                         | KEMET<br>PART NUMBER | MILITARY STYLE<br>CC | MILITARY STYLE<br>CCR |
|----------------------------------------------------|----------------------|----------------------|-----------------------|
| <b>100 VOLT — C192 (CC(R)77 PER MIL-PRF-20/29)</b> |                      |                      |                       |
| 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)      |
| <b>50 VOLT — C192 (CC(R)77 PER MIL-PRF-20/29)</b>  |                      |                      |                       |
| 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)      |
| <b>200 VOLT — C202 (CC(R)78 PER MIL-PRF-20/30)</b> |                      |                      |                       |
| 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.<br>pF                                         | KEMET<br>PART NUMBER | MILITARY STYLE<br>CC | MILITARY STYLE<br>CCR |
|----------------------------------------------------|----------------------|----------------------|-----------------------|
| <b>100 VOLT — C202 (CC(R)78 PER MIL-PRF-20/30)</b> |                      |                      |                       |
| 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)      |
| <b>50 VOLT — C202 (CC(R)78 PER MIL-PRF-20/30)</b>  |                      |                      |                       |
| 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)      |
| <b>200 VOLT — C222 (CC(R)79 PER MIL-PRF-20/31)</b> |                      |                      |                       |
| 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)      |
| <b>100 VOLT — C222 (CC(R)79 PER MIL-PRF-20/31)</b> |                      |                      |                       |
| 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)      |
| <b>50 VOLT — C222 (CC(R)79 PER MIL-PRF-20/31)</b>  |                      |                      |                       |
| 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.

