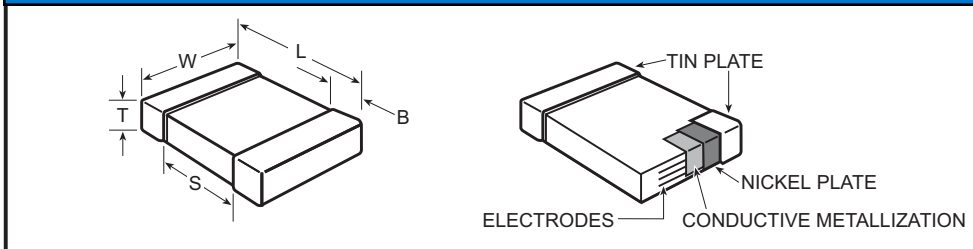


Surface Mount Ceramic Chip Capacitors – 100 Volt Series – X7R Dielectric

Outline Drawing



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



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.