



Defense
and Aerospace

KEMET
CHARGED.™

Ceramic High Reliability Capacitors

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CERAMIC HIGH RELIABILITY PRODUCTS

Ceramic Chips, Radial Molded

KEMET Electronics Corporation has been known for many years as the leader in the ceramic high reliability products. KEMET produces high reliability monolithic ceramic capacitors under tightly-controlled manufacturing procedures. These capacitors achieve “State of the Art” performance by virtue of careful materials selection, conservative design rules, motivational training of employees, and scrupulous inspection of all processes as well as the finished product. KEMET not only manufactures its own high reliability ceramic capacitor (GR900), KEMET also manufactures MIL-PRF-123 product which is built to the highest military standard in the industry today.

BASIC REQUIREMENTS FOR KEMET’S HIGH RELIABILITY PRODUCTS ARE AS FOLLOWS:

- 1. Selected Raw Materials:** All raw materials are selected for characteristics known to produce the finest quality capacitors exhibiting the best electrical parameters and physical integrity. Materials traceability is maintained throughout the manufacturing process.
- 2. Batch Homogeneity:** Production is under batch control. Each batch is homogeneous with respect to materials, design and processing conditions.
- 3. Clean Room Processing:** All processes sensitive to particulate contamination take place in a clean room environment.
- 4. Special Designs:** Special design considerations such as dielectric thickness are strictly enforced. Only COG (BP) and X7R (BX) temperature characteristics are made.
- 5. Destructive Physical Analysis (DPA, or Cross-Sectioning):** All batches are sampled using EIA-469 as a minimum requirement. The samples remain on file and DPA Reports are shipped with the capacitors.
- 6. Ultrasonic Scanning:** Optional 100% screening may be performed using ultrasonic waves to detect voids or delaminations. Screened lots must pass a final sample DPA.
- 7. Batch Performance Monitoring:** All production batches are tested to generate electrical characteristics. Batches which show anomalous characteristics are rejected.
- 8. Special Customer Requirements:** Many special requirements such as serialization, DPA samples,

X-Ray plates, and special packaging can be accommodated.

9. Document Applicable: The high reliability product is implemented through various internal documents under revision control. The Manufacturing Instructions provide detailed descriptions of all operations and delineate requirements for process control and product performance at various points in the process flow. Inspector Operating Documents describe test procedures and sampling plans for inspection of raw materials, in-process material and finished product. Raw material specifications describe physical and chemical characteristics as well as the packaging and labeling needed to preserve characteristics and identity. Customer specifications are internal documents applicable only to products manufactured and inspected to requirements of individual customers; in effect, these documents translate customer drawings into modifications of the specified portions of KEMET standard procedures.

The Quality System in total is controlled by the KEMET Quality Manual and by various Quality Operating Documents. All documents, and revisions thereto, bear specified approval signatures.

DETAILED SPECIFICATION: Temperature Characteristics

Electrical stability with respect to temperature and voltage is related inversely to the packaging efficiency (capacitance X voltage in a given case size). COG (BP) is made from ceramic materials which are not ferroelectric, yielding superior stability but low packaging efficiency. X7R (BX) is made from materials which are ferroelectric, such as barium titanate, yielding a stable and high packaging efficiency.

Aging

If the temperature of a barium titanate dielectric is lowered after an excursion above its curie point, the ceramic crystalline structure gradually reverts to the tetragonal form typical of the low temperature conditions. The reversion requires a considerable length of time, and its effect in practical capacitors has become known as “Aging”. The rate of aging is affected by both the temperature and the applied voltage experienced by the capacitor. The COG (BP) formulation is non-ferroelectric and does not exhibit aging. The X7R (BX) formulation exhibits its own

characteristic aging rate which describes a decrease in capacitance versus time. The capacitance of the X7R dielectric decreases approximately 1.0% during each decade of hours following a return to temperatures below the curie point. In other words, capacitance will decrease 1.0% between 1 and 10 hours, another 1.0% between 10 and 100 hours, another 1.0% between 100 and 1000 hours, etc.

KEMET takes into consideration the aging rate by designing capacitors to fall within the specified capacitance tolerance at 1000 hours. Inasmuch as the aging rate is exponential, very little change in capacitance will take place after 1000 hours.

Voltage Effects

Ferroelectric materials are also affected by applied voltage, both alternating and direct. Low values of voltage produce a slight increase in capacitance and dissipation factor. Higher voltages cause a decrease in capacitance. Typically, capacitors with X7R characteristic decrease in capacitance by approximately 10% when rated DC voltage is applied.

A small portion of the decrease in capacitance by the application of a high DC voltage persists after the voltage is removed and then disappears gradually.

Customer Testing

Because of temperature and voltage effects, caution must be used in establishing a testing sequence for ceramic capacitors. Insulation resistance measurements and tests of dielectric withstanding voltage both require application of high DC voltage and cause temporary changes in capacitance. These tests, therefore, should not be conducted until capacitance testing is completed. Alternatively, the capacitors can be "de-aged" at high temperature as described above. A stabilization time at room ambient of 24 hours should be used after de-aging.

See F-3101 Catalog for more details.

PERFORMANCE CHARACTERISTICS

General Information

Working Voltage:

COG (BP) - 50,100 & 200 volts

X7R (BX) - 50,100 & 200 volts

Temperature Characteristics:

COG (BP): 0 ± 30 ppm/C from -55°C to $+125^{\circ}\text{C}$.
(Limits widen below 20 pF.)

X7R (BX): $\pm 15\%$; from -55°C to $+125^{\circ}\text{C}$.

Capacitance Tolerance:

COG (BP): C - $\pm 0.25\text{pF}$; D - $\pm 0.5\text{pF}$; F - $\pm 1\%$;

G - $\pm 2\%$; J - $\pm 5\%$; K - $\pm 10\%$; M - $\pm 20\%$.

X7R (BX): J - $\pm 5\%$; K - $\pm 10\%$; M - $\pm 20\%$.

Electrical

Capacitance: Within specified tolerance when measured with 1 volt RMS @ 1 kHz (1000pF or less @ 1 MHz for COG (BP)).

Dissipation Factor:

25°C @ 1 kHz (1000 pF or less at 1 MHz for COG (BP)).

COG (BP): 0.15% maximum

X7R (BX): 2.5% maximum

Insulation Resistance:

After 2 minutes electrification:

at 25°C and rated voltage:

COG (BP): 100K megohms or (1000 megohm X μF), whichever is less.

X7R (BX): 100K megohms or (1000 megohm X μF), whichever is less.

at 125°C and rated voltage:

COG (BP): 10K megohms or (100 megohm X μF), whichever is less.

X7R (BX): 10K megohms or (100 megohm X μF), whichever is less.

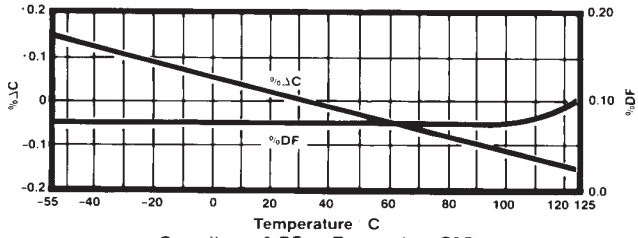
Dielectric Withstanding Voltage: 250% of rated voltage for 5 seconds with current limited to 50 MA at 25°C .

Aging Rate: % Delta Cap/Decade Hour, Typical

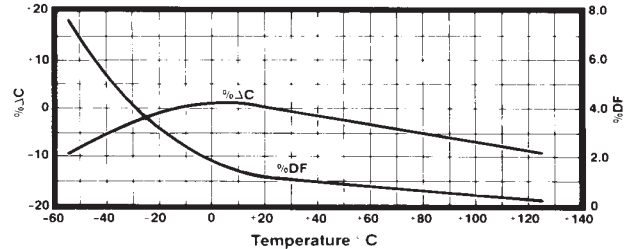
COG (BP): 0%

X7R (BX): 1.0%

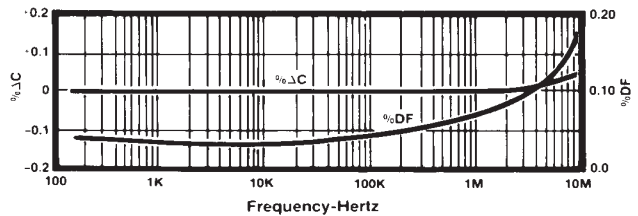
**MIL-PRF-123/GR900
TYPICAL PERFORMANCE CURVES**



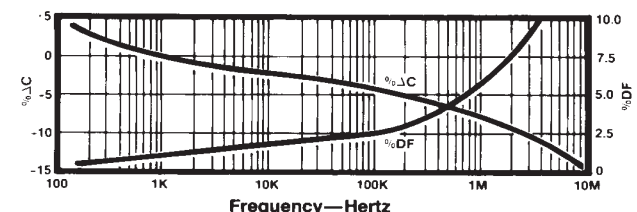
Capacitance & DF vs. Temperature-C0G



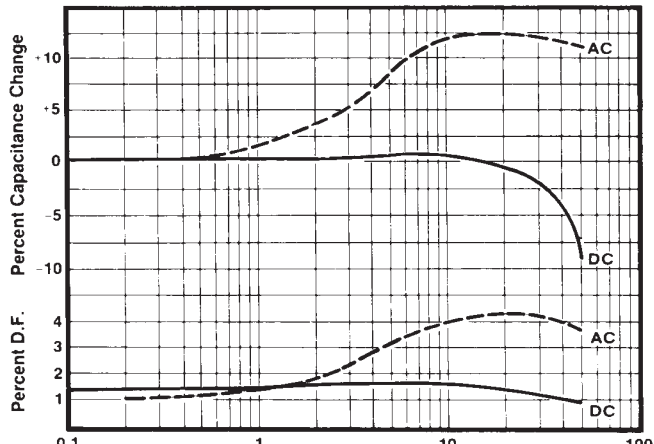
Capacitance & DF vs. Temperature-X7R



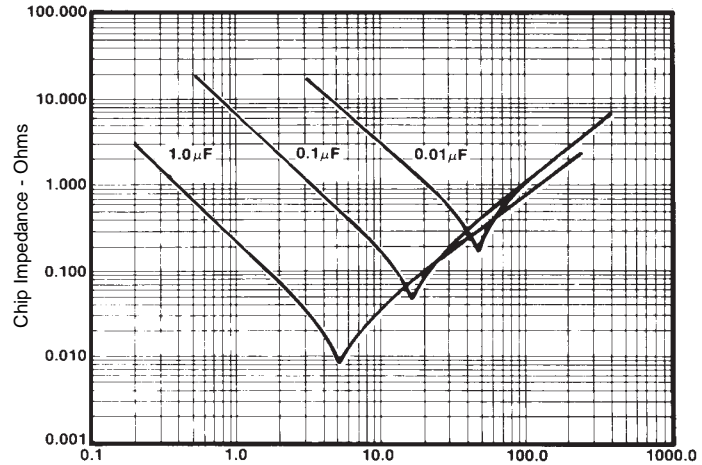
Capacitance & DF vs. Frequency-C0G



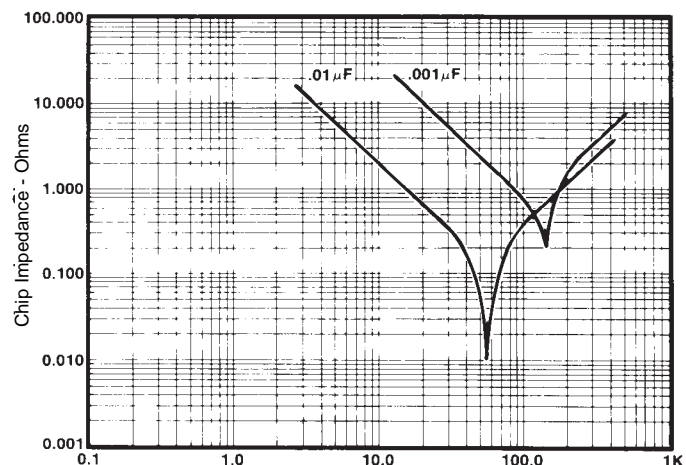
Capacitance & DF vs. Frequency-X7R



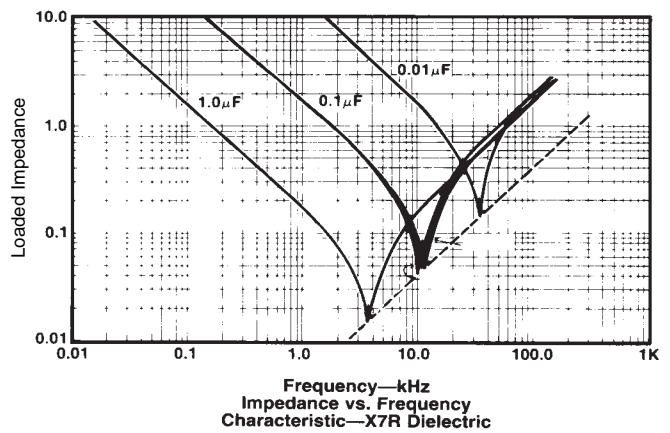
AC or DC Volts Applied
Typical Effect of 1000 Hz AC and DC Voltage Level on Capacitance and Dissipation Factor — X7R
Note: C0G Dielectric capacitance and dissipation factor are stable with voltage.



Impedance vs. Frequency For Ceramic Capacitors — X7R Dielectric



Impedance vs. Frequency for Ceramic Capacitors—C0G Dielectric



Impedance vs. Frequency Characteristic—X7R Dielectric

INTRODUCTION

MIL-PRF-123 specification covers the general requirements for high reliability, general purpose (BX) and temperature stable (BP) ceramic dielectric fixed capacitors for space, missile, and other high reliability applications. Capacitors covered by MIL-PRF-123 may be used in critical frequency determining applications, timing circuits, and other applications where absolute stability is required (BP) and in applications where appreciable variations in capacitance with respect to temperature, voltage, frequency, and life can be tolerated (BX).

SCREENING TESTS

Each lot has the following In-Process Inspections performed:

1. 100% Ultrasonic Scan
2. In-Process Destructive Physical Analysis
3. 100% visual inspection at a minimum of 10X magnification
4. Pre-encapsulation terminal strength evaluation (leaded devices only). Radial leaded capacitors must meet a minimum lead pull of 1.8 kg (4.0 lbs.).

The following Group A shall be performed on each lot:

1. **Thermal Shock**—Performed in accordance to MIL-STD-202, Method 107, Condition A, with step 3 being 125°C. Number of cycles shall be 20 (100% of lot).
2. **Voltage Conditioning**—The voltage conditioning shall consist of applying twice the rated voltage to the units at the maximum rated temperature of 125°C for a minimum of 168 hours and a maximum of 264 hours. The voltage conditioning may be terminated at any time during 168 hours to 264 hours time interval that confirmed failures meet the requirements for the PDA during the last 48 hours listed in Table I below (100% of lot).