**RATINGS & PART NUMBER REFERENCE**

| CAP.<br>pF                                                   | KEMET<br>PART NUMBER | MILITARY STYLE<br>CC | MILITARY STYLE<br>CCR |
|--------------------------------------------------------------|----------------------|----------------------|-----------------------|
| <b>200 VOLT — C052/C056 SIZE (CC(R)05 PER MIL-PRF-20/35)</b> |                      |                      |                       |
| 1.0                                                          | C05(6)G109(2)2G5C(1) | CC05CX1R0(2)         | CCR05CX1R0(2)(1)(7)   |
| 1.1                                                          | C05(6)G119(2)2G5C(1) | CC05CX1R1(2)         | CCR05CX1R1(2)(1)(7)   |
| 1.2                                                          | C05(6)G129(2)2G5C(1) | CC05CX1R2(2)         | CCR05CX1R2(2)(1)(7)   |
| 1.3                                                          | C05(6)G139(2)2G5C(1) | CC05CX1R3(2)         | CCR05CX1R3(2)(1)(7)   |
| 1.5                                                          | C05(6)G159(2)2G5C(1) | CC05CX1R5(2)         | CCR05CX1R5(2)(1)(7)   |
| 1.6                                                          | C05(6)G169(2)2G5C(1) | CC05CX1R6(2)         | CCR05CX1R6(2)(1)(7)   |
| 1.8                                                          | C05(6)G189(2)2G5C(1) | CC05CX1R8(2)         | CCR05CX1R8(2)(1)(7)   |
| 2.0                                                          | C05(6)G209(2)2G5C(1) | CC05CX2R0(2)         | CCR05CX2R0(2)(1)(7)   |
| 2.2                                                          | C05(6)G229(2)2G5C(1) | CC05CK2R2(2)         | CCR05CK2R2(2)(1)(7)   |
| 2.4                                                          | C05(6)G249(2)2G5C(1) | CC05CK2R4(2)         | CCR05CK2R4(2)(1)(7)   |
| 2.7                                                          | C05(6)G279(2)2G5C(1) | CC05CK2R7(3)         | CCR05CK2R7(3)(1)(7)   |
| 3.0                                                          | C05(6)G309(3)2G5C(1) | CC05CK3R0(3)         | CCR05CK3R0(3)(1)(7)   |
| 3.3                                                          | C05(6)G339(3)2G5C(1) | CC05CK3R3(3)         | CCR05CK3R3(3)(1)(7)   |
| 3.6                                                          | C05(6)G369(3)2G5C(1) | CC05CK3R6(3)         | CCR05CK3R6(3)(1)(7)   |
| 3.9                                                          | C05(6)G399(3)2G5C(1) | CC05CK3R9(3)         | CCR05CK3R9(3)(1)(7)   |
| 4.3                                                          | C05(6)G439(3)2G5C(1) | CC05CJ4R3(3)         | CCR05CJ4R3(3)(1)(7)   |
| 4.7                                                          | C05(6)G479(3)2G5C(1) | CC05CJ4R7(3)         | CCR05CJ4R7(3)(1)(7)   |
| 5.1                                                          | C05(6)G519(3)2G5C(1) | CC05CJ5R1(3)         | CCR05CJ5R1(3)(1)(7)   |
| 5.6                                                          | C05(6)G569(3)2G5C(1) | CC05CJ5R6(3)         | CCR05CJ5R6(3)(1)(7)   |
| 6.2                                                          | C05(6)G629(3)2G5C(1) | CC05CJ6R2(3)         | CCR05CJ6R2(3)(1)(7)   |
| 6.8                                                          | C05(6)G689(3)2G5C(1) | CC05CJ6R8(3)         | CCR05CJ6R8(3)(1)(7)   |
| 7.5                                                          | C05(6)G759(3)2G5C(1) | CC05CJ7R5(3)         | CCR05CJ7R5(3)(1)(7)   |
| 8.2                                                          | C05(6)G829(3)2G5C(1) | CC05CH8R2(3)         | CCR05CH8R2(3)(1)(7)   |
| 9.1                                                          | C05(6)G919(3)2G5C(1) | CC05CH9R1(3)         | CCR05CH9R1(3)(1)(7)   |
| 10.0                                                         | C05(6)G100(4)2G5C(1) | CC05CH100(4)         | CCR05CH100(4)(1)(7)   |
| 11.0                                                         | C05(6)G110(4)2G5C(1) | CC05CH110(4)         | CCR05CH110(4)(1)(7)   |
| 12.0                                                         | C05(6)G120(4)2G5C(1) | CC05CH120(4)         | CCR05CH120(4)(1)(7)   |
| 13.0                                                         | C05(6)G130(4)2G5C(1) | CC05CH130(4)         | CCR05CH130(4)(1)(7)   |
| 15.0                                                         | C05(6)G150(4)2G5C(1) | CC05CH150(4)         | CCR05CH150(4)(1)(7)   |
| 16.0                                                         | C05(6)G160(4)2G5C(1) | CC05CH160(4)         | CCR05CH160(4)(1)(7)   |
| 18.0                                                         | C05(6)G180(4)2G5C(1) | CC05CH180(4)         | CCR05CH180(4)(1)(7)   |
| 20.0                                                         | C05(6)G200(4)2G5C(1) | CC05CG200(4)         | CCR05CG200(4)(1)(7)   |
| 22.0                                                         | C05(6)G220(4)2G5C(1) | CC05CG220(4)         | CCR05CG220(4)(1)(7)   |
| 24.0                                                         | C05(6)G240(4)2G5C(1) | CC05CG240(4)         | CCR05CG240(4)(1)(7)   |
| 27.0                                                         | C05(6)G270(4)2G5C(1) | CC05CG270(4)         | CCR05CG270(4)(1)(7)   |
| 30.0                                                         | C05(6)G300(4)2G5C(1) | CC05CG300(4)         | CCR05CG300(4)(1)(7)   |
| 33.0                                                         | C05(6)G330(4)2G5C(1) | CC05CG330(4)         | CCR05CG330(4)(1)(7)   |
| 36.0                                                         | C05(6)G360(4)2G5C(1) | CC05CG360(4)         | CCR05CG360(4)(1)(7)   |
| 39.0                                                         | C05(6)G390(4)2G5C(1) | CC05CG390(4)         | CCR05CG390(4)(1)(7)   |
| 43.0                                                         | C05(6)G430(4)2G5C(1) | CC05CG430(4)         | CCR05CG430(4)(1)(7)   |
| 47.0                                                         | C05(6)G470(4)2G5C(1) | CC05CG470(4)         | CCR05CG470(4)(1)(7)   |
| 51.0                                                         | C05(6)G510(4)2G5C(1) | CC05CG510(4)         | CCR05CG510(4)(1)(7)   |

