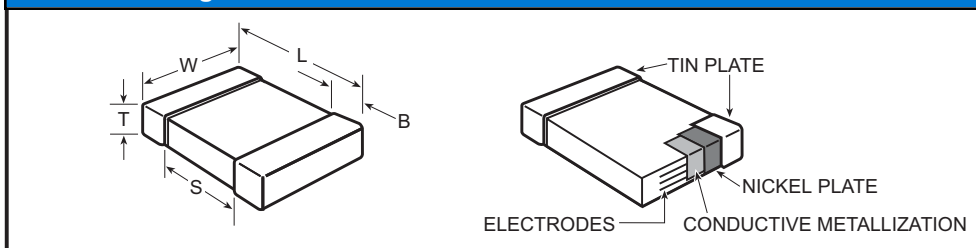


## Surface Mount Ceramic Chip Capacitors – C0402 Series - C0G Dielectric

### Outline Drawing



### Dimensions – Millimeters (Inches)

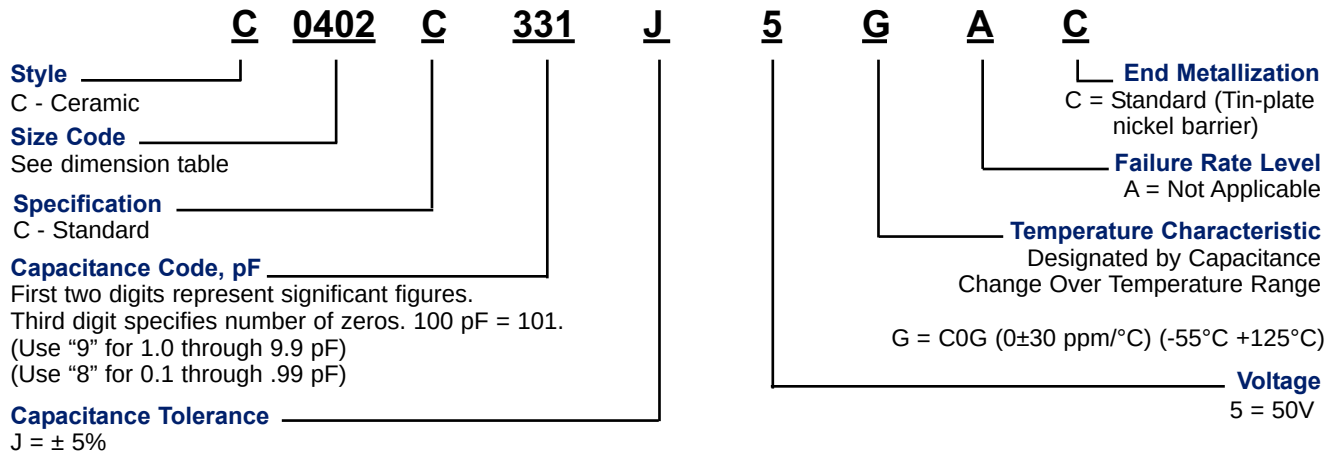
| EIA Size Code | Metric Size Code | L Length                 | W Width                  | B Bandwidth               | S Separation |
|---------------|------------------|--------------------------|--------------------------|---------------------------|--------------|
| 0402          | 1005             | 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 $^{\circ}$ C) parameters:

- Operating Range: -55 $^{\circ}$ C to +125 $^{\circ}$ C, with no-bias capacitance shift limited to  $\pm 30$  ppm/ $^{\circ}$ C over that range.
- Insulation Resistance (IR) measured after 2 minutes at rated voltage @ 25 $^{\circ}$ C: Limit is 10,000 M $\Omega$ , minimum.
- Capacitance and Quality Factor (Q) measured at 1 MHz and 0.5 Vrms: DF limit is 0.1%  
Q = (< 30 pF: Q  $\geq 400 + 20C$ ; > 30pF: 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