Optional Voltage Conditioning (Accelerated Voltage Conditioning)—All conditions of the standard voltage conditioning apply with the exception of the increased voltage and the decreased test time. (Refer to Mil-PRF-123 for formula.)

- *Step 5 is performed on chips at this point (100% of lot).
3. **Dielectric Withstanding Voltage** 250% of the dc rated voltage at 25°C (100% of lot).
 4. **Insulation Resistance**—The 25°C measurement with rated voltage applied shall be the lesser of 100,000 megohms or 1000 megohm-microfarads (100% of lot).
 - *5. **Insulation Resistance**—The 125°C measurement with rated voltage applied shall be the lesser of 10,000 megohms or 100 megohm-microfarads (1000% of lot). For chips 125°C IR is performed prior to step 3 above.
 6. **Storage** at 150°C for 2 hours minimum without voltage applied followed by a 12-hour minimum stabilization period (temperature characteristic BX only).
 7. **Capacitance** must be within specified tolerance at 25°C (100% of lot). **Cap Exclusion:** Capacitance values no more than 5% or .5 pF, whichever is greater, for BX characteristics or 1% or .3 pF, whichever is greater, for BP characteristics beyond specified tolerance limit shall be removed from the lot but shall not be considered defective for determination of the PDA.
 8. **Dissipation Factor** shall not exceed 2.5% for X dielectric, 0.15% for G dielectric at 25°C (100% of lot).
 9. **Percent Defective Allowable (PDA).** The following table lists the PDA requirements for MIL-PRF-123 Group A:

TABLE I

| KEMET STYLE | MIL STYLE | BURN IN PDA LAST 48 HOURS | PDA OVERALL |
|-------------|-----------|---------------------------|-------------|
| C052Z | CKS05 | 1 unit or 0.1% | 3% |
| C062Z | CKS06 | 1 unit or 0.2% | 5% |
| C512Z | CKS07 | 1 unit or 0.2% | 5% |
| C0805Z | CKS51 | 1 unit or 0.1% | 3% |
| C1206Z | CKS55 | 1 unit or 0.1% | 3% |
| C1210Z | CKS52 | 1 unit or 0.1% | 3% |
| C1808Z | CKS53 | 1 unit or 0.1% | 3% |
| C1812Z | CKS56 | 1 unit or 0.1% | 3% |
| C1825Z | CKS57 | 1 unit or 0.1% | 3% |
| C2225Z | CKS54 | 1 unit or 0.1% | 3% |

10. **Radiographic Inspection** (leaded devices only) (100% of lot).
11. **Visual Inspection** per MIL-PRF-123 criteria.
12. **Destructive Physical Analysis** per EIA-469 and MIL-PRF-123.

SAMPLE TESTS

The following Group B tests shall be performed on samples from each lot, which have been subjected to and have passed Group A inspection.

1. **Thermal Shock**—Performed in accordance to MIL-STD-202, Method 107, Condition A, with step 3 being 125°C. Number of cycles shall be 100.
2. **Life Test per MIL-5TD-202, Method 108.** Test temperature and tolerance is +125°C +4°, -0°C. Capacitors shall be subjected to 2X rated voltage for 1000 hours.
3. **Humidity, steady state, low voltage per MIL-STD-202, Method 103, Condition A.** Capacitors shall be subjected to an environment of 85°C with 85% relative humidity for 240 hours minimum. Cycling shall not be performed. A dc potential of 1.3 ±0.25 volts shall be applied continuously through a 100,000 ohm resistance to each device under test. At completion, 25°C IR and Cap are read.
4. **Voltage-temperature limits**—Capacitance is measured at various temperatures (-55°C to +125°C) with and without rated voltage.
5. **Moisture Resistance per MIL-STD-202, Method 106.** There shall be 20 continuous cycles. During the first 10 cycles only, a dc potential of 50 volts shall be applied across the capacitor terminals. Once each day, a check shall be performed to determine whether a capacitor has shorted. Vibration cycle of MIL-STD-202, Method 106, Step 7b shall not be performed. Upon completion of MIL-STD-202, Method 106, Step 6 of the final cycle, capacitors shall be measured for capacitance, dielectric withstanding voltage and insulation resistance.

The following Group C tests shall be performed on samples selected from lots that have passed Group A and have been submitted for Group B inspection. Samples shall be selected every two months.

1. Terminal Strength
2. Solderability
3. Resistance to Soldering Heat
4. Solvent Resistance (Leaded devices only)

All lots shipped must have been subjected to and passed Group A and B testing.

STANDARD PACKAGING FOR MIL-PRF-123 IS AS FOLLOWS:

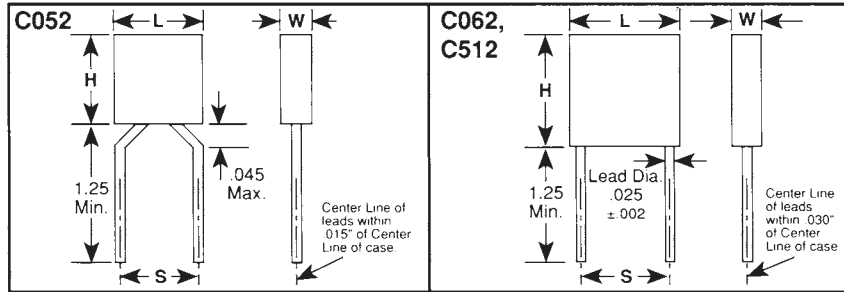
| | | | |
|-------|---------------|--------|-----------|
| C052Z | tray | C0805Z | chip tray |
| | | C1206Z | chip tray |
| C062Z | tray | C1210Z | chip tray |
| C512Z | 1 pc. per bag | C1808Z | chip tray |
| | | C1812Z | chip tray |
| | | C1825Z | chip tray |
| | | C2225Z | chip tray |

DATA PACKAGE

A data package is sent with each shipment which contains:

1. Summary of Group A testing
2. Summary of Group B testing
3. Group B Variables Test Data
4. Lead Pull Data (Leaded Devices Only)
5. Final Destructive Physical Analysis Report
6. Certificate of Compliance stating that the ceramic capacitors supplied meet all the requirements of MIL-PRF-123, the applicable slash sheet(s) and all associated documents.

CAPACITOR OUTLINE DRAWINGS - (RADIAL LEADS)



DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | MILITARY EQUIVALENT STYLES | H HEIGHT | L LENGTH | W WIDTH | S LEAD SPACING |
|-----------|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| C052 | CKS05 | .190 ± .010 (4.83 ± .25) | .190 ± .010 (4.83 ± .25) | .090 ± .010 (2.29 ± .25) | .200 ± .015 (5.08 ± .38) |
| C062 | CKS06 | .290 ± .010 (7.37 ± .25) | .290 ± .010 (7.37 ± .25) | .090 ± .010 (2.29 ± .25) | .200 ± .015 (5.08 ± .38) |
| C512 | CKS07 | .480 ± .020 (12.19 ± .51) | .480 ± .020 (12.19 ± .51) | .140 ± .010 (3.56 ± .25)* | .400 ± .020 (10.16 ± .51) |

*0.200 maximum for some capacitance values.

**ORDERING INFORMATION
KEMET PART NUMBER**

C 052 Z 102 K 5 G 5 C A

CERAMIC CASE SIZE — C

SPECIFICATION — Z — Mil-C-123

CAPACITANCE — 052
In picofarad code

CAPACITANCE TOLERANCE — Z
Standard

C — ±0.25 pF J — ±5%
D — ±0.5 pF K — ±10%
F — ±1%

WORKING VOLTAGE — 102

5 — 50
1 — 100

FAILURE RATE — A — Standard — Not applicable

LEAD MATERIAL — C — Standard
Radial: solder coated copper

INTERNAL CONSTRUCTION — 5 — Standard

| TEMPERATURE CHARACTERISTIC | | | | |
|----------------------------|---------------------|-----------------|----------------------------------|------------------------------------|
| KEMET Designator | Military Equivalent | Temp. Range, °C | Capacitance Change With Temp. | |
| | | | Measured Without DC Bias Voltage | Measured With Bias (Rated) Voltage |
| G (Ultra Stable) | BP | -55 to +125 | ±30 ppm/°C | ±30 ppm/°C |
| X (Stable) | BX | -55 to +125 | ±15% | +15% -25% |

MIL-PRF-123 MILITARY PART NUMBER

M123 A 01 BX B 103 K C

MILITARY SPECIFICATION NUMBER

MODIFICATION LETTER
Indicates the latest characteristics of the part in the specification sheet.

MIL-PRF-123 SLASH SHEET NUMBER

| Slash Sheet # | KEMET Style | Mil-C-123 Style |
|---------------|-------------|-----------------|
| 01 | C052 | CKS05 |
| 02 | C062 | CKS06 |
| 03 | C512 | CKS07 |

TERMINATION
Molded
C — Solder-coated copper (radial)

TOLERANCE
C—±0.25pF J—±5%
D—±0.5pF K—±10%
F—±1%

CAPACITANCE
In picofarad code

VOLTAGE

| VOLTAGE-TEMPERATURE CHARACTERISTICS | | | | |
|-------------------------------------|---------------------|-------------------------------|----------------------------------|------------------------------------|
| KEMET Designator | Military Equivalent | Capacitance Change With Temp. | | |
| | | Temp. Range, °C | Measured Without DC Bias Voltage | Measured (Rated) With Bias Voltage |
| G (Ultra Stable) | BP | -55 to +125 | ±30 ppm/°C | ±30 ppm/°C |
| X (Stable) | BX | -55 to +125 | ±15% | +15% -25% |

RATINGS & PART NUMBER REFERENCE

| CAP. pF | KEMET PART NUMBER | MIL-PRF-123 PART NUMBER |
|---|-------------------|-------------------------|
| 100 VOLT - BP - C052 SIZE (MILITARY CKS05) | | |
| 4.7 | C052Z4791G5CA | M123A01BPC4R71C |
| 5.1 | C052Z5191G5CA | M123A01BPC5R11C |
| 5.6 | C052Z5691G5CA | M123A01BPC5R61C |
| 6.2 | C052Z6291G5CA | M123A01BPC6R21C |
| 6.8 | C052Z6891G5CA | M123A01BPC6R81C |
| 7.5 | C052Z7591G5CA | M123A01BPC7R51C |
| 8.2 | C052Z8291G5CA | M123A01BPC8R21C |
| 9.1 | C052Z9191G5CA | M123A01BPC9R11C |
| 10 | C052Z10021G5CA | M123A01BPC1002C |
| 11 | C052Z11021G5CA | M123A01BPC1102C |
| 12 | C052Z12021G5CA | M123A01BPC1202C |
| 13 | C052Z13021G5CA | M123A01BPC1302C |
| 15 | C052Z15021G5CA | M123A01BPC1502C |
| 16 | C052Z16021G5CA | M123A01BPC1602C |
| 18 | C052Z18021G5CA | M123A01BPC1802C |
| 20 | C052Z20021G5CA | M123A01BPC2002C |
| 22 | C052Z22021G5CA | M123A01BPC2202C |
| 24 | C052Z24021G5CA | M123A01BPC2402C |
| 27 | C052Z27031G5CA | M123A01BPC2703C |
| 30 | C052Z30031G5CA | M123A01BPC3003C |
| 33 | C052Z33031G5CA | M123A01BPC3303C |
| 36 | C052Z36031G5CA | M123A01BPC3603C |
| 39 | C052Z39031G5CA | M123A01BPC3903C |
| 43 | C052Z43031G5CA | M123A01BPC4303C |
| 47 | C052Z47031G5CA | M123A01BPC4703C |
| 51 | C052Z51031G5CA | M123A01BPC5103C |
| 56 | C052Z56031G5CA | M123A01BPC5603C |
| 62 | C052Z62031G5CA | M123A01BPC6203C |
| 68 | C052Z68031G5CA | M123A01BPC6803C |
| 75 | C052Z75031G5CA | M123A01BPC7503C |
| 82 | C052Z82031G5CA | M123A01BPC8203C |
| 91 | C052Z91031G5CA | M123A01BPC9103C |
| 100 | C052Z10131G5CA | M123A01BPC1013C |
| 110 | C052Z11131G5CA | M123A01BPC1113C |
| 120 | C052Z12131G5CA | M123A01BPC1213C |
| 130 | C052Z13131G5CA | M123A01BPC1313C |
| 150 | C052Z15131G5CA | M123A01BPC1513C |
| 160 | C052Z16131G5CA | M123A01BPC1613C |
| 180 | C052Z18131G5CA | M123A01BPC1813C |
| 200 | C052Z20131G5CA | M123A01BPC2013C |
| 220 | C052Z22131G5CA | M123A01BPC2213C |
| 240 | C052Z24131G5CA | M123A01BPC2413C |
| 50 VOLT - BP - C052 SIZE (MILITARY CKS05) | | |
| 270 | C052Z2713G5CA | M123A01BPC2713C |
| 300 | C052Z3013G5CA | M123A01BPC3013C |
| 330 | C052Z3313G5CA | M123A01BPC3313C |
| 360 | C052Z3613G5CA | M123A01BPC3613C |
| 390 | C052Z3913G5CA | M123A01BPC3913C |
| 430 | C052Z4313G5CA | M123A01BPC4313C |
| 470 | C052Z4713G5CA | M123A01BPC4713C |
| 510 | C052Z5113G5CA | M123A01BPC5113C |