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 C052G  
 Insert "6" for stand-off design, Style C056G  
 (7) Add "V" for stand-off design, Style C056G  
 And leave blank for the flat bottom design (C052G)

} Stand-offs are available  
 only as CCR's, not available as CC.

| CAP.<br>pF                                                   | KEMET<br>PART NUMBER | MILITARY STYLE<br>CC | MILITARY STYLE<br>CCR |
|--------------------------------------------------------------|----------------------|----------------------|-----------------------|
| <b>200 VOLT — C052/C056 SIZE (CC(R)05 PER MIL-PRF-20/35)</b> |                      |                      |                       |
| 56.0                                                         | C05(6)G560(4)2G5C(1) | CC05CG560(4)         | CCR05CG560(4)(1)(7)   |
| 62.0                                                         | C05(6)G620(4)2G5C(1) | CC05CG620(4)         | CCR05CG620(4)(1)(7)   |
| 68.0                                                         | C05(6)G680(4)2G5C(1) | CC05CG680(4)         | CCR05CG680(4)(1)(7)   |
| 75.0                                                         | C05(6)G750(4)2G5C(1) | CC05CG750(4)         | CCR05CG750(4)(1)(7)   |
| 82.0                                                         | C05(6)G820(4)2G5C(1) | CC05CG820(4)         | CCR05CG820(4)(1)(7)   |
| 91.0                                                         | C05(6)G910(4)2G5C(1) | CC05CG910(4)         | CCR05CG910(4)(1)(7)   |
| 100.0                                                        | C05(6)G101(4)2G5C(1) | CC05CG101(4)         | CCR05CG101(4)(1)(7)   |
| 110.0                                                        | C05(6)G111(4)2G5C(1) | CC05CG111(4)         | CCR05CG111(4)(1)(7)   |
| 120.0                                                        | C05(6)G121(4)2G5C(1) | CC05CG121(4)         | CCR05CG121(4)(1)(7)   |
| 130.0                                                        | C05(6)G131(4)2G5C(1) | CC05CG131(4)         | CCR05CG131(4)(1)(7)   |
| 150.0                                                        | C05(6)G151(4)2G5C(1) | CC05CG151(4)         | CCR05CG151(4)(1)(7)   |
| 160.0                                                        | C05(6)G161(4)2G5C(1) | CC05CG161(4)         | CCR05CG161(4)(1)(7)   |
| 180.0                                                        | C05(6)G181(4)2G5C(1) | CC05CG181(4)         | CCR05CG181(4)(1)(7)   |
| 200.0                                                        | C05(6)G201(4)2G5C(1) | CC05CG201(4)         | CCR05CG201(4)(1)(7)   |
| 220.0                                                        | C05(6)G221(4)2G5C(1) | CC05CG221(4)         | CCR05CG221(4)(1)(7)   |
| 240.0                                                        | C05(6)G241(4)2G5C(1) | CC05CG241(4)         | CCR05CG241(4)(1)(7)   |
| 270.0                                                        | C05(6)G271(4)2G5C(1) | CC05CG271(4)         | CCR05CG271(4)(1)(7)   |
| 300.0                                                        | C05(6)G301(4)2G5C(1) | CC05CG301(4)         | CCR05CG301(4)(1)(7)   |
| 330.0                                                        | C05(6)G331(4)2G5C(1) | CC05CG331(4)         | CCR05CG331(4)(1)(7)   |
| <b>100 VOLT — C052/C056 SIZE (CC(R)05 PER MIL-PRF-20/35)</b> |                      |                      |                       |
