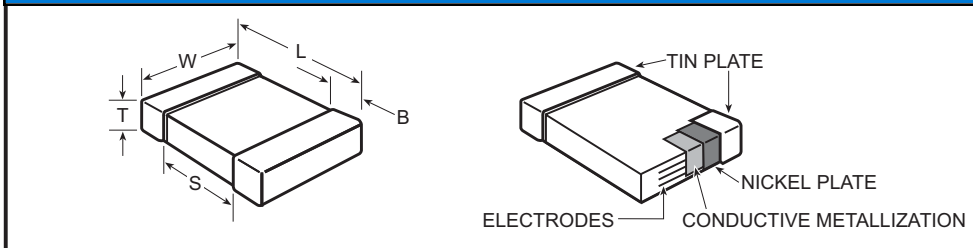


**Surface Mount Ceramic Chip Capacitors – C0402 Series - C0G Dielectric**

**Outline Drawing**



**Dimensions – Millimeters (Inches)**

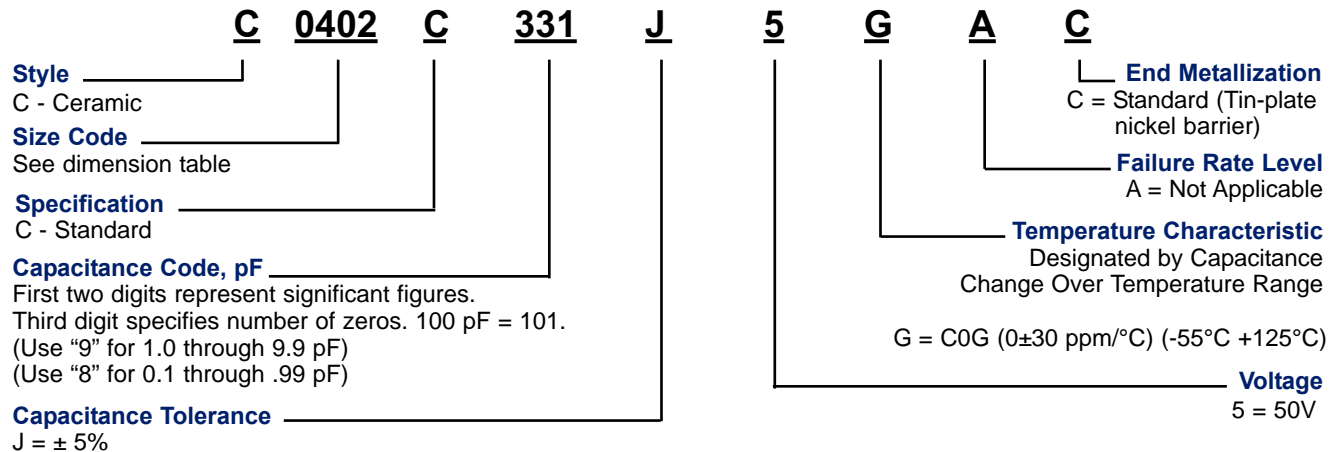
EIA Size Code	Metric Size Code	L Length	W Width	B Bandwidth	S Separation
0402	1005	1.0 (.039) ± 0.05 (.002)	0.5 (.020) ± 0.05 (.002)	0.25 (.010) ± 0.10 (.004)	-

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



### 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 10,000 MΩ, minimum.
- Capacitance and Quality Factor (Q) measured at 1 MHz and 0.5 Vrms: DF limit is 0.1%  
 $Q = (< 30 \text{ pF: } Q \geq 400 + 20C; > 30\text{pF: } Q \geq 1000)$   
 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.***



F-9080A 03/06