| CAP. pF | KEMET PART NUMBER | MIL-PRF-123 PART NUMBER |
|---|-------------------|-------------------------|
| 50 VOLT - BP - C052 SIZE (MILITARY CKS05) (Cont'd) | | |
| 560 | C052Z5613G5CA | M123A01BPC5613C |
| 620 | C052Z6213G5CA | M123A01BPC6213C |
| 680 | C052Z6813G5CA | M123A01BPC6813C |
| 750 | C052Z7513G5CA | M123A01BPC7513C |
| 820 | C052Z8213G5CA | M123A01BPC8213C |
| 910 | C052Z9113G5CA | M123A01BPC9113C |
| 1,000 | C052Z1023G5CA | M123A01BPC1023C |
| 1,100 | C052Z1123G5CA | M123A01BPC1123C |
| 1,200 | C052Z1223G5CA | M123A01BPC1223C |
| 1,300 | C052Z1323G5CA | M123A01BPC1323C |
| 1,500 | C052Z1523G5CA | M123A01BPC1523C |
| 1,600 | C052Z1623G5CA | M123A01BPC1623C |
| 1,800 | C052Z1823G5CA | M123A01BPC1823C |
| 2,000 | C052Z2023G5CA | M123A01BPC2023C |
| 2,200 | C052Z2223G5CA | M123A01BPC2223C |
| 2,400 | C052Z2423G5CA | M123A01BPC2423C |
| 2,700 | C052Z2723G5CA | M123A01BPC2723C |
| 100 VOLT - BP - C062 SIZE (MILITARY CKS06) | | |
| 270 | C062Z2713G5CA | M123A02BPC2713C |
| 300 | C062Z3013G5CA | M123A02BPC3013C |
| 330 | C062Z3313G5CA | M123A02BPC3313C |
| 360 | C062Z3613G5CA | M123A02BPC3613C |
| 390 | C062Z3913G5CA | M123A02BPC3913C |
| 430 | C062Z4313G5CA | M123A02BPC4313C |
| 470 | C062Z4713G5CA | M123A02BPC4713C |
| 510 | C062Z5113G5CA | M123A02BPC5113C |
| 560 | C062Z5613G5CA | M123A02BPC5613C |
| 620 | C062Z6213G5CA | M123A02BPC6213C |
| 680 | C062Z6813G5CA | M123A02BPC6813C |
| 750 | C062Z7513G5CA | M123A02BPC7513C |
| 820 | C062Z8213G5CA | M123A02BPC8213C |
| 910 | C062Z9113G5CA | M123A02BPC9113C |
| 1,000 | C062Z1023G5CA | M123A02BPC1023C |
| 1,100 | C062Z1123G5CA | M123A02BPC1123C |
| 1,200 | C062Z1223G5CA | M123A02BPC1223C |
| 1,300 | C062Z1323G5CA | M123A02BPC1323C |
| 1,500 | C062Z1523G5CA | M123A02BPC1523C |
| 1,600 | C062Z1623G5CA | M123A02BPC1623C |
| 1,800 | C062Z1823G5CA | M123A02BPC1823C |
| 2,000 | C062Z2023G5CA | M123A02BPC2023C |
| 2,200 | C062Z2223G5CA | M123A02BPC2223C |
| 2,400 | C062Z2423G5CA | M123A02BPC2423C |
| 50 VOLT - BP - C062 SIZE (MILITARY CKS06) | | |
| 2,700 | C062Z2723G5CA | M123A02BPC2723C |
| 3,000 | C062Z3023G5CA | M123A02BPC3023C |
| 3,300 | C062Z3323G5CA | M123A02BPC3323C |
| 3,600 | C062Z3623G5CA | M123A02BPC3623C |
| 3,900 | C062Z3923G5CA | M123A02BPC3923C |
| 4,300 | C062Z4323G5CA | M123A02BPC4323C |
| 4,700 | C062Z4723G5CA | M123A02BPC4723C |

RATINGS & PART NUMBER REFERENCE

| CAP. pF | KEMET PART NUMBER | MIL-PRF-123 PART NUMBER |
|---|-------------------|-------------------------|
| 100 VOLT - BP - C512 SIZE (MILITARY CKS07) | | |
| 2,700 | C512Z272G1G5CA | M123A03BPC272C |
| 3,000 | C512Z302G1G5CA | M123A03BPC302C |
| 3,300 | C512Z332G1G5CA | M123A03BPC332C |
| 3,600 | C512Z362G1G5CA | M123A03BPC362C |
| 3,900 | C512Z392G1G5CA | M123A03BPC392C |
| 4,300 | C512Z432G1G5CA | M123A03BPC432C |
| 4,700 | C512Z472G1G5CA | M123A03BPC472C |
| 5,100 | C512Z512G1G5CA | M123A03BPC512C |
| 5,600 | C512Z562G1G5CA | M123A03BPC562C |
| 6,200 | C512Z622G1G5CA | M123A03BPC622C |
| 6,800 | C512Z682G1G5CA | M123A03BPC682C |
| 7,500 | C512Z752G1G5CA | M123A03BPC752C |
| 8,200 | C512Z822G1G5CA | M123A03BPC822C |
| 9,100 | C512Z912G1G5CA | M123A03BPC912C |
| 10,000 | C512Z103G1G5CA | M123A03BPC103C |
| 50 VOLT - BP - C512 SIZE (MILITARY CKS07) | | |
| 11,000 | C512Z113G5G5CA | M123A03BPB113C |
| 12,000 | C512Z123G5G5CA | M123A03BPB123C |
| 13,000 | C512Z133G5G5CA | M123A03BPB133C |
| 15,000 | C512Z153G5G5CA | M123A03BPB153C |
| 16,000 | C512Z163G5G5CA | M123A03BPB163C |
| 18,000 | C512Z183G5G5CA | M123A03BPB183C |
| 20,000 | C512Z203G5G5CA | M123A03BPB203C |
| 22,000 | C512Z223G5G5CA | M123A03BPB223C |
| 24,000 | C512Z243G5G5CA | M123A03BPB243C |
| 27,000 | C512Z273G5G5CA | M123A03BPB273C |
| 30,000 | C512Z303G5G5CA | M123A03BPB303C |
| 33,000 | C512Z333G5G5CA | M123A03BPB333C |
| 36,000 | C512Z363G5G5CA | M123A03BPB363C |
| 39,000 | C512Z393G5G5CA | M123A03BPB393C |
| 43,000 | C512Z433G5G5CA | M123A03BPB433C |
| 47,000 | C512Z473G5G5CA | M123A03BPB473C |
| 51,000 | C512Z513G5G5CA | M123A03BPB513C |
| 56,000 | C512Z563G5G5CA | M123A03BPB563C |
| 62,000 | C512Z623G5G5CA | M123A03BPB623C |
| 68,000 | C512Z683G5G5CA | M123A03BPB683C |
| 75,000 | C512Z753G5G5CA | M123A03BPB753C |
| 82,000 | C512Z823G5G5CA | M123A03BPB823C |
| 91,000 | C512Z913G5G5CA | M123A03BPB913C |
| 100,000 | C512Z104G5G5CA | M123A03BPB104C |

| CAP. pF | KEMET PART NUMBER | MIL-PRF-123 PART NUMBER |
|---|-------------------|-------------------------|
| 100 VOLT - BX - C062 SIZE (MILITARY CKS06) | | |
| 5,600 | C062Z562K1X5CA | M123A02BXC562KC |
| 6,800 | C062Z682K1X5CA | M123A02BXC682KC |
| 8,200 | C062Z822K1X5CA | M123A02BXC822KC |
| 10,000 | C062Z103K1X5CA | M123A02BXC103KC |
| 12,000 | C062Z123K1X5CA | M123A02BXC123KC |
| 15,000 | C062Z153K1X5CA | M123A02BXC153KC |
| 18,000 | C062Z183K1X5CA | M123A02BXC183KC |
| 22,000 | C062Z223K1X5CA | M123A02BXC223KC |
| 27,000 | C062Z273K1X5CA | M123A02BXC273KC |
| 33,000 | C062Z333K1X5CA | M123A02BXC333KC |
| 39,000 | C062Z393K1X5CA | M123A02BXC393KC |
| 47,000 | C062Z473K1X5CA | M123A02BXC473KC |
| 56,000 | C062Z563K1X5CA | M123A02BXC563KC |
| 68,000 | C062Z683K1X5CA | M123A02BXC683KC |
| 82,000 | C062Z823K1X5CA | M123A02BXC823KC |
| 100,000 | C062Z104K1X5CA | M123A02BXC104KC |
| 50 VOLT - BX - C062 SIZE (MILITARY CKS06) | | |
| 56,000 | C062Z563K5X5CA | M123A02BXB563KC |
| 68,000 | C062Z683K5X5CA | M123A02BXB683KC |
| 82,000 | C062Z823K5X5CA | M123A02BXB823KC |
| 100,000 | C062Z104K5X5CA | M123A02BXB104KC |
| 120,000 | C062Z124K5X5CA | M123A02BXB124KC |
| 150,000 | C062Z154K5X5CA | M123A02BXB154KC |
| 180,000 | C062Z184K5X5CA | M123A02BXB184KC |
| 220,000 | C062Z224K5X5CA | M123A02BXB224KC |
| 270,000 | C062Z274K5X5CA | M123A02BXB274KC |
| 330,000 | C062Z334K5X5CA | M123A02BXB334KC |
| 390,000 | C062Z394K5X5CA | M123A02BXB394KC |
| 470,000 | C062Z474K5X5CA | M123A02BXB474KC |
| 560,000 | C062Z564K5X5CA | M123A02BXB564KC |
| 680,000 | C062Z684K5X5CA | M123A02BXB684KC |
| 820,000 | C062Z824K5X5CA | M123A02BXB824KC |
| 1,000,000 | C062Z105K5X5CA | M123A02BXB105KC |

| CAP. pF | KEMET PART NUMBER | MIL-PRF-123 PART NUMBER |
|---|-------------------|-------------------------|
| 100 VOLT - BX - C052 SIZE (MILITARY CKS05) | | |
| 270 | C052Z271K1X5CA | M123A01BXC271KC |
| 330 | C052Z331K1X5CA | M123A01BXC331KC |
| 390 | C052Z391K1X5CA | M123A01BXC391KC |
| 470 | C052Z471K1X5CA | M123A01BXC471KC |
| 560 | C052Z561K1X5CA | M123A01BXC561KC |
| 680 | C052Z681K1X5CA | M123A01BXC681KC |
| 820 | C052Z821K1X5CA | M123A01BXC821KC |
| 1,000 | C052Z102K1X5CA | M123A01BXC102KC |
| 1,200 | C052Z122K1X5CA | M123A01BXC122KC |
| 1,500 | C052Z152K1X5CA | M123A01BXC152KC |
| 1,800 | C052Z182K1X5CA | M123A01BXC182KC |
| 2,200 | C052Z222K1X5CA | M123A01BXC222KC |
| 2,700 | C052Z272K1X5CA | M123A01BXC272KC |
| 3,300 | C052Z332K1X5CA | M123A01BXC332KC |
| 3,900 | C052Z392K1X5CA | M123A01BXC392KC |
| 4,700 | C052Z472K1X5CA | M123A01BXC472KC |
| 50 VOLT - BX - C052 SIZE (MILITARY CKS05) | | |
| 5,600 | C052Z562K5X5CA | M123A01BXB562KC |
| 6,800 | C052Z682K5X5CA | M123A01BXB682KC |
| 8,200 | C052Z822K5X5CA | M123A01BXB822KC |
| 10,000 | C052Z103K5X5CA | M123A01BXB103KC |

| CAP. pF | KEMET PART NUMBER | MIL-PRF-123 PART NUMBER |
|---|-------------------|-------------------------|
| 100 VOLT - BX - C512 SIZE (MILITARY CKS07) | | |
| 56,000 | C512Z563K1X5CA | M123A03BXC563KC |
| 68,000 | C512Z683K1X5CA | M123A03BXC683KC |
| 82,000 | C512Z823K1X5CA | M123A03BXC823KC |
| 100,000 | C512Z104K1X5CA | M123A03BXC104KC |
| 120,000 | C512Z124K1X5CA | M123A03BXC124KC |
| 150,000 | C512Z154K1X5CA | M123A03BXC154KC |
| 180,000 | C512Z184K1X5CA | M123A03BXC184KC |
| 220,000 | C512Z224K1X5CA | M123A03BXC224KC |
| 270,000 | C512Z274K1X5CA | M123A03BXC274KC |
| 330,000 | C512Z334K1X5CA | M123A03BXC334KC |
| 390,000 | C512Z394K1X5CA | M123A03BXC394KC |
| 470,000 | C512Z474K1X5CA | M123A03BXC474KC |
| 50 VOLT - BX - C512 SIZE (MILITARY CKS07) | | |
| 560,000 | C512Z564K5X5CA | M123A03BXB564KC |
| 680,000 | C512Z684K5X5CA | M123A03BXB684KC |
| 820,000 | C512Z824K5X5CA | M123A03BXB824KC |
| 1,000,000 | C512Z105K5X5CA | M123A03BXB105KC |

To complete the part numbers, insert the following tolerances: (1) C, ±0.25pF; D, ±0.5pF (2) C, ±0.25pF; J, ±5%; K, ±10% (3) F, ±1%; J, ±5%; K, ±10%

MARKING INFORMATION

C052Z
M123A 01BPC 4R7CC
MIL-PRF-123 Part Number

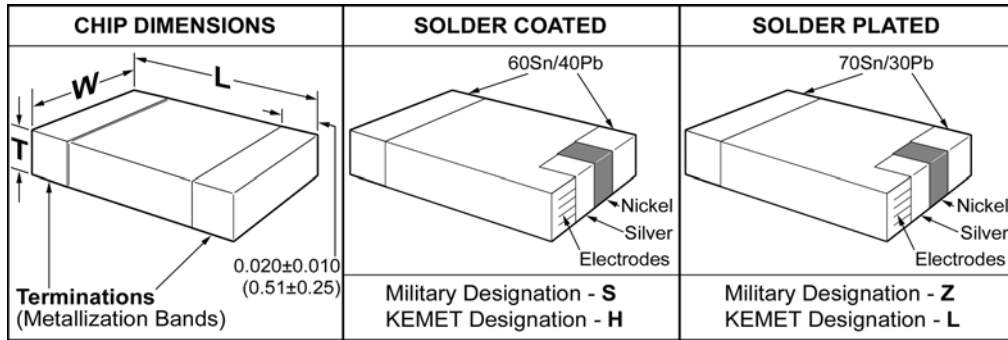
C062Z, C512Z
M123A 02BPC 271FC JAN
MIL-PRF-123 Part Number "JAN"

CAGE = Commercial and Government Entity

JAN — "JAN"
XXXX* — Date Lot Code
31433 — CAGE

271F — Capacitance Code & Tolerance
100V — Voltage
XXXX* — Date Lot Code
31433 — CAGE

CAPACITOR OUTLINE DRAWINGS



NOTE: For solder coated termination, add 0.015" (0.38mm) to the positive width and thickness tolerances. Add the following to the positive length tolerance: **CKS51** - 0.020" (0.51mm); **CKS52, CKS53 and CKS54** - 0.025 (0.64mm); add 0.012" (0.30mm) to the bandwidth tolerance.

DIMENSIONS — INCHES

| Chip Size | Military Equivalent Styles | L Length | W Width | T Thickness Maximum |
|-----------|----------------------------|---------------|---------------|---------------------|
| 0805 | CKS51 | 0.080 ± 0.015 | 0.050 ± 0.015 | 0.055 |
| 1210 | CKS52 | 0.120 ± 0.015 | 0.100 ± 0.015 | 0.065 |
| 1808 | CKS53 | 0.180 ± 0.015 | 0.080 ± 0.015 | 0.065 |
| 2225 | CKS54 | 0.220 ± 0.015 | 0.250 ± 0.015 | 0.070 |
| 1206 | CKS55 | 0.120 ± 0.015 | 0.060 ± 0.015 | 0.065 |
| 1812 | CKS56 | 0.180 ± 0.015 | 0.125 ± 0.015 | 0.080 |
| 1825 | CKS57 | 0.180 ± 0.015 | 0.250 ± 0.015 | 0.080 |

MARKING

Capacitors shall be legibly laser marked in contrasting color with the KEMET trademark and 2-digit capacitance symbol.