| 360.0                                                        | C05(6)G361(4)1G5C(1) | CC05CG361(4)         | CCR05CG361(4)(1)(7)   |
| 390.0                                                        | C05(6)G391(4)1G5C(1) | CC05CG391(4)         | CCR05CG391(4)(1)(7)   |
| 430.0                                                        | C05(6)G431(4)1G5C(1) | CC05CG431(4)         | CCR05CG431(4)(1)(7)   |
| 470.0                                                        | C05(6)G471(4)1G5C(1) | CC05CG471(4)         | CCR05CG471(4)(1)(7)   |
| 510.0                                                        | C05(6)G511(4)1G5C(1) | CC05CG511(4)         | CCR05CG511(4)(1)(7)   |
| 560.0                                                        | C05(6)G561(4)1G5C(1) | CC05CG561(4)         | CCR05CG561(4)(1)(7)   |
| 620.0                                                        | C05(6)G621(4)1G5C(1) | CC05CG621(4)         | CCR05CG621(4)(1)(7)   |
| 680.0                                                        | C05(6)G681(4)1G5C(1) | CC05CG681(4)         | CCR05CG681(4)(1)(7)   |
| 750.0                                                        | C05(6)G751(4)1G5C(1) | CC05CG751(4)         | CCR05CG751(4)(1)(7)   |
| 820.0                                                        | C05(6)G821(4)1G5C(1) | CC05CG821(4)         | CCR05CG821(4)(1)(7)   |
| 910.0                                                        | C05(6)G911(4)1G5C(1) | CC05CG911(4)         | CCR05CG911(4)(1)(7)   |
| 1,000.0                                                      | C05(6)G102(4)1G5C(1) | CC05CG102(4)         | CCR05CG102(4)(1)(7)   |
| 1,100.0                                                      | C05(6)G112(4)1G5C(1) | CC05CG112(4)         | CCR05CG112(4)(1)(7)   |
| 1,200.0                                                      | C05(6)G122(4)1G5C(1) | CC05CG122(4)         | CCR05CG122(4)(1)(7)   |
| 1,300.0                                                      | C05(6)G132(4)1G5C(1) | CC05CG132(4)         | CCR05CG132(4)(1)(7)   |
| 1,500.0                                                      | C05(6)G152(4)1G5C(1) | CC05CG152(4)         | CCR05CG152(4)(1)(7)   |
| 1,600.0                                                      | C05(6)G162(4)1G5C(1) | CC05CG162(4)         | CCR05CG162(4)(1)(7)   |
| 1,800.0                                                      | C05(6)G182(4)1G5C(1) | CC05CG182(4)         | CCR05CG182(4)(1)(7)   |
| <b>50 VOLT — C052/C056 SIZE (CC(R)05 PER MIL-PRF-20/35)</b>  |                      |                      |                       |
| 2,000.0                                                      | C05(6)G202(4)5G5C(1) | CC05CG202(4)         | CCR05CG202(4)(1)(7)   |
| 2,200.0                                                      | C05(6)G222(4)5G5C(1) | CC05CG222(4)         | CCR05CG222(4)(1)(7)   |
| 2,400.0                                                      | C05(6)G242(4)5G5C(1) | CC05CG242(4)         | CCR05CG242(4)(1)(7)   |
| 2,700.0                                                      | C05(6)G272(4)5G5C(1) | CC05CG272(4)         | CCR05CG272(4)(1)(7)   |
| 3,000.0                                                      | C05(6)G302(4)5G5C(1) | CC05CG302(4)         | CCR05CG302(4)(1)(7)   |
| 3,300.0                                                      | C05(6)G332(4)5G5C(1) | CC05CG332(4)         | CCR05CG332(4)(1)(7)   |



