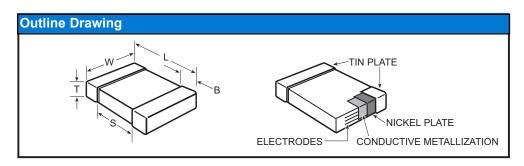


Product Bulletin

Surface Mount Ceramic Chip Capacitors - C0402 Series - C0G Dielectric



Dimensions – Millimeters (Inches)										
EIA Size Code	Metric Size Code	L Length	W Width	B Bandwidth	S Separation					
0402	1005	1.0 (.039) ± 0.05 (.002)	0.5 (.020) ± 0.05 (.002)	0.25 (.010) ± 0.10 (.004)	=					

See Capacitance Value Table below for thickness dimension.

Capacitance Value										
Capacitance Value (pF)	KEMET Part Number	Voltage	Capacitance Tolerance	Thickness	Qty 7" Reel	Qty 13" Reel				
120	C0402C121J5GAC	50	±5%	0.5 (.020) ± 0.05 (.002)	10,000	50,000				
150	C0402C151J5GAC	50	±5%	0.5 (.020) ± 0.05 (.002)	10,000	50,000				
180	C0402C181J5GAC	50	± 5 %	0.5 (.020) ± 0.05 (.002)	10,000	50,000				
220	C0402C221J5GAC	50	±5%	0.5 (.020) ± 0.05 (.002)	10,000	50,000				
270	C0402C271J5GAC	50	± 5 %	0.5 (.020) ± 0.05 (.002)	10,000	50,000				
330	C0402C331J5GAC	50	± 5 %	0.5 (.020) ± 0.05 (.002)	10,000	50,000				

Capacitor Ordering Information <u>33</u>1 0402 <u>5</u> <u>J</u> G Α Style . **End Metallization** C = Standard (Tin-plate C - Ceramic nickel barrier) Size Code See dimension table **Failure Rate Level** A = Not Applicable Specification . **Temperature Characteristic** C - Standard Designated by Capacitance Capacitance Code, pF Change Over Temperature Range First two digits represent significant figures. Third digit specifies number of zeros. 100 pF = 101. $G = C0G (0\pm30 \text{ ppm/°C}) (-55°C +125°C)$ (Use "9" for 1.0 through 9.9 pF)

Voltage 5 = 50V

Electrical Parameters

Capacitance Tolerance -

 $J = \pm 5\%$

(Use "8" for 0.1 through .99 pF)

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 10,000 MΩ, minimum.
- Capacitance and Quality Factor (Q) measured at 1 MHz and 0.5 Vrms: DF limit is 0.1%
 Q = (< 30 pF: Q ≥ 400 + 20C; > 30pF: Q ≥ 1000)
 C = Nominal Capacitance

Soldering Process

These components are suitable for reflow 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 will be supplied unmarked.

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.

