



New Product Release

Surface Mount Ceramic Chip Capacitors
Extended Values 0603, X7R Dielectric, 100 & 200 Volts

100 Volts – 12,000 pF - 39,000 pF
200 Volts – 1,200 pF - 10,000 pF

Outline Drawings

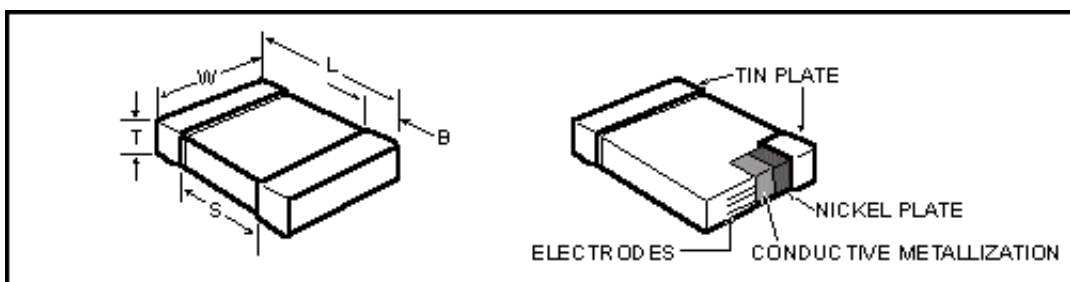


Table 1 - Dimensions - Millimeters

EIA Size Code	Metric Size Code (Ref)	L# Length	W# Width	Thickness	B Bandwidth	S Min. Separation	Mounting Technique
0603*	1608	1.6 (.063) ± 0.15 (.006)	0.8 (.032) ± 0.15 (.006)	See Table 2	0.35 (.014) ± 0.15 (.006)	0.7 (.028)	Solder Wave or Solder Reflow

Table 2 - Ratings & Part Number Listing

Cap Values	KEMET Part Number	Capacitance Tolerance	Thickness - mm	Qty 7" Reel	Qty 13" Reel
12,000pF	C0603C123(1)1RAC	J,K,M	0.8 ± 0.1	4,000	10,000
15,000pF	C0603C153(1)1RAC	J,K,M	0.8 ± 0.1	4,000	10,000
18,000pF	C0603C183(1)1RAC	J,K,M	0.8 ± 0.1	4,000	10,000
22,000pF	C0603C223(1)1RAC	J,K,M	0.8 ± 0.1	4,000	10,000
27,000pF	C0603C273(1)1RAC	J,K,M	0.8 ± 0.1	4,000	10,000
33,000pF	C0603C333(1)1RAC	J,K,M	0.8 ± 0.1	4,000	10,000
39,000pF	C0603C393(1)1RAC	J,K,M	0.8 ± 0.1	4,000	10,000
1,200pF	C0603C122(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
1,500pF	C0603C152(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
1,800pF	C0603C182(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
2,200pF	C0603C222(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
2,700pF	C0603C272(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
3,300pF	C0603C332(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
3,900pF	C0603C392(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
4,700pF	C0603C472(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
5,600pF	C0603C562(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
6,800pF	C0603C682(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
8,200pF	C0603C822(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000
10,000pF	C0603C103(1)2RAC	J,K,M	0.8 ± 0.1	4,000	10,000

To complete the KEMET part number, insert capacitance tolerance: J - ±5%, K - ±10% or M ±20%.

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 1000 megohm microfarads or 100 gigohms, whichever is less.
- Capacitance and Dissipation Factor (DF) measured at 1KHz at 1.0Vrms.
 - 25 Volts - DF Limit is 3.5%
 - >25 Volts - DF Limit is 2.5%.

Soldering Process

Wave soldering or reflow soldering is acceptable for these chips.

Marking

These chips are normally supplied unmarked. If required, they can be laser marked as an extra cost option. More detail on the marking format is included in our 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.

