

Radial Multilayer Ceramic Capacitors



Epoxy Coated Radial Leaded Multilayer Ceramic Capacitor

Features

Small size, big capacitance from 1pF to 1μF with no polarity. Suitable for taking place of aluminum electrolytic capacitors if only the smaller installation space is available.

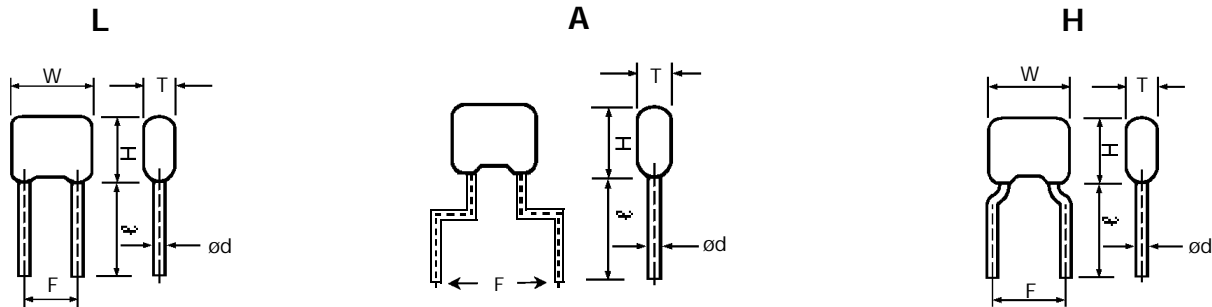
The internal electrodes are built inside dielectric then sealed with resin. This structure makes the capacitors highly reliable.

Due to ceramic intrinsic excellent frequency characteristic, it can serve in high frequency applications.

As the epoxy powder is applied for coating, this product shows excellent resistance to humidity, and no change in the appearance of capacitor surface during soldering or solvent cleaning.

Dimensions

Lead Style:



Lead Space (F):

| CODE | LEAD SPACE | REMARK |
|------|-------------|------------|
| 2 | 2.5mm ± 1mm | 0.1" Pitch |
| 5 | 5.0mm ± 1mm | 0.2" |
| 7 | 7.5mm ± 1mm | 0.3" |

Lead Length (‡):

| CODE | LEAD LENGTH | REMARK |
|------|-------------|----------|
| 6 | 6mm ± 1mm | |
| 4 | 4mm ± 1mm | |
| 9 | 9mm ± 1mm | |
| L | 25mm (min) | Standard |

| T.C. | Voltage | Range | Tolerance |
|------|-----------|----------------|--------------------|
| NPO | 50V (1H) | 1pF - 5600pF | 5% (J) & 10% (K) |
| | 100V (2A) | 1pF - 3300pF | 5% (J) & 10% (K) |
| | 500V (2H) | 1pF - 1000pF | 5% (J) |
| X7R | 50V (1H) | 10pF - 1μF | 10% (K) |
| | 100V (2A) | 10pF - .22μF | 10% (K) |
| | 500V (2H) | 120pF - .047μF | 10% (K) |
| Z5U | 50V (1H) | .01μF - 1μF | 20% (M) 80 -20 (Z) |
| | 100V (2A) | .01μF - 1μF | 20% (M) 80 -20 (Z) |

Body Size and its Dimensions:

Dimensions: Inches (Millimeters)