KEMET ORDERING INFORMATION

Ceramic Chip Size

0805, 1206, 1210, 1808, 1812, 1825, 2225

Specification

Z — Mil-PRF-123

Capacitance Picofarad Code

First two digits represent significant figures.
Third digit specifies number of zeros to follow.

Capacitance Tolerance

C — ±0.25pF J — ±5%
 D — ±0.5 pF K — ±10%
 F — ±1%

Working Voltage

5 — 50; 1 — 100

Termination
 H = Nickel Guarded, Solder-Coated (Sn60)
 L = 70/30 Tin/Lead Plated

Failure Rate
 (%/1000 Hours)
 A - Standard — Not Applicable

Temperature Characteristic

| KEMET Designator | Military Equivalent | Temp. Range, °C | Measured Without DC Bias Voltage | Measured With Bias (Rated Voltage) |
|------------------|---------------------|-----------------|----------------------------------|------------------------------------|
| G (Ultra Stable) | BP | -55 to +125 | ±30 ppm °C | ±30 ppm °C |
| X (Stable) | BX | -55 to +125 | ±15% | +15% -25% |

M123 A 10 BX B 472 K Z

Military Specification Number

Modification Number

Indicates the latest characteristics of the part in the specification sheet

MIL-PRF-123 Slash Sheet Number

| Slash Sheet # | KEMET Style | MIL-PRF-123 Style |
|---------------|-------------|-------------------|
| 10 | C0805 | CKS51 |
| 11 | C1210 | CKS52 |
| 12 | C1808 | CKS53 |
| 13 | C2225 | CKS54 |
| 21 | C1206 | CKS55 |
| 22 | C1812 | CKS56 |
| 23 | C1825 | CKS57 |

Termination
 Z = 70/30 Tin Lead Plated
 S = Nickel guarded Solder-coated (Sn60)

Tolerance
 C = ±0.25pF; D = ±0.5pF;
 F = ±1%; J = ±5%; K = ± 10%

Capacitance Picofarad Code

Voltage
 B = 50; C = 100

Temperature Characteristic

| KEMET Designator | Military Equivalent | Temp. Range, °C | Capacitance Change with Temperature | |
|------------------|---------------------|-----------------|-------------------------------------|------------------------------------|
| | | | Measured Without DC Bias Voltage | Measured With Bias (Rated Voltage) |
| G (UltraStable) | BP | -55 to 125 | ±30 ppm°C | ±30 ppm°C |
| X (Stable) | BX | -55 to +125 | ±15% | +15% -25% |

HIGH RELIABILITY — GR900

GR900 capacitors are intended for use in any application where the chance of failure must be reduced to the lowest possible level. While any well-made multilayer ceramic capacitor is an inherently reliable device, GR900 capacitors receive special attention in all phases of manufacture including:

- Raw Materials Selection
- Special Designs
- Clean Room Production
- Individual Batch Testing
- C-SAM (when applicable)
- Singular Batch Identity is Maintained
- Destructive Physical Analysis

These parts are well worth the added investment in comparison to the cost of a device or system failure.

Typical applications include:

Medical, Aerospace, Communication Satellites, Radar, Guidance Systems.

SCREENING AND SAMPLE TESTS

Each batch receives the following testing/inspections:

Preliminary:

1. **Destructive Physical Analysis: (DPA)** - A sample is pulled from each lot and examined per EIA-469 and KEMET's strict internal void and delamination criteria. Sampling plan is per MIL-PRF-123.

2. **C-SAM** - May be performed on batches failing to meet the DPA criteria for removal of marginal product. Not required on each lot.

Group A

1. **Thermal Shock** — Materials used in the construction of multilayer ceramic capacitors possess various thermal coefficients of expansion. To assure maximum uniformity, each part is temperature cycled in accordance to MIL-STD-202, Method 107, Condition A with Step 3 being 125°C. Number of cycles shall be 20 (100% of lot).

2. **Voltage Conditioning** — One of the most strenuous environments for any capacitor is the high temperature/high voltage test. All units are subject to twice-rated voltage to the units at the maximum rated temperature of 125°C for a minimum of 168 hours and a maximum of 264 hours. The voltage conditioning may be terminated at any time during 168 hours to 264 hours time interval that confirmed failures meet the requirements of the PDA during the last 48 hours of 1 unit or .4% (100% of lot).

Optional Voltage Conditioning (Accelerated Voltage Conditioning) — All conditions of the standard voltage conditioning apply with the exception of increased voltage and decreased test time. Refer to MIL-PRF-123 for the proper formula.

***Step 5 is performed on chips at this point (100% of lot).**

3. **Dielectric Withstanding Voltage** — 250% of the dc rated voltage at 25°C (100% of lot).

4. **Insulation Resistance** — The 25°C measurement with rated voltage applied shall be the lesser of 100 GΩ or 1000 megohm-microfarads (100% of lot).

*5. **Insulation Resistance** — The 125°C measurement with rated voltage applied shall be the lesser of 10 GΩ or 100 megohm-microfarads (100% of lot). For chips, 125°C IR is performed prior to Step 3 above.

6. **Storage** at 150°C for 2 hours minimum without voltage applied followed by a 12-hour minimum stabilization period (temperature characteristic BX only).

7. **Capacitance** — Shall be within specified tolerance at 25°C (100% of lot). (Aging phenomenon is taken into account for BX dielectric to obtain capacitance.)

8. **Dissipation Factor** — Shall not exceed 2.5% for X7R (BX) dielectric, 0.15% for C0G (BP) dielectric at 25°C. (100% of lot.)

9. **Percent Defective Allowable (PDA)** — The overall PDA is 8% for parts outside the MIL-PRF-123 values. The PDA is per MIL-PRF-123 for all parts that are valid MIL-PRF-123 values. The PD includes steps 1 through 8 above with the following exceptions. Capacitance exclusion - capacitance values no more than 5% or .5pF, whichever is greater for BX characteristic or 1% or .3pF, whichever is greater for BP characteristic beyond specified tolerance limit, shall be removed from the lot but shall not be considered defective for determination of the PD.

Insulation Resistance at 25°C — Product which is not acceptable for twice the military limit but is acceptable per the military limit, is removed from the lot but shall not be considered defective for determination of the PD.

10. **Visual and Mechanical Examination** — Performed per MIL-PRF-123 criteria.

11. **Radiographic Examination (Leaded Devices Only)** — Radial devices receive a one-plane X-ray.

12. **Destructive Physical Analysis (DPA)** — A sample is examined on each lot per EIA-469. Sampling Plan is per MIL-PRF-123.

STANDARD PACKAGING

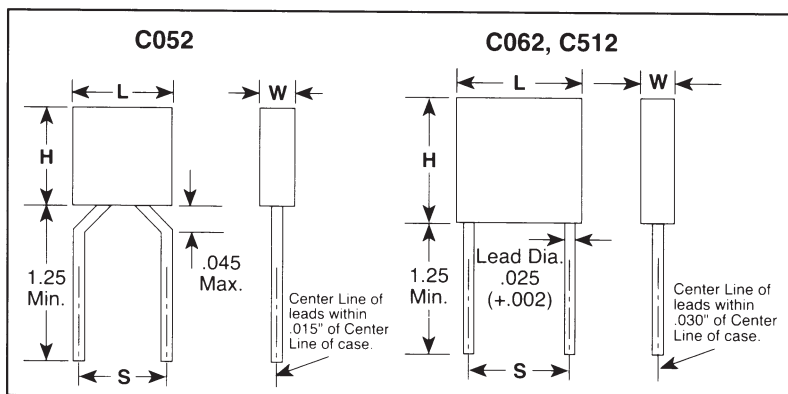
All products are packaged in trays except C512 capacitors which are packaged 1 piece per bag.

DATA PACKAGE

A data package is sent with each shipment which contains:

1. Final Destructive Physical Analysis (DPA) report.
2. Certificate of Compliance stating that the parts meet all applicable requirements of the appropriate military specification to the best failure level to which KEMET is approved.
3. Summary of Group A Testing.

CAPACITOR OUTLINE DRAWINGS



DIMENSIONS — INCHES & (MILLIMETERS) RADIAL LEAD

| KEMET CASE SIZE | H HEIGHT | L LENGTH | W WIDTH | S LEAD SPACING | MILITARY STYLES | | |
|-----------------|---------------------------|---------------------------|--------------------------|---------------------------|-----------------|---------------|-------------|
| | | | | | MIL-PRF-20 | MIL-PRF-39014 | MIL-PRF-123 |
| C052 | .190 ± .010 (4.83 ± .25) | .190 ± .010 (4.83 ± .25) | .090 ± .010 (2.29 ± .25) | .200 ± .015 (5.08 ± .38) | CCR05 | CKR05 | CKS05 |
| C062 | .290 ± .010 (7.37 ± .25) | .290 ± .010 (7.37 ± .25) | .090 ± .010 (2.29 ± .25) | .200 ± .015 (5.08 ± .38) | CCR06 | CKR06 | CKS06 |
| C512 | .480 ± .020 (12.19 ± .51) | .480 ± .020 (12.19 ± .51) | .140 ± .010 (3.56 ± .25) | .400 ± .020 (10.16 ± .51) | CCR07 | — | CKS07 |

C 052 B 223 K 1 X 5 C A

MONOLITHIC CERAMIC CAPACITORS

PHYSICAL DIMENSIONS
(See above)

HI REL SPECIFICATIONS APPLY:
B—Leaded devices

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

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

FAILURE RATE
A—Standard — Not Applicable

LEAD MATERIAL
C — Standard —
Radial: solder coated copper

INTERNAL CONSTRUCTION
5— Standard

TEMPERATURE CHARACTERISTICS
(See table below)

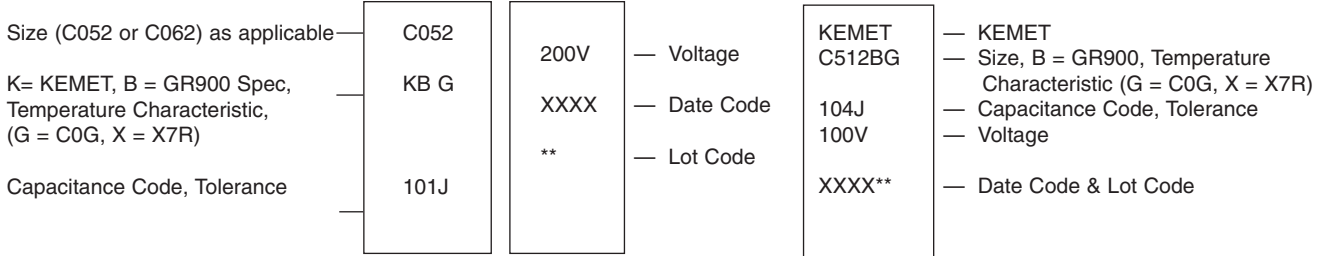
RATED VOLTAGE
1 — 100
2 — 200
5 — 50

*These tolerances available only for 1.0 through 9.1 pF capacitors.

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

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

CAPACITOR MARKINGS



RATINGS & PART NUMBER REFERENCE

| CAPACITANCE pF | KEMET PART NUMBER |
|-----------------------------------|-------------------------|
| 200 VOLT - BP - STYLE C052 | |
| 1.0 | C052B109 Δ 2G5CA |
| 1.1 | C052B119 Δ 2G5CA |
| 1.2 | C052B129 Δ 2G5CA |
| 1.5 | C052B159 Δ 2G5CA |
| 1.8 | C052B189 Δ 2G5CA |
| 2.0 | C052B209 Δ 2G5CA |
| 2.2 | C052B229 Δ 2G5CA |
| 2.4 | C052B249 Δ 2G5CA |
| 2.7 | C052B279 Δ 2G5CA |
| 3.0 | C052B309 Δ 2G5CA |
| 3.3 | C052B339 Δ 2G5CA |
| 3.6 | C052B369 Δ 2G5CA |
| 3.9 | C052B399 Δ 2G5CA |
| 4.3 | C052B439 Δ 2G5CA |
| 4.7 | C052B479 Δ 2G5CA |
| 5.1 | C052B519 Δ 2G5CA |
| 5.6 | C052B569 Δ 2G5CA |
| 6.2 | C052B629 Δ 2G5CA |
| 6.8 | C052B689 Δ 2G5CA |
| 7.5 | C052B759 Δ 2G5CA |
| 8.2 | C052B829 Δ 2G5CA |
| 9.1 | C052B919 Δ 2G5CA |
| 10.0 | C052B100 Δ 2G5CA |
| 11.0 | C052B110 Δ 2G5CA |
| 12.0 | C052B120 Δ 2G5CA |
| 13.0 | C052B130 Δ 2G5CA |
| 15.0 | C052B150 Δ 2G5CA |
| 16.0 | C052B160 Δ 2G5CA |
| 18.0 | C052B180 Δ 2G5CA |
| 20.0 | C052B200 Δ 2G5CA |
| 22.0 | C052B220 Δ 2G5CA |
| 24.0 | C052B240 Δ 2G5CA |
| 27.0 | C052B270 Δ 2G5CA |
| 30.0 | C052B300 Δ 2G5CA |

| CAPACITANCE pF | KEMET PART NUMBER |
|--|-------------------------|
| 200 VOLT - BP - STYLE C052 (Cont'd) | |
| 33.0 | C052B330 Δ 2G5CA |
| 36.0 | C052B360 Δ 2G5CA |
| 39.0 | C052B390 Δ 2G5CA |
| 43.0 | C052B430 Δ 2G5CA |
| 47.0 | C052B470 Δ 2G5CA |
| 51.0 | C052B510 Δ 2G5CA |
| 56.0 | C052B560 Δ 2G5CA |
| 62.0 | C052B620 Δ 2G5CA |
| 68.0 | C052B680 Δ 2G5CA |
| 75.0 | C052B750 Δ 2G5CA |
| 82.0 | C052B820 Δ 2G5CA |
| 91.0 | C052B910 Δ 2G5CA |
| 100 | C052B101 Δ 2G5CA |
| 110 | C052B111 Δ 2G5CA |
| 120 | C052B121 Δ 2G5CA |
| 130 | C052B131 Δ 2G5CA |
| 150 | C052B151 Δ 2G5CA |
| 160 | C052B161 Δ 2G5CA |
| 180 | C052B181 Δ 2G5CA |
| 200 | C052B201 Δ 2G5CA |
| 220 | C052B221 Δ 2G5CA |
| 240 | C052B241 Δ 2G5CA |
| 270 | C052B271 Δ 2G5CA |
| 300 | C052B301 Δ 2G5CA |
| 330 | C052B331 Δ 2G5CA |
| 360 | C052B361 Δ 2G5CA |
| 390 | C052B391 Δ 2G5CA |
| 430 | C052B431 Δ 2G5CA |
| 470 | C052B471 Δ 2G5CA |
| 510 | C052B511 Δ 2G5CA |
| 560 | C052B561 Δ 2G5CA |
| 620 | C052B621 Δ 2G5CA |
| 680 | C052B681 Δ 2G5CA |
| 750 | C052B751 Δ 2G5CA |