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

## RATINGS & PART NUMBER REFERENCE

| CAP.<br>pF                                                   | KEMET<br>PART NUMBER | MILITARY STYLE<br>CC | MILITARY STYLE<br>CCR |
|--------------------------------------------------------------|----------------------|----------------------|-----------------------|
| <b>200 VOLT — C062/C066 SIZE (CC(R)06 PER MIL-PRF-20/36)</b> |                      |                      |                       |
| 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)   |
| <b>100 VOLT — C062/C066 SIZE (CC(R)06 PER MIL-PRF-20/36)</b> |                      |                      |                       |
| 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)   |
| <b>50 VOLT — C062/C066 SIZE (CC(R)06 PER MIL-PRF-20/36)</b>  |                      |                      |                       |
| 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.<br>pF                                                  | KEMET<br>PART NUMBER | MILITARY STYLE<br>CC | MILITARY STYLE<br>CCR |
|-------------------------------------------------------------|----------------------|----------------------|-----------------------|
| <b>50 VOLT — C062/C066 SIZE (CC(R)06 PER MIL-PRF-20/36)</b> |                      |                      |                       |
| 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)   |
| <b>200 VOLT — C512 SIZE (CC(R)07 PER MIL-PRF-20/37)</b>     |                      |                      |                       |
| 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)      |
| <b>100 VOLT — C512 SIZE (CC(R)07 PER MIL-PRF-20/37)</b>     |                      |                      |                       |
| 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)      |
| <b>50 VOLT — C512 SIZE (CC(R)07 PER MIL-PRF-20/37)</b>      |                      |                      |                       |
| 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)      |
| <b>200 VOLT — C522 SIZE (CC(R)08 PER MIL-PRF-20/38)</b>     |                      |                      |                       |
| 3,900.0                                                     | C522G392(8)2G5C(1)   | CC08CG392(8)         | CCR08CG392(8)(1)      |
| 4,700.0                                                     | C522G472(8)2G5C(1)   | CC08CG472(8)         | CCR08CG472(8)(1)      |
| <b>100 VOLT — C522 SIZE (CC(R)08 PER MIL-PRF-20/38)</b>     |                      |                      |                       |
| 15,000.0                                                    | C522G153(8)1G5C(1)   | CC08CG153(8)         | CCR08CG153(8)(1)      |
| 18,000.0                                                    | C522G183(8)1G5C(1)   | CC08CG183(8)         | CCR08CG183(8)(1)      |
| <b>50 VOLT — C522 SIZE (CC(R)08 PER MIL-PRF-20/38)</b>      |                      |                      |                       |
| 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  $\pm 0.031$  (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.