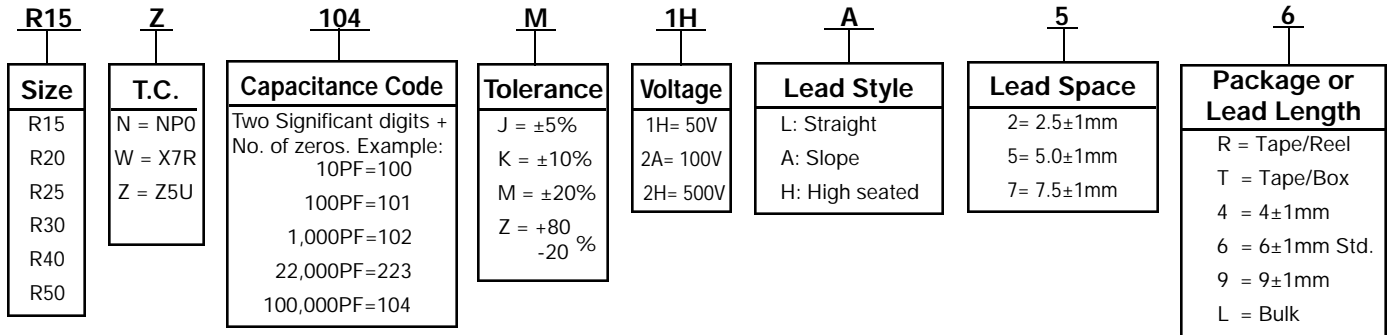
| Size | R15 (L) | R15 (L) | R15 (A,H) | R20 (L) | R25 (A,H) | R30 (L) | R40 (L) | R50 (L) |
|--------------------|----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|
| Width (W) | .150 (3.81) | .200 (5.08) | .200 (5.08) | .260 (6.604) | .260 (6.604) | .300 (7.62) | .400 (10.16) | .500 (12.70) |
| Height (H) | .150 (3.81) | .200 (5.08) | .200 (5.08) | .25 (6.35) | .250 (6.35) | .300 (7.62) | .400 (10.16) | .500 (12.70) |
| Thickness (T) | .100 (2.54) | .125 (3.175) | .125 (3.175) | .150 (3.81) | .160 (4.06) | .150 (3.81) | .150 (3.81) | .200 (5.08) |
| Lead Spacing (F) | .100 (2.54) | .100 (2.54) | .200 (5.08) | .250 (6.35) | .300 (7.62) | .200 (5.08) | .200 (5.08) | .400 (10.16) |
| Lead Diameter (ød) | .020 (.508) | .020 (.508) | .020 (.508) | .020 (.508) | .020 (.508) | .020 (.508) | .020 (.508) | .025 (.635) |



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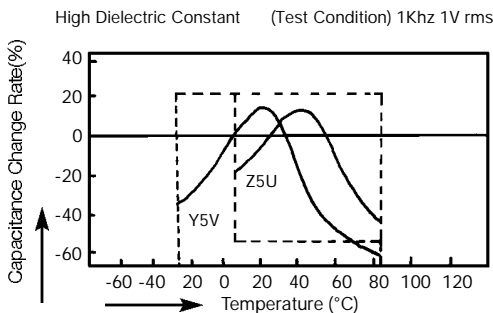
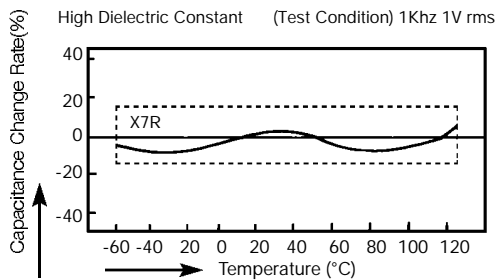
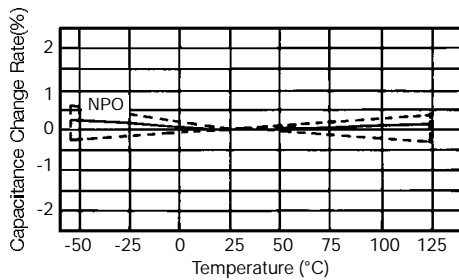
Multilayer Ceramic Capacitor

Part Numbering System



Typical Performance Characteristics

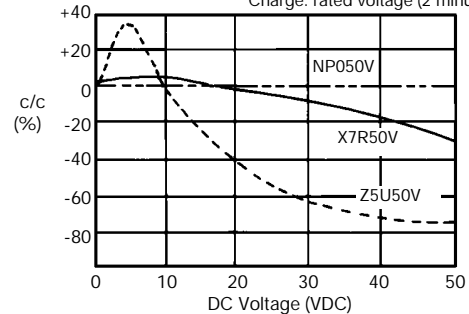
Temperature value - Temperature Characteristics
 Capacitance value - Temperature Characteristics
 Temperature Compensating (Test Condition) 1MHz, 1V rms.



DC Voltage Characteristics

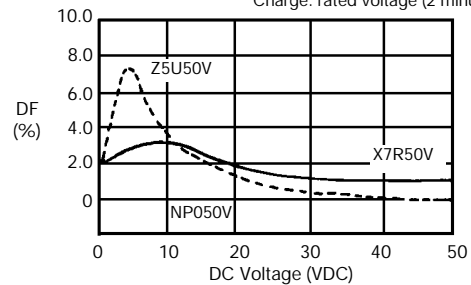
Capacitance - DC voltage characteristics

Test Condition: Z5U: 1kHz 0.5V rms
 X7R: 1kHz 1V rms
 NP0: 1MHz, 1V rms
 Charge: rated voltage (2 minutes)



