



Surface Mount Multilayer Ceramic Capacitors

KPS Series Commercial and Automotive Grade X7R Dielectric



Why Choose KEMET

KEMET applies world-class service and quality to deliver industry-leading, high performance capacitance solutions worldwide. With 95% of possible dielectric solutions, KEMET offers the world's most complete line of surface mount and through-hole capacitor technologies across tantalum, ceramic, film, aluminum and paper dielectrics. One world. One KEMET.

Features & Benefits

- Higher capacitance in the same footprint
- Potential board space savings
- Single and double chip options available
- Advanced protection against thermal and mechanical stress
- Provides up to 10 mm of board flex capability
- Reduces audible, microphonic noise
- Extremely low ESR and ESL
- Pb-free and RoHS-compliant
- Capable of Pb-free reflow profiles
- Non-polar device, minimizing installation concerns
- Tantalum and electrolytic alternative
- Automotive Grade (AEC-Q200) available

Product Checklist

- Do you require a device capable of Pb-free reflow profiles?
- Do you require advanced protection against thermal and mechanical stress?
- Is your circuit board subject to high levels of board flexure during assembly, mounting or depanelization?
- Does your circuit have integrated current limitation?
- Does your application have a direct battery or power source connection?
- Do you prefer a high capacitance ceramic alternative to tantalum or aluminum capacitor technologies?
- Do you require a device with high ripple current capability?

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

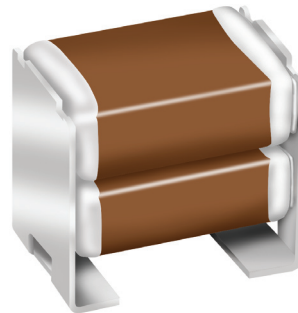
Programs Supported

Demanding alternative energy, industrial/lighting, automotive, military/aerospace and telecommunications applications:

- Power supplies
- Smoothing circuits
- DC-to-DC converters
- Input/output filters
- Piezoelectric and mechanical noise reduction
- Improving flex performance in board flex application

Electrical/Physical Characteristics

Case Size	Tolerances	Dielectric	Temperature Range	Voltage Options	Capacitance Values
1210, 1812, 2220	±10%, ±20%	X7R (Temperature characteristic = ±15% capacitance shift from -55° to +125°C)	-55°C to +125°C	10 V, 16 V, 25 V, 50 V, 100 V, 250 V, 500 V, 630 V	0.1 μF to 47 μF



Ordering Information

Ceramic	Case Size (L" x W")	Specification/ Series	Capacitance Code (pF)	Capacitance Tolerance ¹	Rated Voltage (VDC)	Dielectric	Failure Rate/ Design	Leadframe Finish ²	Packaging/ Grade (C-Spec) ³
C	2220	C	106	M	5	R	2	C	7186
	1210 1812 2220	C = Standard	2 Sig. Digits + Number of Zeros.	K = ±10% M = ±20%	8 = 10 V 4 = 16 V 3 = 25 V 5 = 50 V 1 = 100 V A = 250 V C = 500 V B = 630 V	R = X7R	1 = KPS Single Chip Stack 2 = KPS Double Chip Stack	C = 100% Matte Sn	7186 = 7" Reel Unmarked 7289 = 13" Reel Unmarked

¹ Double chip stacks ("2" in the 13th character position of the ordering code) are only available in M (±20%) capacitance tolerance. Single chip stacks ("1" in the 13th character position of the ordering code) are available in K (±10%) or M (±20%) tolerances.

² Additional leadframe finish options may be available. Contact KEMET for details.

³ Additional reeling or packaging options may be available. Contact KEMET for details.