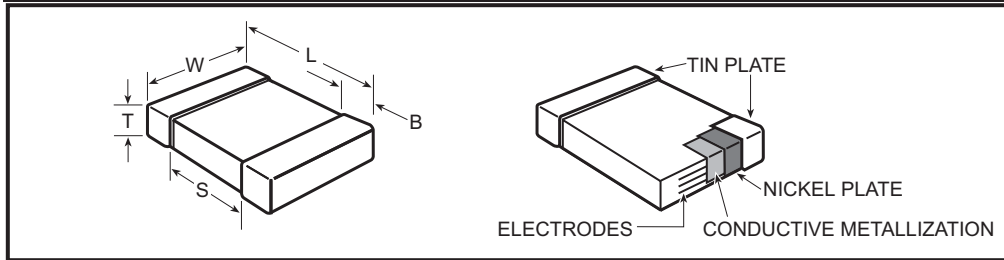


Surface Mount Ceramic Chip Capacitors – Ultra-High Capacitance, Large Case Size, C0G Dielectric

Outline Drawing

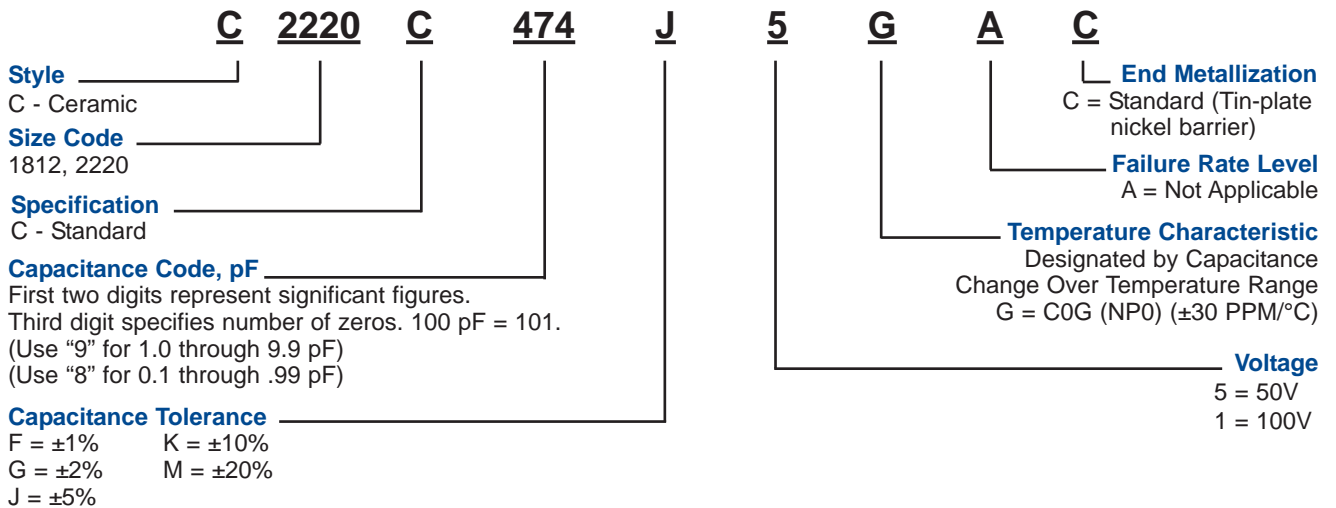


Dimensions - Millimeters (Inches)

EIA SIZE CODE	METRIC SIZE CODE	L - LENGTH	W - WIDTH	B - BANDWIDTH	S SEPARATION minimum	MOUNTING TECHNIQUE
1812	4532	4.5 (.177 ± .30 (.012))	3.2 (.126 ± .30 (.012))	0.60 (.024) ± .35 (.014)	N/A	Solder Reflow
2220	5650	5.6 (.220 ± .40 (.016))	5.0 (.197) ± .40 (.016)	0.60 (.024) ± .35 (.014)	N/A	Solder Reflow

See Capacitance Value Chart following for thickness dimension.