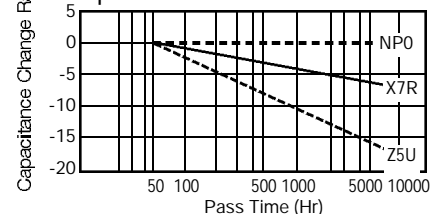
Q. DF - DC voltage characteristics

Test Condition: Z5U: 1kHz 0.5V rms
 X7R: 1kHz 1V rms
 NP0: 1MHz, 1V rms
 Charge: rated voltage (2 minutes)



Aging Characteristics

Capacitance

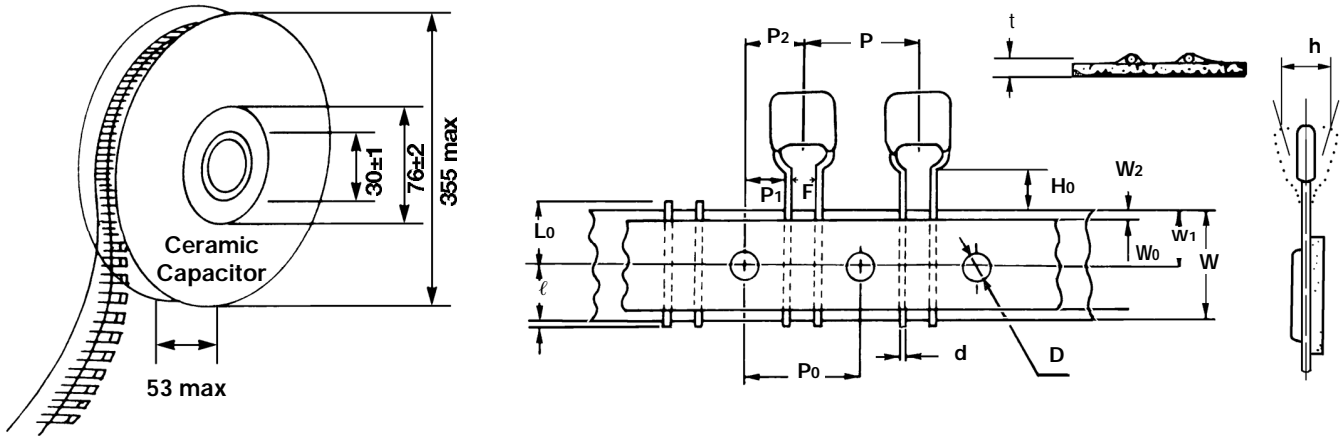


Radial Multilayer Ceramic Capacitors



Radial Tape and Reel For Auto Insertion

Dimension



2.5mm Pitch

Quantity per reel is 2500pcs.

(Unit: mm)

| Code | P | P ₀ | P ₁ | P ₂ | d | F | h | W | W ₀ | W ₁ | W ₂ | H ₀ | l | D | t | Lo |
|------|------|----------------|----------------|----------------|-------|-----|----|------------|----------------|----------------|----------------|----------------|-----|------|------|-----|
| Dim. | 12.7 | 12.7 | 5.1 | 6.35 | 0.5 | 2.5 | 0 | 18 | 13 | 9 | 1.5 | 16 | 1.0 | 4.0 | 0.7 | 11 |
| Tol. | ±1 | ±0.3 | ±0.7 | ±1.3 | ±0.05 | ±1 | ±2 | +1 -0.5 | ±1 | ±0.5 | ±1.5 | ±0.5 | MAX | ±0.2 | ±0.2 | MAX |

5mm Pitch

Standard reel quantity is 2500, quantity may vary depending on capacitance or voltage.

(Unit: mm)

| Code | P | P ₀ | P ₁ | P ₂ | d | F | h | W | W ₀ | W ₁ | W ₂ | H ₀ | l | D | t | Lo |
|------|------|----------------|----------------|----------------|-------|-----|----|------------|----------------|----------------|----------------|----------------|-----|------|------|-----|
| Dim. | 12.7 | 12.7 | 3.85 | 6.35 | 0.5 | 5.0 | 0 | 18 | 13 | 9 | 1.5 | 16 | 1.0 | 4.0 | 0.7 | 11 |
| Tol. | ±1 | ±0.3 | ±0.7 | ±1.3 | ±0.05 | ±1 | ±2 | +1 -0.5 | ±1 | ±0.5 | ±1.5 | ±0.5 | MAX | ±0.2 | ±0.2 | MAX |

Special Features For Tape & Box

Quantity per box is 2500pcs.

