



Surface Mount Multilayer Ceramic Capacitors

ArcShield™ Technology



Why Choose KEMET

KEMET Electronics Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

Features & Benefits

- Permanent internal arc protection
- Protective surface coating NOT required
- Base metal electrode (BME) dielectric system
- Industry-leading CV values
- Exceptional performance at high frequencies
- Pb-Free and RoHS compliant
- Non-polarized
- Low ESR and ESL
- Commercial and Automotive grades available
- 100% pure matte tin-plated termination finish
- SnPb-plated termination finish option available upon request (5% Pb min)
- Flexible termination option available upon request

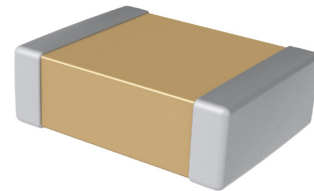
Product Checklist

- Does your high voltage application meet or exceed 300 VDC?
- Will your high voltage circuit be exposed to high humidity environments?
- Is surface arcing (arc-over discharge) a concern?
- Are you currently using MLCCs with a surface coating to prevent surface arcing?
- Do you require stricter testing protocol and inspection criteria (Automotive Grade)?
- Would you be interested in a flexible termination option to improve board flex performance?

For more information, samples and engineering kits, please visit us at www.kemet.com or call 1.877.myKEMET.

Applications

- Power supply
- LCD fluorescent backlight ballasts
- HID lighting
- Telecom equipment
- Industrial equipment/control
- Medical equipment/control
- LAN/WAN interface
- Analog modems
- Digital modems
- Automotive charging stations
- Electric and hybrid vehicles
- Input filters
- Resonators
- Tank circuits
- Snubber circuits
- Output filters
- High voltage coupling
- High voltage DC blocking
- Lighting ballast
- Voltage multiplier circuits
- DC/DC converter
- Coupling capacitors/Ćuk converters



Electrical/Physical Characteristics

Case Size	Tolerances	Dielectric	Temperature Range	Voltage Options	Capacitance Values
0603 - 2225	±5%, ±10%, ±20%	X7R	±15% from -55°C to +125°C	500 VDC, 630 VDC, 1,000 VDC	1,000 pF to 560 nF

Ordering Information

Ceramic	Case Size (L" x W")	Specification/ Series	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Dielectric	Failure Rate/ Design	Termination Finish ¹	Packaging/ Grade (C-Spec) ²
C	1812	V	334	K	C	R	A	C	TU
	0603 0805 1206 1210 1808 1812 1825 2220 2225	V = ArcShield W = ArcShield w/ Flexible Termination	Two Sig. Digits + Number of Zeros	J = ±5% K = ±10% M = ±20%	C = 500 B = 630 D = 1000	R=X7R	A=N/A	C = 100% Matte Sn L = SnPb (5% Pb min)	See "Packaging C-Spec Ordering Options Table" below

¹ Additional termination finish options may be available. Contact KEMET for details.

² SnPb termination finish option is not available on automotive grade product.

² Additional reeling or packaging options may be available. Contact KEMET for details.



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Packaging C-Spec Ordering Options Table

Packaging Type	Packaging/Grade Ordering Code (C-Spec)
Commercial Grade ¹	
Bulk Bag	Not required (Blank)
7" Reel / Unmarked	TU
7" Reel / Marked	TM
7" Reel / Unmarked / 2 mm pitch ²	7081
13" / Unmarked / 2 mm pitch ²	7082
Automotive Grade ³	
7" Reel	AUTO
13" Reel (Punched Paper) / Unmarked	AUTO7411
13" Reel (Embossed Plastic) / Unmarked	AUTO7210
7" Reel / Unmarked / 2 mm pitch ²	AUTO3190
13" Reel / Unmarked / 2 mm pitch ²	AUTO3191

¹ Default packaging is "Bulk Bag". An ordering code C-Spec is not required for "Bulk Bag" packaging.

¹ The terms "Marked" and "Unmarked" pertain to laser marking option of capacitors. All packaging options labeled as "Unmarked" will contain capacitors that have not been laser marked.

² The 2 mm pitch option allows for double the packaging quantity of capacitors on a given reel size. This option is limited to EIA 0603 (1608 metric) case size devices. For more information regarding 2 mm pitch option see "Tape & Reel Packaging Information".

³ Reeling tape options (Paper or Plastic) are dependent on capacitor case size (L" x W") and thickness dimension. See "Chip Thickness/Tape & Reel Packaging Quantities" and "Tape & Reel Packaging Information".

³ All Automotive packaging C-Specs listed exclude the option to laser mark components. Please contact KEMET if you require a laser marked option. For more information see "Capacitor Marking".