Product Bulletin

Surface Mount Ceramic Chip Capacitors
New Extended Values in X5R Dielectric

KEMET is pleased to continue the expansion of high capacitance ratings in our X5R ceramic chip capacitors to include the following values in our base metal electrode devices.

X5R/1210 - 6.8µF – 10.0µF (685 - 106) @ 25 Volts

Outline Drawing

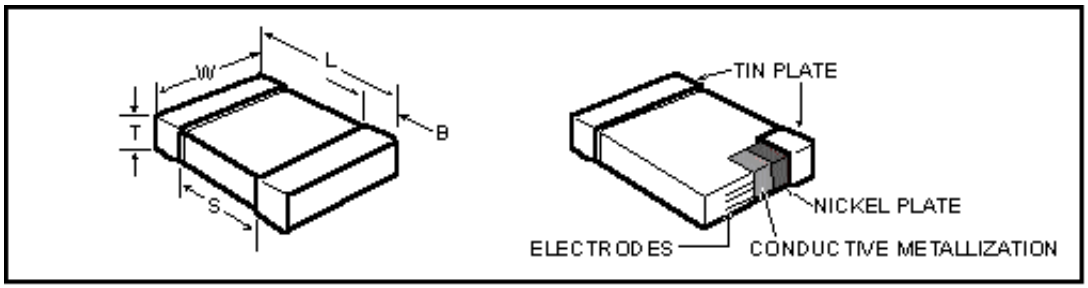

Table 1
Dimensions - Millimeters (Inches)

Metric Size Code	EIA Size Code	L - Length	W - Width	Max. T - Thickness	B - Bandwidth	Separation
3225	1210	3.2 (.126) ± 0.2 (.008)	2.5 (.098) ± 0.2 (.008)	See Table 2	0.5 (.02) ± .25 (.010)	N/A

Table 2 - X5R - Capacitance Value Extensions

Capacitance (µF)	KEMET Part Number	Voltage	Cap Tol	Thickness T (mm)	Qty 7" Reel	Qty 13" Reel
6.8	C1210C685(1)3PAC	25	K,M	1.85 ± .20	2,000	8,000
8.2	C1210C825(1)3PAC	25	K,M	2.10 ± .20	2,000	8,000
10.0	C1210C106(1)3PAC	25	K,M	2.10 ± .20	2,000	8,000

(1) To complete KEMET part number, insert the alpha code for the tolerance desired. K = ±10%; M = ±20%

Electrical Parameters

As detailed in the KEMET Surface Mount Catalog F3102 for X5R, with following specific requirements based on room temperature (25°C) parameters:

- Operating Range: -55°C to +85°C, with no-bias capacitance shift limited to ± 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 1Vrms. DF Limit is 5%.

Soldering Process

The 1210 part is suitable for reflow soldering only. 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 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.