(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 13

BP CAPACITANCE TOLERANCE: $\pm 1\%$, $\pm 2\%$, $\pm 5\%$, $\pm 10\%$, $\pm 20\%$ ($\pm 0.5\text{pF}$ & $\pm 0.25\text{pF}$ tolerances available 1.0 thru 9.1pF only) TEMPERATURE CHARACTERISTIC "G"

BX CAPACITANCE TOLERANCE: $\pm 5\%$, $\pm 10\%$, $\pm 20\%$ TEMPERATURE CHARACTERISTIC "X"

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

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE pF | KEMET PART NUMBER |
|--|----------------------|
| 200 VOLT - BP - STYLE C052 (Cont'd) | |
| 820 | C052B821(1)2G5CA |
| 910 | C052B911(1)2G5CA |
| 1000 | C052B102(1)2G5CA |
| 1100 | C052B112(1)2G5CA |
| 1200 | C052B122(1)2G5CA |
| 1300 | C052B132(1)2G5CA |
| 1500 | C052B152(1)2G5CA |
| 100 VOLT - BP - STYLE C052 | |
| 1600 | C052B162(1)1G5CA |
| 1800 | C052B182(1)1G5CA |
| 2000 | C052B202(1)1G5CA |
| 2200 | C052B222(1)1G5CA |
| 2400 | C052B242(1)1G5CA |
| 2700 | C052B272(1)1G5CA |
| 3000 | C052B302(1)1G5CA |
| 3300 | C052B332(1)1G5CA |
| 3600 | C052B362(1)1G5CA |
| 3900 | C052B392(1)1G5CA |
| 4300 | C052B432(1)1G5CA |
| 4700 | C052B472(1)1G5CA |
| 5100 | C052B512(1)1G5CA |
| 5600 | C052B562(1)1G5CA |
| 50 VOLT - BP - STYLE C052 | |
| 6200 | C052B622(1)5G5CA |
| 6800 | C052B682(1)5G5CA |
| 200 VOLT - BX - STYLE C052 | |
| 470 | C052B471(1)2X5CA |
| 560 | C052B561(1)2X5CA |
| 680 | C052B681(1)2X5CA |
| 820 | C052B821(1)2X5CA |
| 1000 | C052B102(1)2X5CA |
| 1200 | C052B122(1)2X5CA |
| 1500 | C052B152(1)2X5CA |
| 1800 | C052B182(1)2X5CA |
| 2200 | C052B222(1)2X5CA |
| 2700 | C052B272(1)2X5CA |
| 3300 | C052B332(1)2X5CA |
| 3900 | C052B392(1)2X5CA |
| 4700 | C052B472(1)2X5CA |
| 5600 | C052B562(1)2X5CA |
| 6800 | C052B682(1)2X5CA |
| 8200 | C052B822(1)2X5CA |
| 10,000 | C052B103(1)2X5CA |
| 12,000 | C052B123(1)2X5CA |
| 15,000 | C052B153(1)2X5CA |
| 100 VOLT - BX - STYLE C052 | |
| 18,000 | C052B183(1)1X5CA |
| 22,000 | C052B223(1)1X5CA |
| 27,000 | C052B273(1)1X5CA |
| 33,000 | C052B333(1)1X5CA |
| 39,000 | C052B393(1)1X5CA |
| 47,000 | C052B473(1)1X5CA |
| 50 VOLT - BX - STYLE C052 | |
| 56,000 | C052B563(1)5X5CA |
| 68,000 | C052B683(1)5X5CA |
| 82,000 | C052B823(1)5X5CA |
| 100,000 | C052B104(1)5X5CA |
| 120,000 | C052B124(1)5X5CA |
| 150,000 | C052B154(1)5X5CA |
| 200 VOLT - BP - STYLE C062 | |
| 270 | C062B271(1)2G5CA |
| 330 | C062B331(1)2G5CA |
| 360 | C062B361(1)2G5CA |
| 390 | C062B391(1)2G5CA |

| CAPACITANCE pF | KEMET PART NUMBER |
|--|----------------------|
| 200 VOLT - BP - STYLE C062 (Cont'd) | |
| 430 | C062B431(1)2G5CA |
| 470 | C062B471(1)2G5CA |
| 510 | C062B511(1)2G5CA |
| 560 | C062B561(1)2G5CA |
| 620 | C062B621(1)2G5CA |
| 680 | C062B681(1)2G5CA |
| 750 | C062B751(1)2G5CA |
| 820 | C062B821(1)2G5CA |
| 910 | C062B911(1)2G5CA |
| 1000 | C062B102(1)2G5CA |
| 1100 | C062B112(1)2G5CA |
| 1200 | C062B122(1)2G5CA |
| 1300 | C062B132(1)2G5CA |
| 1500 | C062B152(1)2G5CA |
| 1600 | C062B162(1)2G5CA |
| 1800 | C062B182(1)2G5CA |
| 2000 | C062B202(1)2G5CA |
| 2200 | C062B222(1)2G5CA |
| 2400 | C062B242(1)2G5CA |
| 2700 | C062B272(1)2G5CA |
| 3000 | C062B302(1)2G5CA |
| 3300 | C062B332(1)2G5CA |
| 3600 | C062B362(1)2G5CA |
| 3900 | C062B392(1)2G5CA |
| 4700 | C062B472(1)2G5CA |
| 5100 | C062B512(1)2G5CA |
| 5600 | C062B562(1)2G5CA |
| 6200 | C062B622(1)2G5CA |
| 6800 | C062B682(1)2G5CA |
| 100 VOLT - BP - STYLE C062 | |
| 7500 | C062B752(1)1G5CA |
| 8200 | C062B822(1)1G5CA |
| 9100 | C062B912(1)1G5CA |
| 10,000 | C062B103(1)1G5CA |
| 11,000 | C062B113(1)1G5CA |
| 12,000 | C062B123(1)1G5CA |
| 13,000 | C062B133(1)1G5CA |
| 15,000 | C062B153(1)1G5CA |
| 16,000 | C062B163(1)1G5CA |
| 18,000 | C062B183(1)1G5CA |
| 20,000 | C062B203(1)1G5CA |
| 22,000 | C062B223(1)1G5CA |
| 24,000 | C062B243(1)1G5CA |
| 200 VOLT - BX - STYLE C062 | |
| 3300 | C062B332(1)2X5CA |
| 3900 | C062B392(1)2X5CA |
| 4700 | C062B472(1)2X5CA |
| 5600 | C062B562(1)2X5CA |
| 6800 | C062B682(1)2X5CA |
| 8200 | C062B822(1)2X5CA |
| 10,000 | C062B103(1)2X5CA |
| 12,000 | C062B123(1)2X5CA |
| 15,000 | C062B153(1)2X5CA |
| 18,000 | C062B183(1)2X5CA |
| 22,000 | C062B223(1)2X5CA |
| 27,000 | C062B273(1)2X5CA |
| 33,000 | C062B333(1)2X5CA |
| 39,000 | C062B393(1)2X5CA |
| 47,000 | C062B473(1)2X5CA |
| 56,000 | C062B563(1)2X5CA |
| 68,000 | C062B683(1)2X5CA |

(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 13. **BP CAPACITANCE TOLERANCE:** ±1%, ±2%, ±5%, ±10%, ±20% (±0.5pF & ±0.25pF tolerances available 1.0 thru 9.1pF only) TEMPERATURE CHARACTERISTIC "G" **BX CAPACITANCE TOLERANCE:** ±5%, ±10%, ±20% TEMPERATURE CHARACTERISTIC "X" (2) Capacitance values shown above are standard. Other capacitance values are available upon request.

RATINGS & PART NUMBER REFERENCE

| CAPACITANCE pF | KEMET PART NUMBER |
|-----------------------------------|-------------------------|
| 100 VOLT - BX - STYLE C062 | |
| 82,000 | C062B823 <u>1</u> 1X5CA |
| 100,000 | C062B104 <u>1</u> 1X5CA |
| 120,000 | C062B124 <u>1</u> 1X5CA |
| 150,000 | C062B154 <u>1</u> 1X5CA |
| 180,000 | C062B184 <u>1</u> 1X5CA |
| 220,000 | C062B224 <u>1</u> 1X5CA |
| 50 VOLT - BX - STYLE C062 | |
| 270,000 | C062B274 <u>1</u> 5X5CA |
| 330,000 | C062B334 <u>1</u> 5X5CA |
| 390,000 | C062B394 <u>1</u> 5X5CA |
| 470,000 | C062B474 <u>1</u> 5X5CA |
| 560,000 | C062B564 <u>1</u> 5X5CA |
| 680,000 | C062B684 <u>1</u> 5X5CA |
| 820,000 | C062B824 <u>1</u> 5X5CA |
| 1,000,000 | C062B105 <u>1</u> 5X5CA |
| 200 VOLT - BP- STYLE C512 | |
| 2000 | C512B202 <u>1</u> 2G5CA |
| 2200 | C512B222 <u>1</u> 2G5CA |
| 2400 | C512B242 <u>1</u> 2G5CA |
| 2700 | C512B272 <u>1</u> 2G5CA |
| 3000 | C512B302 <u>1</u> 2G5CA |
| 3300 | C512B332 <u>1</u> 2G5CA |
| 3600 | C512B362 <u>1</u> 2G5CA |
| 3900 | C512B392 <u>1</u> 2G5CA |
| 4300 | C512B432 <u>1</u> 2G5CA |
| 4700 | C512B472 <u>1</u> 2G5CA |
| 5600 | C512B562 <u>1</u> 2G5CA |
| 6800 | C512B682 <u>1</u> 2G5CA |
| 8200 | C512B822 <u>1</u> 2G5CA |
| 10,000 | C512B103 <u>1</u> 2G5CA |
| 12,000 | C512B123 <u>1</u> 2G5CA |
| 15,000 | C512B153 <u>1</u> 2G5CA |
| 18,000 | C512B183 <u>1</u> 2G5CA |
| 22,000 | C512B223 <u>1</u> 2G5CA |
| 27,000 | C512B273 <u>1</u> 2G5CA |
| 33,000 | C512B333 <u>1</u> 2G5CA |
| 100 VOLT - BP- STYLE C512 | |
| 39,000 | C512B393 <u>1</u> 1G5CA |
| 47,000 | C512B473 <u>1</u> 1G5CA |
| 56,000 | C512B563 <u>1</u> 1G5CA |
| 68,000 | C512B683 <u>1</u> 1G5CA |
| 82,000 | C512B823 <u>1</u> 1G5CA |
| 100,000 | C512B104 <u>1</u> 1G5CA |

| CAPACITANCE pF | KEMET PART NUMBER |
|-----------------------------------|-------------------------|
| 50 VOLT - BP- STYLE C512 | |
| 120,000 | C512B124 <u>1</u> 5G5CA |
| 150,000 | C512B154 <u>1</u> 5G5CA |
| 200 VOLT - BX - STYLE C512 | |
| 39,000 | C512B393 <u>1</u> 2X5CA |
| 47,000 | C512B473 <u>1</u> 2X5CA |
| 56,000 | C512B563 <u>1</u> 2X5CA |
| 68,000 | C512B683 <u>1</u> 2X5CA |
| 82,000 | C512B823 <u>1</u> 2X5CA |
| 100,000 | C512B104 <u>1</u> 2X5CA |
| 120,000 | C512B124 <u>1</u> 2X5CA |
| 150,000 | C512B154 <u>1</u> 2X5CA |
| 180,000 | C512B184 <u>1</u> 2X5CA |
| 220,000 | C512B224 <u>1</u> 2X5CA |
| 270,000 | C512B274 <u>1</u> 2X5CA |
| 330,000 | C512B334 <u>1</u> 2X5CA |
| 390,000 | C512B394 <u>1</u> 2X5CA |
| 100 VOLT - BX - STYLE C512 | |
| 470,000 | C512B474 <u>1</u> 1X5CA |
| 560,000 | C512B564 <u>1</u> 1X5CA |
| 680,000 | C512B684 <u>1</u> 1X5CA |
| 820,000 | C512B824 <u>1</u> 1X5CA |
| 1,000,000 | C512B105 <u>1</u> 1X5CA |
| 50 VOLT - BX - STYLE C512 | |
| 1,200,000 | C512B125 <u>1</u> 5X5CA |
| 1,500,000 | C512B155 <u>1</u> 5X5CA |
| 2,000,000 | C512B205 <u>1</u> 5X5CA |
| 2,200,000 | C512B225 <u>1</u> 5X5CA |
| 3,300,000 | C512B335 <u>1</u> 5X5CA |

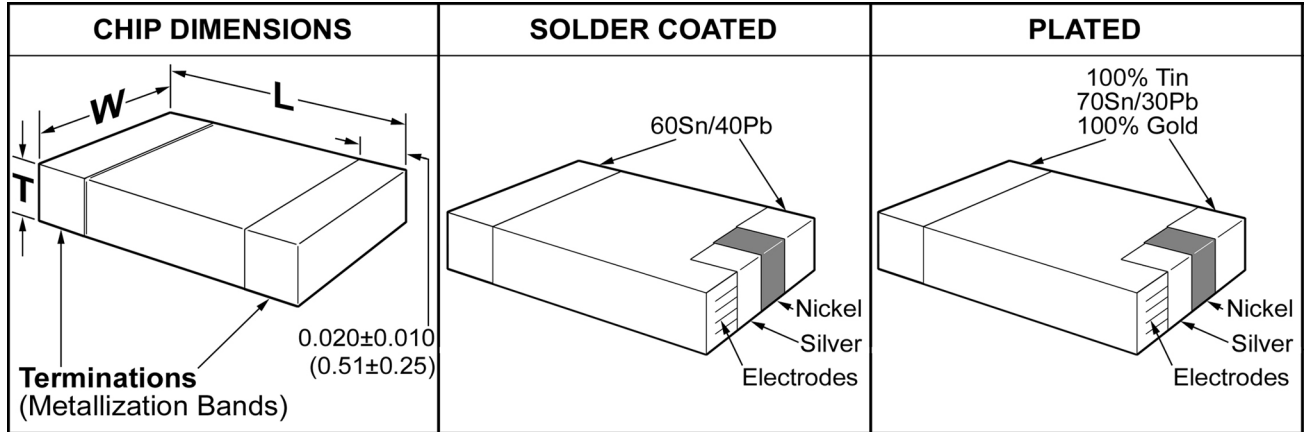
(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 13.