Figure 1

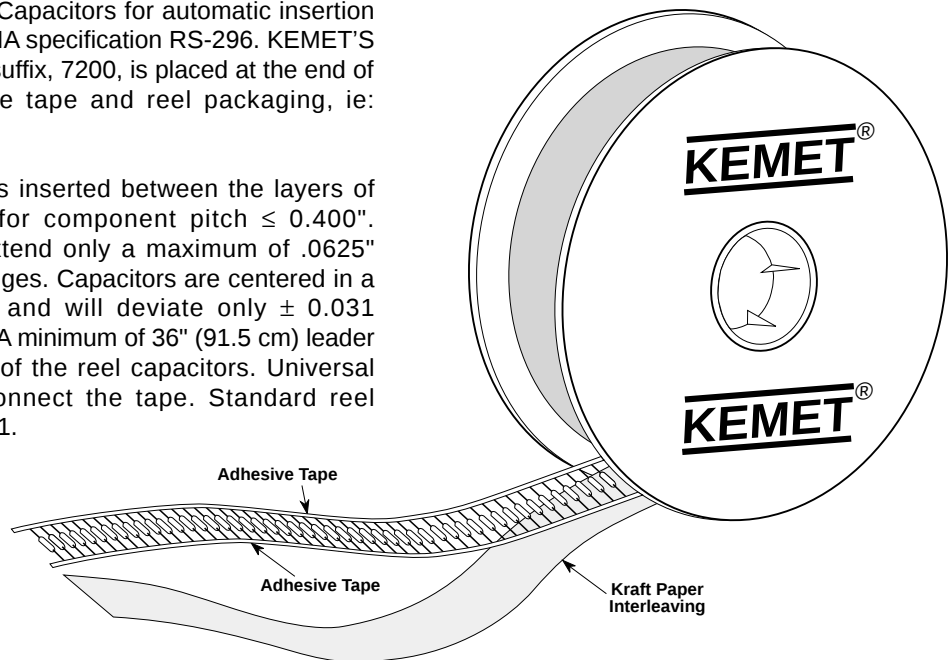


Figure 2

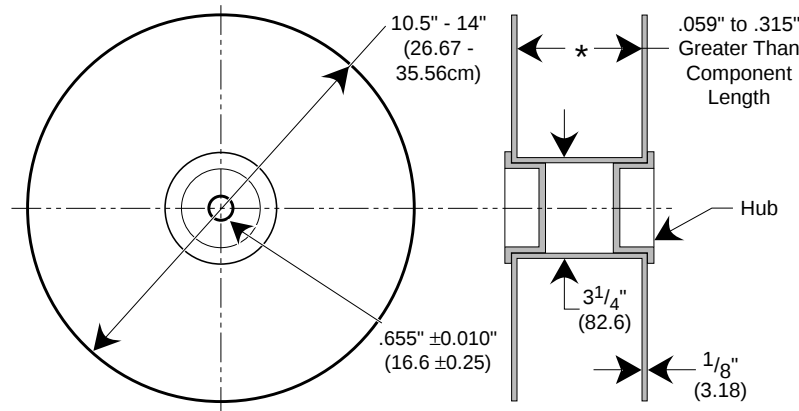


Figure 3

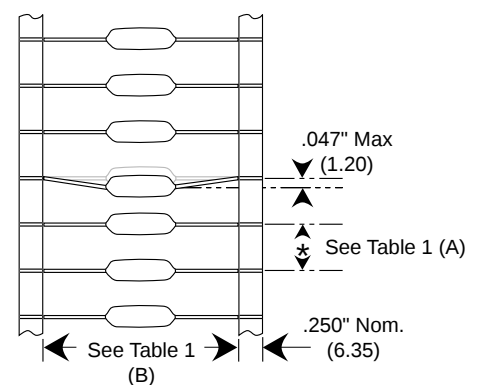


Table 1 Dimensions in Inches & (Millimeters)

| 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)<br>0.197" (5.01mm) to 0.394" (10mm) | 0.197" or (5mm)<br>0.394" or (10mm) | 2.062" (52.4mm)                                     | 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.

