

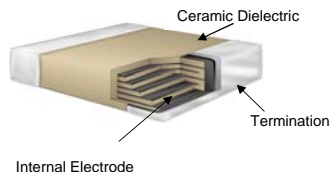
KEMET Surface Mount Ceramic

Revision F, 17 Jul 2007

Note: Information subject to change without notice. Monitor website regularly for updates.
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Characteristics and Typical Construction

- Standard EIA Chip Sizes
- COG, X5R, X7R, Y5V, Z5U Dielectrics
- Termination code 'C' products support manufacture of RoHS-compliant EEE
- 6.3 - 3000 Volts
- Tape & Reel Packaging
- Bulk Cassette packaging available
- Matte Tin finish terminations standard
- SnPb terminations available beginning August, 2005



RoHS Restricted Substance Content

Key for Determining Adherence to China RoHS and EU 2002/95/EC and 2005/618/EC Content Criteria¹
 O = ≤ MCV, X = > MCV, X = > MCV, but EU RoHS Compliant with Exemption(s)

| KEMET Product | Series | Substance and MCV ¹ Termination Code | Restricted Substance | | | | | Compliant Version | | | China RoHS Symbol ³ | | | |
|--|--------|--|----------------------|------------------|---|----|-----|-------------------|---------------------|-----------------|--------------------------------|----------------|--------|--------|
| | | | Cd | Cr ⁶⁺ | Pb | Hg | PBB | PBDE | Size and Dielectric | Available since | | Standard since | | |
| Ceramic Chip / Standard Ceramic Chip / High Voltage Tip & Ring | CxxxxC | C | O | O | X COG and X7R < 1.0nF ² O X7R ≥ 1.0nF X5R, Y5V, Z5U | O | O | O | 0402 COG | Jun-04 | Jun-04 | Ⓞ | | |
| Ceramic Open Mode Capacitors | CxxxxF | | | | | | | | > 0402 COG | Jul-03 | Jul-03 | | | |
| KEMET Commercial-Off-The-Shelf (KCOTS) | CxxxxT | | | | | | | | All others | | | | Aug-93 | Aug-93 |
| Low Profile Ceramic Chip / Standard | CxxxxL | | | | | | | | | | | | | |
| Floating Electrode | CxxxxS | | | | | | | | | | | | | |
| Flexible Termination | CxxxxX | | | | | | | | | | | | | |
| Ceramic Chip / Standard Ceramic Chip / High Voltage Tip & Ring | CxxxxC | L (not available for 0201 products) | O | O | X | O | O | O | Not Available | | | ⓧ | | |
| Ceramic Open Mode Capacitors | CxxxxF | | | | | | | | | | | | | |
| KEMET Commercial-Off-The-Shelf (KCOTS) | CxxxxT | | | | | | | | | | | | | |
| Low Profile Ceramic Chip / Standard | CxxxxL | | | | | | | | | | | | | |
| Floating Electrode | CxxxxS | | | | | | | | | | | | | |
| Flexible Termination | CxxxxX | | | | | | | | | | | | | |

¹ MCV = Maximum Concentration Values per 2005/618/EC amending RoHS Directive 2002/95/EC and China RoHS criteria.

² All KEMET X7R and COG surface mount offerings already meet RoHS requirements. A limited group of these components contain a small portion of lead (Pb) that is exempt per Annex 1 to 2002/95/EC. These components are in transition to a completely lead-free material set. This transition will be complete by 2QCY2007 for commercial components, TBD for automotive COG, based on their approval status.

³ China RoHS Symbol based on current manufacturing. Refer to notes in Pb column for transition dates.

Soldering Capability Characteristics

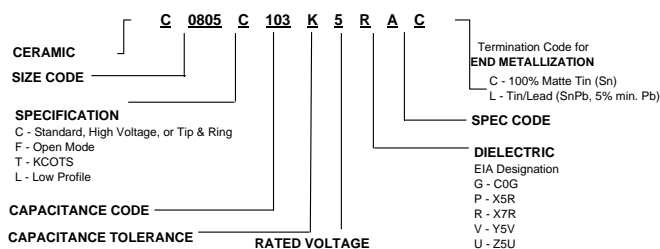
| | Matte Tin Termination | SnPb Termination |
|---------------------------------|-------------------------------|-------------------------------|
| Termination Material | Silver or Copper | Silver or Copper |
| Termination Plating (Barrier) | 100% Matte Tin (Nickel) | 90Sn10 Pb (Nickel) |
| Peak Temperature Capability | 260°C | 260°C |
| Soldering Process Compatibility | Backward & Forward Compatible | Backward & Forward Compatible |
| MSL Rating per J-STD-020C | Not Classified ⁴ | Not Classified ⁵ |
| Tin Whisker Test Results | Class 2 | Class 2 |

based on JESD22-A121 and JESD201⁵

⁴ MSL not classified for ceramic capacitors. J-STD-020 is applicable to non-hermetic surface mount devices, and is intended for plastic package components. KEMET ceramic chips are not encapsulated in a plastic package, so they are not susceptible to these effects. If an MSL were required, the rating this product would be considered MSL 1 or better.

⁵ Per EIA/ECA component bulletin CB19, tin whiskering is not considered a reliability risk within the capacitor industry for non-Military / Hi-Rel applications.

Ordering



Identification

Reel level KEMET EZ ID label indicates product content relative to substance restrictions of the EU RoHS Directive, 2002/95/EC, 2005/618/EC and China RoHS...
 RoHS-PRC = Meets criteria without exemption
 RoHS-EU = Meets criteria with exemption
 RoHS-NO = Does not meet criteria