BP CAPACITANCE TOLERANCE: ±1%, ±2%, ±5%, ±10%, ±20% (±0.5pF & ±0.25pF tolerances available 1.0 thru 9.1pF only) TEMPERATURE CHARACTERISTIC "G"

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

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

CAPACITOR OUTLINE DRAWINGS



*Add .38mm (.015") to the positive width and thickness tolerance dimensions and .64mm (.025") to the positive length tolerance dimension for the Sn60 solder coated product.

DIMENSIONS — MILLIMETERS (INCHES)

| Size Code | L Length | W Width | T Thickness Max. |
|-----------|-----------------------------|-----------------------------|------------------|
| 0504 | 1.269 (.050) ± 0.254 (.010) | 1.015 (.040) ± 0.254 (.010) | 1.142 (.045) |
| 0805 | 2.03 (.080) ± 0.38 (.015) | 1.27 (.050) ± 0.38 (.015) | 1.4 (.055) |
| 1005 | 2.56 (.100) ± 0.38 (.015) | 1.27 (.050) ± 0.38 (.015) | 1.5 (.059) |
| 1206 | 3.07 (.120) ± 0.38 (.015) | 1.52 (.060) ± 0.38 (.015) | 1.6 (.065) |
| 1210 | 3.07 (.120) ± 0.38 (.015) | 2.56 (.100) ± 0.38 (.015) | 1.6 (.065) |
| 1805 | 4.57 (.180) ± 0.38 (.015) | 1.27 (.050) ± 0.38 (.015) | 1.4 (.055) |
| 1808 | 4.57 (.180) ± 0.38 (.015) | 2.03 (.080) ± 0.38 (.015) | 1.6 (.065) |
| 1812 | 4.57 (.180) ± 0.38 (.015) | 3.18 (.125) ± 0.38 (.015) | 2.03 (.080) |
| 1825 | 4.57 (.180) ± 0.38 (.015) | 6.35 (.250) ± 0.38 (.015) | 2.03 (.080) |
| 2225 | 5.59 (.220) ± 0.38 (.015) | 6.35 (.250) ± 0.38 (.015) | 2.03 (.080) |

ORDERING INFORMATION

C 0805 A 103 K 5 X A C

CERAMIC SIZE CODE
See table above

SPECIFICATION
A — KEMET GR900 (CHIPS); Q — MIL-PRF-123 In Process & Group A

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

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

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

VOLTAGE
1—100
2—200
5—50

END METALLIZATION

- C—Tin-Plated
- H—Solder-Coated
- L—70/30 Tin/Lead Plated
- G—Gold Plated

FAILURE RATE LEVEL (%/1,000 HOURS)

A—Standard—Not applicable

TEMPERATURE CHARACTERISTIC

Designated by Capacitance Change over Temperature Range
G—BP (±30 PPM/°C)
X—BX (±15%, +15%, -25% with bias.)

MARKING

Capacitors shall be legibly laser marked in contrasting color with the KEMET trademark and 2-digit capacitance symbol.

RATINGS AND PART NUMBER REFERENCE

STYLE C0504

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 1.0 | C0504A109(1)2GA(2) |
| 1.1 | C0504A119(1)2GA(2) |
| 1.2 | C0504A129(1)2GA(2) |
| 1.5 | C0504A159(1)2GA(2) |
| 1.6 | C0504A169(1)2GA(2) |
| 1.8 | C0504A189(1)2GA(2) |
| 2.0 | C0504A209(1)2GA(2) |
| 2.2 | C0504A229(1)2GA(2) |
| 2.4 | C0504A249(1)2GA(2) |
| 2.7 | C0504A279(1)2GA(2) |
| 3.0 | C0504A309(1)2GA(2) |
| 3.3 | C0504A339(1)2GA(2) |
| 3.6 | C0504A369(1)2GA(2) |
| 3.9 | C0504A399(1)2GA(2) |
| 4.3 | C0504A439(1)2GA(2) |
| 4.7 | C0504A479(1)2GA(2) |
| 5.1 | C0504A519(1)2GA(2) |
| 5.6 | C0504A569(1)2GA(2) |
| 6.2 | C0504A629(1)2GA(2) |
| 6.8 | C0504A689(1)2GA(2) |
| 7.5 | C0504A759(1)2GA(2) |
| 8.2 | C0504A829(1)2GA(2) |
| 9.1 | C0504A919(1)2GA(2) |
| 10.0 | C0504A100(1)2GA(2) |
| 11.0 | C0504A110(1)2GA(2) |
| 12.0 | C0504A120(1)2GA(2) |
| 13.0 | C0504A130(1)2GA(2) |
| 15.0 | C0504A150(1)2GA(2) |
| 16.0 | C0504A160(1)2GA(2) |
| 18.0 | C0504A180(1)2GA(2) |
| 20.0 | C0504A200(1)2GA(2) |
| 22.0 | C0504A220(1)2GA(2) |
| 24.0 | C0504A240(1)2GA(2) |
| 27.0 | C0504A270(1)2GA(2) |
| 30.0 | C0504A300(1)2GA(2) |
| 33.0 | C0504A330(1)2GA(2) |
| 36.0 | C0504A360(1)2GA(2) |
| 39.0 | C0504A390(1)2GA(2) |
| 43.0 | C0504A430(1)2GA(2) |
| 47.0 | C0504A470(1)2GA(2) |
| 51.0 | C0504A510(1)2GA(2) |
| 56.0 | C0504A560(1)2GA(2) |
| 62.0 | C0504A620(1)2GA(2) |
| 75.0 | C0504A750(1)2GA(2) |
| 82.0 | C0504A820(1)2GA(2) |
| 100 VOLT - BP | |
| 91.0 | C0504A910(1)1GA(2) |
| 100 | C0504A101(1)1GA(2) |
| 110 | C0504A111(1)1GA(2) |
| 120 | C0504A121(1)1GA(2) |
| 130 | C0504A131(1)1GA(2) |
| 50 VOLT - BP | |
| 150 | C0504A151(1)5GA(2) |
| 160 | C0504A161(1)5GA(2) |
| 180 | C0504A181(1)5GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BX | |
| 220 | C0504A221(1)2XA(2) |
| 270 | C0504A271(1)2XA(2) |
| 330 | C0504A331(1)2XA(2) |
| 100 VOLT - BX | |
| 360 | C0504A361(1)1XA(2) |
| 390 | C0504A391(1)1XA(2) |
| 470 | C0504A471(1)1XA(2) |
| 560 | C0504A561(1)1XA(2) |
| 680 | C0504A681(1)1XA(2) |
| 820 | C0504A821(1)1XA(2) |
| 1000 | C0504A102(1)1XA(2) |
| 1200 | C0504A122(1)1XA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|---------------------|----------------------|
| 50 VOLT - BX | |
| 1500 | C0504A152(1)5XA(2) |
| 1800 | C0504A182(1)5XA(2) |
| 2200 | C0504A222(1)5XA(2) |
| 2700 | C0504A272(1)5XA(2) |
| 3300 | C0504A332(1)5XA(2) |
| 3900 | C0504A392(1)5XA(2) |
| 4700 | C0504A472(1)5XA(2) |
| 5600 | C0504A562(1)5XA(2) |
| 6800 | C0504A682(1)5XA(2) |

STYLE C0805

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 1.0 | C0805A109(1)2GA(2) |
| 1.1 | C0805A119(1)2GA(2) |
| 1.2 | C0805A129(1)2GA(2) |
| 1.5 | C0805A159(1)2GA(2) |
| 1.6 | C0805A169(1)2GA(2) |
| 1.8 | C0805A189(1)2GA(2) |
| 2.0 | C0805A209(1)2GA(2) |
| 2.2 | C0805A229(1)2GA(2) |
| 2.4 | C0805A249(1)2GA(2) |
| 2.7 | C0805A279(1)2GA(2) |
| 3.0 | C0805A309(1)2GA(2) |
| 3.3 | C0805A339(1)2GA(2) |
| 3.6 | C0805A369(1)2GA(2) |
| 3.9 | C0805A399(1)2GA(2) |
| 4.3 | C0805A439(1)2GA(2) |
| 4.7 | C0805A479(1)2GA(2) |
| 5.1 | C0805A519(1)2GA(2) |
| 5.6 | C0805A569(1)2GA(2) |
| 6.2 | C0805A629(1)2GA(2) |
| 6.8 | C0805A689(1)2GA(2) |
| 7.5 | C0805A759(1)2GA(2) |
| 8.2 | C0805A829(1)2GA(2) |
| 9.1 | C0805A919(1)2GA(2) |
| 10.0 | C0805A100(1)2GA(2) |
| 11.0 | C0805A110(1)2GA(2) |
| 12.0 | C0805A120(1)2GA(2) |
| 13.0 | C0805A130(1)2GA(2) |
| 15.0 | C0805A150(1)2GA(2) |
| 16.0 | C0805A160(1)2GA(2) |
| 18.0 | C0805A180(1)2GA(2) |
| 20.0 | C0805A200(1)2GA(2) |
| 22.0 | C0805A220(1)2GA(2) |
| 24.0 | C0805A240(1)2GA(2) |
| 27.0 | C0805A270(1)2GA(2) |
| 30.0 | C0805A300(1)2GA(2) |
| 33.0 | C0805A330(1)2GA(2) |
| 36.0 | C0805A360(1)2GA(2) |
| 39.0 | C0805A390(1)2GA(2) |
| 43.0 | C0805A430(1)2GA(2) |
| 47.0 | C0805A470(1)2GA(2) |
| 51.0 | C0805A510(1)2GA(2) |
| 56.0 | C0805A560(1)2GA(2) |
| 62.0 | C0805A620(1)2GA(2) |
| 75.0 | C0805A750(1)2GA(2) |
| 82.0 | C0805A820(1)2GA(2) |
| 91.0 | C0805A910(1)2GA(2) |
| 100 | C0805A101(1)2GA(2) |
| 110 | C0805A111(1)2GA(2) |
| 120 | C0805A121(1)2GA(2) |
| 130 | C0805A131(1)2GA(2) |
| 150 | C0805A151(1)2GA(2) |
| 160 | C0805A161(1)2GA(2) |
| 180 | C0805A181(1)2GA(2) |
| 200 | C0805A201(1)2GA(2) |
| 220 | C0805A221(1)2GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 100 VOLT - BP | |
| 240 | C0805A241(1)1GA(2) |
| 270 | C0805A271(1)1GA(2) |
| 300 | C0805A301(1)1GA(2) |
| 330 | C0805A331(1)1GA(2) |
| 360 | C0805A361(1)1GA(2) |
| 390 | C0805A391(1)1GA(2) |
| 430 | C0805A431(1)1GA(2) |
| 470 | C0805A471(1)1GA(2) |
| 50 VOLT - BP | |
| 510 | C0805A511(1)5GA(2) |
| 560 | C0805A561(1)5GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BX | |
| 180 | C0805A181(1)2XA(2) |
| 220 | C0805A221(1)2XA(2) |
| 270 | C0805A271(1)2XA(2) |
| 330 | C0805A331(1)2XA(2) |
| 390 | C0805A391(1)2XA(2) |
| 470 | C0805A471(1)2XA(2) |
| 560 | C0805A561(1)2XA(2) |
| 680 | C0805A681(1)2XA(2) |
| 820 | C0805A821(1)2XA(2) |
| 100 VOLT - BX | |
| 1000 | C0805A102(1)1XA(2) |
| 1200 | C0805A122(1)1XA(2) |
| 1500 | C0805A152(1)1XA(2) |
| 1800 | C0805A182(1)1XA(2) |
| 2200 | C0805A222(1)1XA(2) |
| 3300 | C0805A332(1)1XA(2) |
| 3900 | C0805A392(1)1XA(2) |
| 4700 | C0805A472(1)1XA(2) |
| 50 VOLT - BX | |
| 6800 | C0805A682(1)5XA(2) |
| 8200 | C0805A822(1)5XA(2) |
| 10000 | C0805A103(1)5XA(2) |

(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 17.

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

(2) Complete part number by inserting end Metallization, as applicable as shown in ordering information on page 17.

