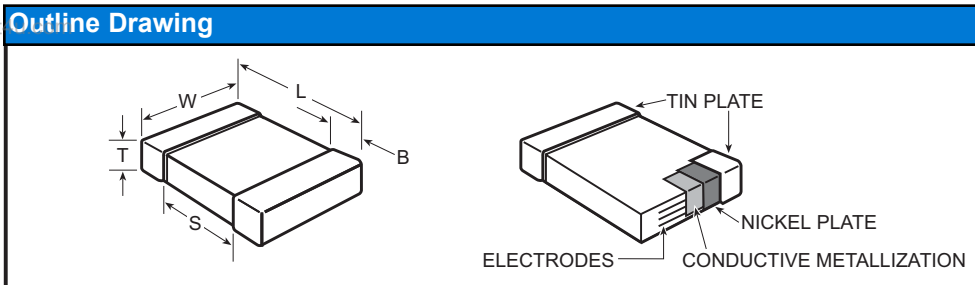


Surface Mount Ceramic Chip Capacitors – 100 Volt Series – X7R Dielectric

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Dimensions – Millimeters (Inches)

| EIA Size Code | Metric Size Code | L Length | W Width | B Bandwidth | S Separation |
|---------------|------------------|-----------------------------|-----------------------------|------------------------------|--------------|
| 0603 | 1608 | 1.6 (.063) ± 0.15 (.006) | 0.8 (.031) ± 0.15 (.006) | 0.35 (.014) ± 0.15 (.006) | 0.7 (.028) |
| 0805 | 2012 | 2.0 (.079) ± 0.2 (.008) | 1.25 (.049) ± 0.2 (.008) | 0.5 (.02) ± 0.25 (.010) | 0.75 (.030) |
| 1206 | 3216 | 3.2 (.126) ± 0.2 (.008) | 1.6 (.063) ± 0.2 (.008) | 0.5 (.02) ± 0.25 (.010) | N/A |
| 1210 | 3225 | 3.2 (.126) ± 0.2 (.006) | 2.5 (.098) ± 0.2 (.008) | 0.5 (.02) ± 0.25 (.010) | N/A |

See below for thickness dimension.

Capacitance Value

| Capacitance Values (µF) | KEMET Part Number | Voltage | Capacitance Tolerance | Thickness mm | Qty 7" Reel | Qty 13" Reel |
|-------------------------|-------------------|---------|-----------------------|---------------------------|-------------|--------------|
| 0.047 | C0603C473_1RAC | 100 | J,K,M | 0.8 (.031) ± 0.07 (.003) | 4,000 | 10,000 |
| 0.22 | C0805C224_1RAC | 100 | J,K,M | 1.25 (.049) ± 0.15 (.001) | 2,500 | 10,000 |
| 0.47 | C1206C474_1RAC | 100 | J,K,M | 1.60 (.063) ± 0.15 (.001) | 2,000 | 8,000 |
| 0.47 | C1210C474_1RAC | 100 | J,K,M | 0.95 (.037) ± 0.10 (.004) | 4,000 | 10,000 |
| 1.0 | C1210C105_1RAC | 100 | J,K,M | 1.70 (.067) ± 0.20 (.008) | 2,000 | 8,000 |



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Electrical Parameters

As detailed in the KEMET Surface Mount Catalog F3102 for X7R, with following specific requirements based on room temperature (25°C) parameters:

- Operating Range: -55°C to +125°C, with no-bias capacitance shift limited to $\pm 15\%$ over that range.
- Insulation Resistance (IR) measured after 2 minutes at rated voltage @ 25°C: Limit is 500 megohm microfarads or 50,000M Ω , whichever of the two is smaller.
- Capacitance and Dissipation Factor (DF) measured at the following conditions: DF Limit is 2.5%. 1 kHz and 1 Vrms.

Qualifications/ Certifications

- AEC-Q200 Rev. C
- RoHS Compliant

Soldering Process

These components are suitable for reflow and wave soldering. All parts incorporate the standard KEMET barrier layer of pure nickel, with an overplate of pure tin to provide excellent solderability as well as resistance to leaching.

Marking

These chips will be supplied unmarked. If required, they can be laser-marked as an extra option. Details on the marking format are included in KEMET Surface Mount catalog F3102.

In general, the information in the KEMET Surface Mount catalog F3102 applies to these capacitors. The information in this bulletin supplements that in the catalog.