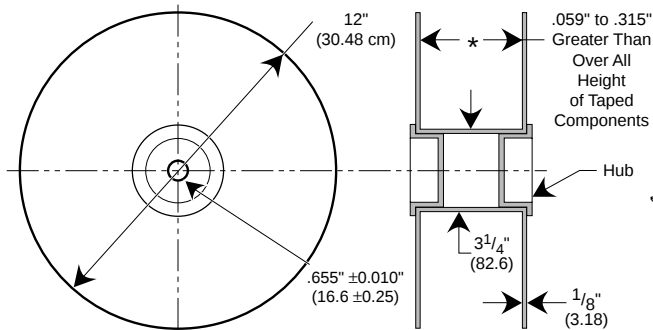


Figure 3: Standard Reel

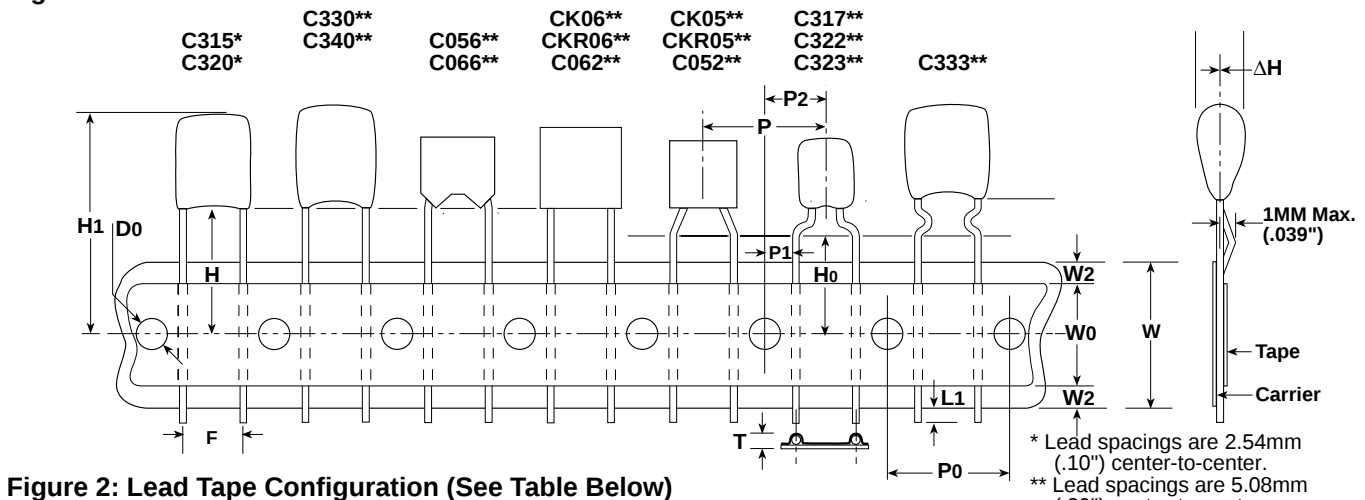
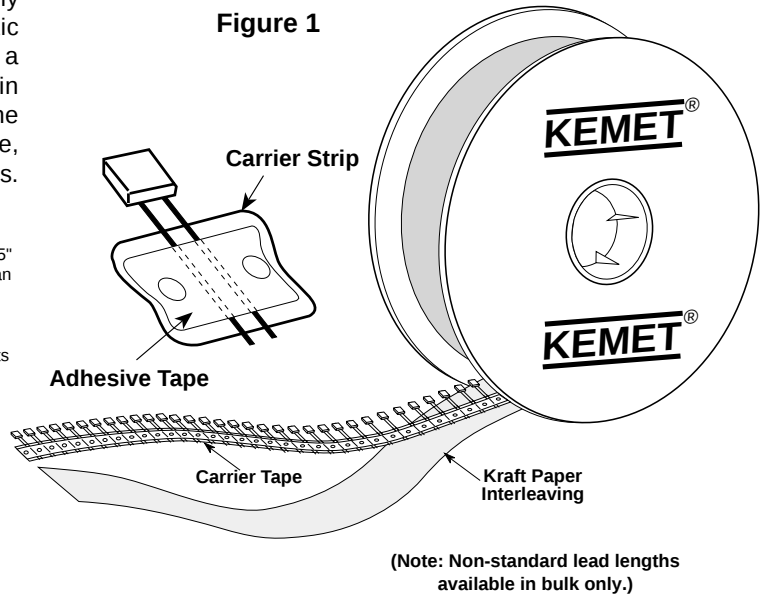


Figure 2: Lead Tape Configuration (See Table Below)

## 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<br>16.0 (.630) 18.0 (.709) | 7301 7303<br>±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<br>(+.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<br>(+.039 -.020)      |
| Height to Seating Plane (straight leads) (2) | H      | 7301 7303<br>16.0 (.630) 18.0 (.709) | 7301 7303<br>±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

| <b>CERAMIC PACKAGING</b> |                       |                               |                                   |                                   |                              |                  |
|--------------------------|-----------------------|-------------------------------|-----------------------------------|-----------------------------------|------------------------------|------------------|
| <b>KEMET Series</b>      | <b>Military Style</b> | <b>Military Specification</b> | <b>Standard (1) Bulk Quantity</b> | <b>Ammo Pack Quantity Maximum</b> | <b>Maximum Reel Quantity</b> | <b>Reel Size</b> |
| C114C-K-G                | CK12, CC75            | MIL-C-11015/<br>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.