Ordering Information



Electrical Parameters

As detailed in the KEMET Surface Mount Catalog F3102 for C0G, 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 ± 30 PPM/°C over that range.
- Insulation Resistance (IR) measured after 2 minutes at rated voltage @ 25°C: Limit is 1000 megohm microfarads or 100G Ω , whichever is less.
- Capacitance and Dissipation Factor (DF) measured at the following conditions.
Capacitance - 1 kHz and 1 vrms if capacitance >1000 pF
1 MHz and 1 vrms if capacitance \leq 1000 pF
DF Limit is 0.1%.

Soldering Process

Components are suitable for IR 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. (Please refer to KEMET catalog F3102 for additional soldering information and recommendations.)

Marking

These chips will be supplied unmarked. However, marking is available as an extra cost option.

Qualification/Certification

AEC-Q200 Rev. C - Automotive

RoHS 6/6 - 100% tin termination

***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.***

Ratings & Part Number Table - 1812 Case Size

Capacitance Value (pF)	KEMET Part Number	Voltage	Capacitance Tolerance	Thickness mm (inches)	Qty 7" Reel	Qty 13" Reel
15000	C1812C153_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
18000	C1812C183_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
22000	C1812C223_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
27000	C1812C273_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
33000	C1812C333_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
47000	C1812C473_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
56000	C1812C563_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
68000	C1812C683_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
82000	C1812C823_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
100000	C1812C104_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
120000	C1812C124_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
150000	C1812C154_5GAC	50	F, G, J, K, M	1.25 (0.049) ± 0.15 (0.006)	1000	4000
220000	C1812C224_5GAC	50	F, G, J, K, M	1.60 (0.063) ± 0.20 (0.008)	1000	4000
15000	C1812C153_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
18000	C1812C183_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
22000	C1812C223_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
27000	C1812C273_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
33000	C1812C333_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
47000	C1812C473_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
56000	C1812C563_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
68000	C1812C683_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
82000	C1812C823_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.10 (0.004)	1000	4000
100000	C1812C104_1GAC	100	F, G, J, K, M	1.25 (0.049) ± 0.15 (0.006)	1000	4000
120000	C1812C124_1GAC	100	F, G, J, K, M	1.40 (0.055) ± 0.15 (0.006)	1000	4000
150000	C1812C154_1GAC	100	F, G, J, K, M	1.70 (0.067) ± 0.20 (0.008)	1000	4000

Ratings & Part Number Table - 2220 Case Size

Capacitance Value (pF)	KEMET Part Number	Voltage	Capacitance Tolerance	Thickness mm (inches)	Qty 7" Reel	Qty 13" Reel
33000	C2220C333_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
47000	C2220C473_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
56000	C2220C563_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
68000	C2220C683_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
82000	C2220C823_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
100000	C2220C104_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
120000	C2220C124_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
150000	C2220C154_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
220000	C2220C224_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
270000	C2220C274_5GAC	50	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
330000	C2220C334_5GAC	50	F, G, J, K, M	1.30 (0.051) ± 0.15 (0.006)	1000	4000
470000	C2220C474_5GAC	50	F, G, J, K, M	1.70 (0.067) ± 0.15 (0.006)	1000	4000
22000	C2220C223_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
27000	C2220C273_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
33000	C2220C333_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
47000	C2220C473_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
56000	C2220C563_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
68000	C2220C683_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
82000	C2220C823_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
100000	C2220C104_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
120000	C2220C124_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
150000	C2220C154_1GAC	100	F, G, J, K, M	1.00 (0.039) ± 0.15 (0.006)	1000	4000
220000	C2220C224_1GAC	100	F, G, J, K, M	1.30 (0.051) ± 0.15 (0.006)	1000	4000
270000	C2220C274_1GAC	100	F, G, J, K, M	1.50 (0.059) ± 0.15 (0.006)	1000	4000
330000	C2220C334_1GAC	100	F, G, J, K, M	1.80 (0.071) ± 0.15 (0.006)	1000	4000