**RATINGS AND PART NUMBER REFERENCE
STYLE C1005**

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 1.0 | C1005A109(1)2GA(2) |
| 1.1 | C1005A119(1)2GA(2) |
| 1.2 | C1005A129(1)2GA(2) |
| 1.5 | C1005A159(1)2GA(2) |
| 1.6 | C1005A169(1)2GA(2) |
| 1.8 | C1005A189(1)2GA(2) |
| 2.0 | C1005A209(1)2GA(2) |
| 2.2 | C1005A229(1)2GA(2) |
| 2.4 | C1005A249(1)2GA(2) |
| 2.7 | C1005A279(1)2GA(2) |
| 3.0 | C1005A309(1)2GA(2) |
| 3.3 | C1005A339(1)2GA(2) |
| 3.6 | C1005A369(1)2GA(2) |
| 3.9 | C1005A399(1)2GA(2) |
| 4.3 | C1005A439(1)2GA(2) |
| 4.7 | C1005A479(1)2GA(2) |
| 5.1 | C1005A519(1)2GA(2) |
| 5.6 | C1005A569(1)2GA(2) |
| 6.8 | C1005A689(1)2GA(2) |
| 7.5 | C1005A759(1)2GA(2) |
| 8.2 | C1005A829(1)2GA(2) |
| 9.1 | C1005A919(1)2GA(2) |
| 10.0 | C1005A100(1)2GA(2) |
| 11.0 | C1005A110(1)2GA(2) |
| 12.0 | C1005A120(1)2GA(2) |
| 13.0 | C1005A130(1)2GA(2) |
| 15.0 | C1005A150(1)2GA(2) |
| 16.0 | C1005A160(1)2GA(2) |
| 18.0 | C1005A180(1)2GA(2) |
| 20.0 | C1005A200(1)2GA(2) |
| 22.0 | C1005A220(1)2GA(2) |
| 24.0 | C1005A240(1)2GA(2) |
| 27.0 | C1005A270(1)2GA(2) |
| 30.0 | C1005A300(1)2GA(2) |
| 33.0 | C1005A330(1)2GA(2) |
| 36.0 | C1005A360(1)2GA(2) |
| 39.0 | C1005A390(1)2GA(2) |
| 43.0 | C1005A430(1)2GA(2) |
| 47.0 | C1005A470(1)2GA(2) |
| 51.0 | C1005A510(1)2GA(2) |
| 56.0 | C1005A560(1)2GA(2) |
| 62.0 | C1005A620(1)2GA(2) |
| 75.0 | C1005A750(1)2GA(2) |
| 82.0 | C1005A820(1)2GA(2) |
| 91.0 | C1005A910(1)2GA(2) |
| 100 | C1005A101(1)2GA(2) |
| 110 | C1005A111(1)2GA(2) |
| 120 | C1005A121(1)2GA(2) |
| 130 | C1005A131(1)2GA(2) |
| 150 | C1005A151(1)2GA(2) |
| 160 | C1005A161(1)2GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 180 | C1005A181(1)2GA(2) |
| 200 | C1005A201(1)2GA(2) |
| 220 | C1005A221(1)2GA(2) |
| 240 | C1005A241(1)2GA(2) |
| 270 | C1005A271(1)2GA(2) |
| 300 | C1005A301(1)2GA(2) |
| 330 | C1005A331(1)2GA(2) |
| 360 | C1005A361(1)2GA(2) |
| 390 | C1005A391(1)2GA(2) |
| 430 | C1005A431(1)2GA(2) |
| 470 | C1005A471(1)2GA(2) |
| 100 VOLT - BP | |
| 510 | C1005A511(1)1GA(2) |
| 560 | C1005A561(1)1GA(2) |
| 620 | C1005A621(1)1GA(2) |
| 680 | C1005A681(1)1GA(2) |
| 750 | C1005A751(1)1GA(2) |
| 820 | C1005A821(1)1GA(2) |
| 50 VOLT - BP | |
| 910 | C1005A911(1)5GA(2) |
| 1000 | C1005A102(1)5GA(2) |
| 1100 | C1005A112(1)5GA(2) |
| 1200 | C1005A122(1)5GA(2) |
| 200 VOLT - BX | |
| 330 | C1005A331(1)2XA(2) |
| 390 | C1005A391(1)2XA(2) |
| 470 | C1005A471(1)2XA(2) |
| 560 | C1005A561(1)2XA(2) |
| 680 | C1005A681(1)2XA(2) |
| 820 | C1005A821(1)2XA(2) |
| 1000 | C1005A102(1)2XA(2) |
| 1200 | C1005A122(1)2XA(2) |
| 1500 | C1005A152(1)2XA(2) |
| 1800 | C1005A182(1)2XA(2) |
| 100 VOLT - BX | |
| 2200 | C1005A222(1)1XA(2) |
| 2700 | C1005A272(1)1XA(2) |
| 3300 | C1005A332(1)1XA(2) |
| 3900 | C1005A392(1)1XA(2) |
| 4700 | C1005A472(1)1XA(2) |
| 5600 | C1005A562(1)1XA(2) |
| 6800 | C1005A682(1)1XA(2) |
| 8200 | C1005A822(1)1XA(2) |
| 10,000 | C1005A103(1)1XA(2) |
| 50 VOLT - BX | |
| 12,000 | C1005A123(1)5XA(2) |
| 15,000 | C1005A153(1)5XA(2) |
| 18,000 | C1005A183(1)5XA(2) |
| 22,000 | C1005A223(1)5XA(2) |

**RATINGS AND PART NUMBER REFERENCE
STYLE C1206**

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 10.0 | C1206A100(1)2GA(2) |
| 11.0 | C1206A110(1)2GA(2) |
| 12.0 | C1206A120(1)2GA(2) |
| 13.0 | C1206A130(1)2GA(2) |
| 15.0 | C1206A150(1)2GA(2) |
| 16.0 | C1206A160(1)2GA(2) |
| 18.0 | C1206A180(1)2GA(2) |
| 20.0 | C1206A200(1)2GA(2) |
| 22.0 | C1206A220(1)2GA(2) |
| 24.0 | C1206A240(1)2GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 27.0 | C1206A270(1)2GA(2) |
| 30.0 | C1206A300(1)2GA(2) |
| 33.0 | C1206A330(1)2GA(2) |
| 36.0 | C1206A360(1)2GA(2) |
| 39.0 | C1206A390(1)2GA(2) |
| 43.0 | C1206A430(1)2GA(2) |
| 47.0 | C1206A470(1)2GA(2) |
| 51.0 | C1206A510(1)2GA(2) |
| 56.0 | C1206A560(1)2GA(2) |
| 62.0 | C1206A620(1)2GA(2) |

(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 17.
BP CAPACITANCE TOLERANCE: ±1%, ±2%, ±5%, ±10%, ±20% (±0.5pF & ±0.25pF tolerances available 1.0 thru 10pF only) **TEMPERATURE CHARACTERISTIC "G"**
BX CAPACITANCE TOLERANCE: ±5%, ±10%, ±20% **TEMPERATURE CHARACTERISTIC "X"**
(2) Complete part number by inserting end Metallization, as applicable as shown in ordering information on page 17.

**RATINGS AND PART NUMBER REFERENCE
STYLE C1206 (continued)**

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 68.0 | C1206A680(1)2GA(2) |
| 75.0 | C1206A750(1)2GA(2) |
| 82.0 | C1206A820(1)2GA(2) |
| 91.0 | C1206A910(1)2GA(2) |
| 100 | C1206A101(1)2GA(2) |
| 110 | C1206A111(1)2GA(2) |
| 120 | C1206A121(1)2GA(2) |
| 130 | C1206A131(1)2GA(2) |
| 150 | C1206A151(1)2GA(2) |
| 160 | C1206A161(1)2GA(2) |
| 180 | C1206A181(1)2GA(2) |
| 200 | C1206A201(1)2GA(2) |
| 220 | C1206A221(1)2GA(2) |
| 240 | C1206A241(1)2GA(2) |
| 270 | C1206A271(1)2GA(2) |
| 300 | C1206A301(1)2GA(2) |
| 330 | C1206A331(1)2GA(2) |
| 360 | C1206A361(1)2GA(2) |
| 390 | C1206A391(1)2GA(2) |
| 430 | C1206A431(1)2GA(2) |
| 470 | C1206A471(1)2GA(2) |
| 100 VOLT - BP | |
| 510 | C1206A511(1)1GA(2) |
| 560 | C1206A561(1)1GA(2) |
| 620 | C1206A621(1)1GA(2) |
| 680 | C1206A681(1)1GA(2) |
| 750 | C1206A751(1)1GA(2) |
| 820 | C1206A821(1)1GA(2) |
| 910 | C1206A911(1)1GA(2) |
| 1000 | C1206A102(1)1GA(2) |
| 1100 | C1206A112(1)1GA(2) |
| 1200 | C1206A122(1)1GA(2) |
| 1300 | C1206A132(1)1GA(2) |
| 1500 | C1206A152(1)1GA(2) |
| 1600 | C1206A162(1)1GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 50 VOLT - BP | |
| 1800 | C1206A182(1)5GA(2) |
| 2000 | C1206A202(1)5GA(2) |
| 200 VOLT - BX | |
| 470 | C1206A471(1)2XA(2) |
| 560 | C1206A561(1)2XA(2) |
| 680 | C1206A681(1)2XA(2) |
| 820 | C1206A821(1)2XA(2) |
| 1000 | C1206A102(1)2XA(2) |
| 1200 | C1206A122(1)2XA(2) |
| 1500 | C1206A152(1)2XA(2) |
| 1800 | C1206A182(1)2XA(2) |
| 2200 | C1206A222(1)2XA(2) |
| 2700 | C1206A272(1)2XA(2) |
| 3300 | C1206A332(1)2XA(2) |
| 3900 | C1206A392(1)2XA(2) |
| 4700 | C1206A472(1)2XA(2) |
| 100 VOLT - BX | |
| 5600 | C1206A562(1)1XA(2) |
| 6800 | C1206A682(1)1XA(2) |
| 8200 | C1206A822(1)1XA(2) |
| 10,000 | C1206A103(1)1XA(2) |
| 12,000 | C1206A123(1)1XA(2) |
| 15,000 | C1206A153(1)1XA(2) |
| 50 VOLT - BX | |
| 18,000 | C1206A183(1)5XA(2) |
| 22,000 | C1206A223(1)5XA(2) |
| 27,000 | C1206A273(1)5XA(2) |
| 33,000 | C1206A333(1)5XA(2) |
| 39,000 | C1206A393(1)5XA(2) |
| 47,000 | C1206A473(1)5XA(2) |

**RATINGS AND PART NUMBER REFERENCE
STYLE C1210**

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 10.0 | C1210A100(1)2GA(2) |
| 11.0 | C1210A110(1)2GA(2) |
| 12.0 | C1210A120(1)2GA(2) |
| 13.0 | C1210A130(1)2GA(2) |
| 15.0 | C1210A150(1)2GA(2) |
| 16.0 | C1210A160(1)2GA(2) |
| 18.0 | C1210A180(1)2GA(2) |
| 20.0 | C1210A200(1)2GA(2) |
| 22.0 | C1210A220(1)2GA(2) |
| 24.0 | C1210A240(1)2GA(2) |
| 27.0 | C1210A270(1)2GA(2) |
| 30.0 | C1210A300(1)2GA(2) |
| 33.0 | C1210A330(1)2GA(2) |
| 36.0 | C1210A360(1)2GA(2) |
| 39.0 | C1210A390(1)2GA(2) |
| 43.0 | C1210A430(1)2GA(2) |
| 47.0 | C1210A470(1)2GA(2) |
| 51.0 | C1210A510(1)2GA(2) |
| 56.0 | C1210A560(1)2GA(2) |
| 62.0 | C1210A620(1)2GA(2) |
| 68.0 | C1210A680(1)2GA(2) |
| 75.0 | C1210A750(1)2GA(2) |
| 82.0 | C1210A820(1)2GA(2) |
| 91.0 | C1210A910(1)2GA(2) |
| 100 | C1210A101(1)2GA(2) |
| 110 | C1210A111(1)2GA(2) |
| 120 | C1210A121(1)2GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 130 | C1210A131(1)2GA(2) |
| 150 | C1210A151(1)2GA(2) |
| 160 | C1210A161(1)2GA(2) |
| 180 | C1210A181(1)2GA(2) |
| 200 | C1210A201(1)2GA(2) |
| 220 | C1210A221(1)2GA(2) |
| 240 | C1210A241(1)2GA(2) |
| 270 | C1210A271(1)2GA(2) |
| 300 | C1210A301(1)2GA(2) |
| 330 | C1210A331(1)2GA(2) |
| 360 | C1210A361(1)2GA(2) |
| 390 | C1210A391(1)2GA(2) |
| 430 | C1210A431(1)2GA(2) |
| 470 | C1210A471(1)2GA(2) |
| 510 | C1210A511(1)2GA(2) |
| 560 | C1210A561(1)2GA(2) |
| 620 | C1210A621(1)2GA(2) |
| 680 | C1210A681(1)2GA(2) |
| 750 | C1210A751(1)2GA(2) |
| 820 | C1210A821(1)2GA(2) |
| 910 | C1210A911(1)2GA(2) |
| 1000 | C1210A102(1)2GA(2) |

(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 17.

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

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

(2) Complete part number by inserting end Metallization, as applicable as shown in ordering information on page 17.

**RATINGS AND PART NUMBER REFERENCE
STYLE C1210 (continued)**

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 100 VOLT - BP | |
| 1100 | C1210A112(1)1GA(2) |
| 1200 | C1210A122(1)1GA(2) |
| 1300 | C1210A132(1)1GA(2) |
| 1500 | C1210A152(1)1GA(2) |
| 1600 | C1210A162(1)1GA(2) |
| 1800 | C1210A182(1)1GA(2) |
| 2000 | C1210A202(1)1GA(2) |
| 2200 | C1210A222(1)1GA(2) |
| 2400 | C1210A242(1)1GA(2) |
| 2700 | C1210A272(1)1GA(2) |
| 3000 | C1210A302(1)1GA(2) |
| 3300 | C1210A332(1)1GA(2) |
| 50 VOLT - BP | |
| 3600 | C1210A362(1)5GA(2) |
| 3900 | C1210A392(1)5GA(2) |
| 200 VOLT - BX | |
| 470 | C1210A471(1)2XA(2) |
| 560 | C1210A561(1)2XA(2) |
| 680 | C1210A681(1)2XA(2) |
| 820 | C1210A821(1)2XA(2) |
| 1000 | C1210A102(1)2XA(2) |
| 1200 | C1210A122(1)2XA(2) |
| 1500 | C1210A152(1)2XA(2) |
| 1800 | C1210A182(1)2XA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BX | |
| 2200 | C1210A222(1)2XA(2) |
| 2700 | C1210A272(1)2XA(2) |
| 3300 | C1210A332(1)2XA(2) |
| 3900 | C1210A392(1)2XA(2) |
| 4700 | C1210A472(1)2XA(2) |
| 5600 | C1210A562(1)2XA(2) |
| 6800 | C1210A682(1)2XA(2) |
| 8200 | C1210A822(1)2XA(2) |
| 10,000 | C1210A103(1)2XA(2) |
| 100 VOLT - BX | |
| 12,000 | C1210A123(1)1XA(2) |
| 15,000 | C1210A153(1)1XA(2) |
| 18,000 | C1210A183(1)1XA(2) |
| 22,000 | C1210A223(1)1XA(2) |
| 27,000 | C1210A273(1)1XA(2) |
| 33,000 | C1210A333(1)1XA(2) |
| 50 VOLT - BX | |
| 39,000 | C1210A393(1)5XA(2) |
| 47,000 | C1210A473(1)5XA(2) |
| 56,000 | C1210A563(1)5XA(2) |
| 68,000 | C1210A683(1)5XA(2) |
| 82,000 | C1210A823(1)5XA(2) |
| 100,000 | C1210A104(1)5XA(2) |

**RATINGS AND PART NUMBER REFERENCE
STYLE C1805**

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 220 | C1805A221(1)2GA(2) |
| 240 | C1805A241(1)2GA(2) |
| 270 | C1805A271(1)2GA(2) |
| 300 | C1805A301(1)2GA(2) |
| 330 | C1805A331(1)2GA(2) |
| 360 | C1805A361(1)2GA(2) |
| 390 | C1805A391(1)2GA(2) |
| 430 | C1805A431(1)2GA(2) |
| 470 | C1805A471(1)2GA(2) |
| 100 VOLT - BP | |
| 510 | C1805A511(1)1GA(2) |
| 560 | C1805A561(1)1GA(2) |
| 620 | C1805A621(1)1GA(2) |
| 680 | C1805A681(1)1GA(2) |
| 750 | C1805A751(1)1GA(2) |
| 820 | C1805A821(1)1GA(2) |
| 910 | C1805A911(1)1GA(2) |
| 1000 | C1805A102(1)1GA(2) |
| 1100 | C1805A112(1)1GA(2) |
| 1200 | C1805A122(1)1GA(2) |
| 1300 | C1805A132(1)1GA(2) |
| 1500 | C1805A152(1)1GA(2) |
| 50 VOLT - BP | |
| 1600 | C1805A162(1)5GA(2) |
| 1800 | C1805A182(1)5GA(2) |
| 2000 | C1805A202(1)5GA(2) |
| 2200 | C1805A222(1)5GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BX | |
| 1200 | C1805A122(1)2XA(2) |
| 1500 | C1805A152(1)2XA(2) |
| 1800 | C1805A182(1)2XA(2) |
| 2200 | C1805A222(1)2XA(2) |
| 2700 | C1805A272(1)2XA(2) |
| 3300 | C1805A332(1)2XA(2) |
| 3900 | C1805A392(1)2XA(2) |
| 100 VOLT - BX | |
| 4700 | C1805A472(1)1XA(2) |
| 5600 | C1805A562(1)1XA(2) |
| 6800 | C1805A682(1)1XA(2) |
| 8200 | C1805A822(1)1XA(2) |
| 10,000 | C1805A103(1)1XA(2) |
| 12,000 | C1805A123(1)1XA(2) |
| 15,000 | C1805A153(1)1XA(2) |
| 18,000 | C1805A183(1)1XA(2) |
| 50 VOLT - BX | |
| 18,000 | C1805A183(1)5XA(2) |
| 22,000 | C1805A223(1)5XA(2) |
| 27,000 | C1805A273(1)5XA(2) |
| 33,000 | C1805A333(1)5XA(2) |
| 39,000 | C1805A393(1)5XA(2) |
| 47,000 | C1805A473(1)5XA(2) |

(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 17.

