



New Product Release

Surface Mount Ceramic Chip Capacitors
Extended Values 0805, X7R Dielectric, 25, 50, 100, 200 Volts

25 Volts – 0.56µF
50 Volts – 0.12 - 0.22µF
100 Volts – 56,000 - 120,000pF
200 Volts – 8,200 - 56,000pF

Outline Drawings

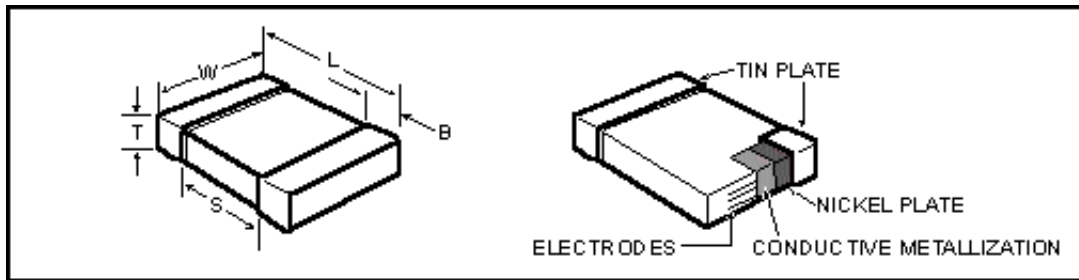


Table 1 Dimensions - Millimeters

EIA Size Code	Metric Size Code (Ref)	L# Length	W# Width	Thickness	B Bandwidth	S Min. Separation	Mounting Technique
0805*	2012	2.0 (.079) ± 0.2 (.008)	1.25 (.049) ± 0.2 (.008)	See Table 2	0.5 (.02) ± .25 (.010)	0.75 (.030)	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
0.56µF	C0805C564(1)3RAC	J,K,M	1.25 ± 0.15	2,500	10,000
0.12µF	C0805C124(1)5RAC*	J,K,M	.90 ± .10	4,000	10,000
0.15µF	C0805C154(1)5RAC*	J,K,M	.90 ± .10	4,000	10,000
0.18µF	C0805C184(1)5RAC*	J,K,M	.90 ± .10	4,000	10,000
0.22µF	C0805C224(1)5RAC*	J,K,M	.90 ± .10	4,000	10,000
56,000pF	C0805C563(1)1RAC	J,K,M	1.00 ± 0.10	2,500	10,000
68,000pF	C0805C683(1)1RAC	J,K,M	1.00 ± 0.10	2,500	10,000
82,000pF	C0805C823(1)1RAC	J,K,M	1.00 ± 0.10	2,500	10,000
100,000pF	C0805C104(1)1RAC	J,K,M	1.00 ± 0.10	2,500	10,000
120,000pF	C0805C124(1)1RAC	J,K,M	1.25 ± 0.15	2,500	10,000
8,200pF	C0805C822(1)2RAC	J,K,M	.78 ± 0.10	2,500	10,000
10,000pF	C0805C103(1)2RAC	J,K,M	.78 ± 0.10	2,500	10,000
12,000pF	C0805C123(1)2RAC	J,K,M	.78 ± 0.10	2,500	10,000
15,000pF	C0805C153(1)2RAC	J,K,M	.78 ± 0.10	2,500	10,000
18,000pF	C0805C183(1)2RAC	J,K,M	.78 ± 0.10	2,500	10,000
22,000pF	C0805C223(1)2RAC	J,K,M	.78 ± 0.10	2,500	10,000
27,000pF	C0805C273(1)2RAC	J,K,M	1.00 ± 0.10	2,500	10,000
33,000pF	C0805C333(1)2RAC	J,K,M	1.00 ± 0.10	2,500	10,000
39,000pF	C0805C393(1)2RAC	J,K,M	1.00 ± 0.10	2,500	10,000
47,000pF	C0805C473(1)2RAC	J,K,M	1.25 ± 0.15	2,500	10,000
56,000pF	C0805C563(1)2RAC	J,K,M	1.25 ± 0.15	2,500	10,000

To complete the KEMET part number, insert capacitance tolerance: J - ±5%, K - ±10% or M ±20%.
 * X7R Dielectric - Extended Range Values - Cap and DF measured at 0.5 Vrms.

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.