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

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

(2) Complete part number by inserting end Metallization, as applicable as shown in ordering information on page 17.

RATINGS AND PART NUMBER REFERENCE
STYLE C1808

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 330 | C1808A331(1)2GA(2) |
| 360 | C1808A361(1)2GA(2) |
| 390 | C1808A391(1)2GA(2) |
| 430 | C1808A431(1)2GA(2) |
| 470 | C1808A471(1)2GA(2) |
| 510 | C1808A511(1)2GA(2) |
| 560 | C1808A561(1)2GA(2) |
| 620 | C1808A621(1)2GA(2) |
| 680 | C1808A681(1)2GA(2) |
| 750 | C1808A751(1)2GA(2) |
| 820 | C1808A821(1)2GA(2) |
| 910 | C1808A911(1)2GA(2) |
| 1000 | C1808A102(1)2GA(2) |
| 1100 | C1808A112(1)2GA(2) |
| 1200 | C1808A122(1)2GA(2) |
| 1300 | C1808A132(1)2GA(2) |
| 1500 | C1808A152(1)2GA(2) |
| 100 VOLT - BP | |
| 1600 | C1808A162(1)1GA(2) |
| 1800 | C1808A182(1)1GA(2) |
| 2000 | C1808A202(1)1GA(2) |
| 2200 | C1808A222(1)1GA(2) |
| 2400 | C1808A242(1)1GA(2) |
| 2700 | C1808A272(1)1GA(2) |
| 3000 | C1808A302(1)1GA(2) |
| 3300 | C1808A332(1)1GA(2) |
| 3600 | C1808A362(1)1GA(2) |
| 3900 | C1808A392(1)1GA(2) |
| 4300 | C1808A432(1)1GA(2) |
| 4700 | C1808A472(1)1GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 50 VOLT - BP | |
| 5100 | C1808A512(1)5GA(2) |
| 5600 | C1808A562(1)5GA(2) |
| 200 VOLT - BX | |
| 2200 | C1808A222(1)2XA(2) |
| 2700 | C1808A272(1)2XA(2) |
| 3300 | C1808A332(1)2XA(2) |
| 3900 | C1808A392(1)2XA(2) |
| 4700 | C1808A472(1)2XA(2) |
| 5600 | C1808A562(1)2XA(2) |
| 6800 | C1808A682(1)2XA(2) |
| 8200 | C1808A822(1)2XA(2) |
| 10,000 | C1808A103(1)2XA(2) |
| 100 VOLT - BX | |
| 12,000 | C1808A123(1)1XA(2) |
| 15,000 | C1808A153(1)1XA(2) |
| 18,000 | C1808A183(1)1XA(2) |
| 22,000 | C1808A223(1)1XA(2) |
| 27,000 | C1808A273(1)1XA(2) |
| 33,000 | C1808A333(1)1XA(2) |
| 39,000 | C1808A393(1)1XA(2) |
| 47,000 | C1808A473(1)1XA(2) |
| 50 VOLT - BX | |
| 39,000 | C1808A393(1)5XA(2) |
| 47,000 | C1808A473(1)5XA(2) |
| 56,000 | C1808A563(1)5XA(2) |
| 68,000 | C1808A683(1)5XA(2) |
| 82,000 | C1808A823(1)5XA(2) |
| 100,000 | C1808A104(1)5XA(2) |

RATINGS AND PART NUMBER REFERENCE
STYLE C1812

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 330 | C1812A331(1)2GA(2) |
| 360 | C1812A361(1)2GA(2) |
| 390 | C1812A391(1)2GA(2) |
| 430 | C1812A431(1)2GA(2) |
| 470 | C1812A471(1)2GA(2) |
| 510 | C1812A511(1)2GA(2) |
| 560 | C1812A561(1)2GA(2) |
| 620 | C1812A621(1)2GA(2) |
| 680 | C1812A681(1)2GA(2) |
| 750 | C1812A751(1)2GA(2) |
| 820 | C1812A821(1)2GA(2) |
| 910 | C1812A911(1)2GA(2) |
| 1000 | C1812A102(1)2GA(2) |
| 1100 | C1812A112(1)2GA(2) |
| 1200 | C1812A122(1)2GA(2) |
| 1300 | C1812A132(1)2GA(2) |
| 1500 | C1812A152(1)2GA(2) |
| 1600 | C1812A162(1)2GA(2) |
| 1800 | C1812A182(1)2GA(2) |
| 2000 | C1812A202(1)2GA(2) |
| 2200 | C1812A222(1)2GA(2) |
| 2400 | C1812A242(1)2GA(2) |
| 2700 | C1812A272(1)2GA(2) |
| 100 VOLT - BP | |
| 3000 | C1812A302(1)1GA(2) |
| 3300 | C1812A332(1)1GA(2) |
| 3600 | C1812A362(1)1GA(2) |
| 3900 | C1812A392(1)1GA(2) |
| 4300 | C1812A432(1)1GA(2) |
| 4700 | C1812A472(1)1GA(2) |
| 5100 | C1812A512(1)1GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 100 VOLT - BP | |
| 5600 | C1812A562(1)1GA(2) |
| 6200 | C1812A622(1)1GA(2) |
| 6800 | C1812A682(1)1GA(2) |
| 50 VOLT - BP | |
| 7500 | C1812A752(1)5GA(2) |
| 8200 | C1812A822(1)5GA(2) |
| 9100 | C1812A912(1)5GA(2) |
| 10,000 | C1812A103(1)5GA(2) |
| 200 VOLT - BX | |
| 6800 | C1812A682(1)2XA(2) |
| 8200 | C1812A822(1)2XA(2) |
| 10,000 | C1812A103(1)2XA(2) |
| 12,000 | C1812A123(1)2XA(2) |
| 15,000 | C1812A153(1)2XA(2) |
| 18,000 | C1812A183(1)2XA(2) |
| 100 VOLT - BX | |
| 22,000 | C1812A223(1)1XA(2) |
| 27,000 | C1812A273(1)1XA(2) |
| 33,000 | C1812A333(1)1XA(2) |
| 39,000 | C1812A393(1)1XA(2) |
| 47,000 | C1812A473(1)1XA(2) |
| 56,000 | C1812A563(1)1XA(2) |
| 68,000 | C1812A683(1)1XA(2) |
| 82,000 | C1812A823(1)1XA(2) |
| 50 VOLT - BX | |
| 82,000 | C1812A823(1)5XA(2) |
| 100,000 | C1812A104(1)5XA(2) |
| 120,000 | C1812A124(1)5XA(2) |
| 150,000 | C1812A154(1)5XA(2) |
| 180,000 | C1812A184(1)5XA(2) |

(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 17. **BP CAPACITANCE TOLERANCE:** ±1%, ±2%, ±5%, ±10%, ±20% (±0.5pF & ±0.25pF tolerances available 1.0 thru 10pF only) **TEMPERATURE CHARACTERISTIC "G" BX CAPACITANCE TOLERANCE:** ±5%, ±10%, ±20% **TEMPERATURE CHARACTERISTIC "X"** (2) Complete part number by inserting end Metallization, as applicable as shown in ordering information on page 17.

RATINGS AND PART NUMBER REFERENCE STYLE C1825

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 2700 | C1825A272(1)2GA(2) |
| 3000 | C1825A302(1)2GA(2) |
| 3300 | C1825A332(1)2GA(2) |
| 3600 | C1825A362(1)2GA(2) |
| 3900 | C1825A392(1)2GA(2) |
| 4300 | C1825A432(1)2GA(2) |
| 4700 | C1825A472(1)2GA(2) |
| 5100 | C1825A512(1)2GA(2) |
| 5600 | C1825A562(1)2GA(2) |
| 100 VOLT - BP | |
| 6200 | C1825A622(1)1GA(2) |
| 6800 | C1825A682(1)1GA(2) |
| 7500 | C1825A752(1)1GA(2) |
| 8200 | C1825A822(1)1GA(2) |
| 9100 | C1825A912(1)1GA(2) |
| 10,000 | C1825A103(1)1GA(2) |
| 11,000 | C1825A113(1)1GA(2) |
| 12,000 | C1825A123(1)1GA(2) |
| 13,000 | C1825A133(1)1GA(2) |
| 15,000 | C1825A153(1)1GA(2) |
| 16,000 | C1825A163(1)1GA(2) |
| 18,000 | C1825A183(1)1GA(2) |
| 50 VOLT - BP | |
| 20,000 | C1825A203(1)5GA(2) |
| 22,000 | C1825A223(1)5GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BX | |
| 10,000 | C1825A103(1)2XA(2) |
| 12,000 | C1825A123(1)2XA(2) |
| 15,000 | C1825A153(1)2XA(2) |
| 18,000 | C1825A183(1)2XA(2) |
| 22,000 | C1825A223(1)2XA(2) |
| 33,000 | C1825A333(1)2XA(2) |
| 39,000 | C1825A393(1)2XA(2) |
| 47,000 | C1825A473(1)2XA(2) |
| 100 VOLT - BX | |
| 56,000 | C1825A563(1)1XA(2) |
| 68,000 | C1825A683(1)1XA(2) |
| 82,000 | C1825A823(1)1XA(2) |
| 100,000 | C1825A104(1)1XA(2) |
| 120,000 | C1825A124(1)1XA(2) |
| 150,000 | C1825A154(1)1XA(2) |
| 180,000 | C1825A184(1)1XA(2) |
| 50 VOLT - BX | |
| 180,000 | C1825A184(1)5XA(2) |
| 220,000 | C1825A224(1)5XA(2) |
| 270,000 | C1825A274(1)5XA(2) |
| 330,000 | C1825A334(1)5XA(2) |
| 390,000 | C1825A394(1)5XA(2) |
| 470,000 | C1825A474(1)5XA(2) |

RATINGS AND PART NUMBER REFERENCE STYLE C2225

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BP | |
| 2700 | C2225A272(1)2GA(2) |
| 3000 | C2225A302(1)2GA(2) |
| 3300 | C2225A332(1)2GA(2) |
| 3600 | C2225A362(1)2GA(2) |
| 3900 | C2225A392(1)2GA(2) |
| 4300 | C2225A432(1)2GA(2) |
| 4700 | C2225A472(1)2GA(2) |
| 5100 | C2225A512(1)2GA(2) |
| 5600 | C2225A562(1)2GA(2) |
| 6200 | C2225A622(1)2GA(2) |
| 6800 | C2225A682(1)2GA(2) |
| 7500 | C2225A752(1)2GA(2) |
| 8200 | C2225A822(1)2GA(2) |
| 100 VOLT - BP | |
| 9100 | C2225A912(1)1GA(2) |
| 10,000 | C2225A103(1)1GA(2) |
| 11,000 | C2225A113(1)1GA(2) |
| 12,000 | C2225A123(1)1GA(2) |
| 13,000 | C2225A133(1)1GA(2) |
| 15,000 | C2225A153(1)1GA(2) |
| 16,000 | C2225A163(1)1GA(2) |
| 18,000 | C2225A183(1)1GA(2) |
| 20,000 | C2225A203(1)1GA(2) |
| 22,000 | C2225A223(1)1GA(2) |
| 50 VOLT - BP | |
| 24,000 | C2225A243(1)5GA(2) |
| 27,000 | C2225A273(1)5GA(2) |
| 33,000 | C2225A333(1)5GA(2) |

| CAPACITANCE pF | KEMET PART NUMBER |
|----------------------|----------------------|
| 200 VOLT - BX | |
| 18,000 | C2225A183(1)2XA(2) |
| 22,000 | C2225A223(1)2XA(2) |
| 27,000 | C2225A273(1)2XA(2) |
| 33,000 | C2225A333(1)2XA(2) |
| 39,000 | C2225A393(1)2XA(2) |
| 47,000 | C2225A473(1)2XA(2) |
| 100 VOLT - BX | |
| 56,000 | C2225A563(1)1XA(2) |
| 68,000 | C2225A683(1)1XA(2) |
| 82,000 | C2225A823(1)1XA(2) |
| 100,000 | C2225A104(1)1XA(2) |
| 120,000 | C2225A124(1)1XA(2) |
| 150,000 | C2225A154(1)1XA(2) |
| 180,000 | C2225A184(1)1XA(2) |
| 50 VOLT - BX | |
| 220,000 | C2225A224(1)5XA(2) |
| 270,000 | C2225A274(1)5XA(2) |
| 330,000 | C2225A334(1)5XA(2) |
| 390,000 | C2225A394(1)5XA(2) |
| 470,000 | C2225A474(1)5XA(2) |
| 560,000 | C2225A564(1)5XA(2) |
| 680,000 | C2225A684(1)5XA(2) |
| 820,000 | C2225A824(1)5XA(2) |
| 1,000,000 | C2225A105(1)5XA(2) |

(1) Complete KEMET part number by inserting capacitance tolerance, as applicable as shown in ordering information on page 17. **BP CAPACITANCE TOLERANCE:** ±1%, ±2%, ±5%, ±10%, ±20% (±0.5pF & ±0.25pF tolerances available 1.0 thru 10pF only) **TEMPERATURE CHARACTERISTIC "G"** **BX CAPACITANCE TOLERANCE:** ±5%, ±10%, ±20% **TEMPERATURE CHARACTERISTIC "X"**

(2) Complete part number by inserting end Metallization, as applicable as shown in ordering information on page 17.