

# 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.

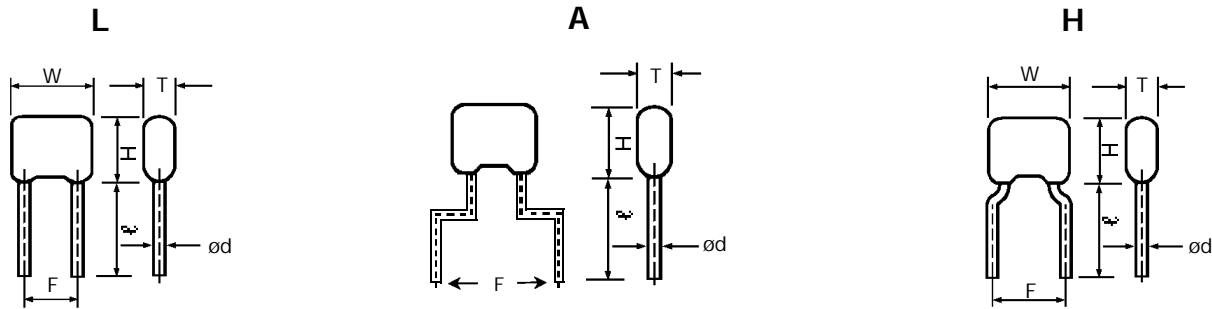
The internal electrodes are built inside dielectric then sealed with resin. This structure makes the capacitors highly reliable.

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 (L):

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)

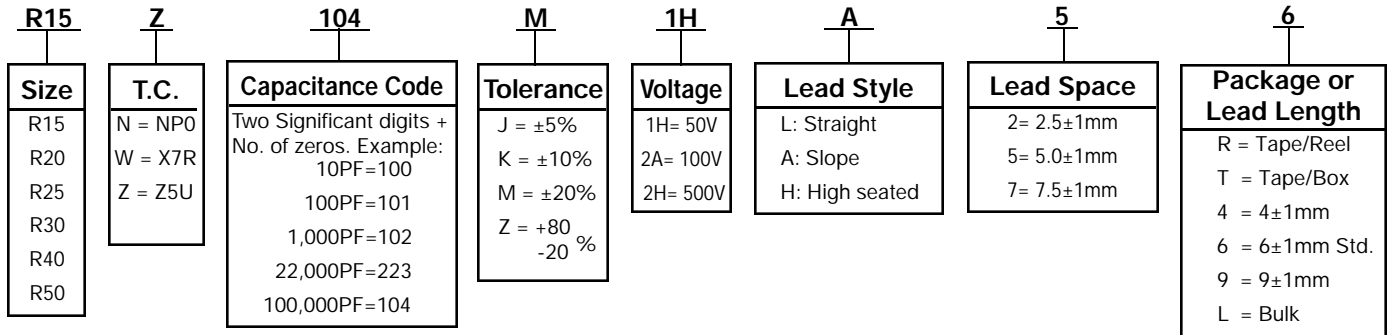
Size	R15 (L)	R15 (L)	R15 (A,H)	R20 (L)	R25 (A,H)	R30 (L)	R40 (L)	R50 (L)
Width (W)	.150 (3.81)	.200 (5.08)	.200 (5.08)	.260 (6.604)	.260 (6.604)	.300 (7.62)	.400 (10.16)	.500 (12.70)
Height (H)	.150 (3.81)	.200 (5.08)	.200 (5.08)	.25 (6.35)	.250 (6.35)	.300 (7.62)	.400 (10.16)	.500 (12.70)
Thickness (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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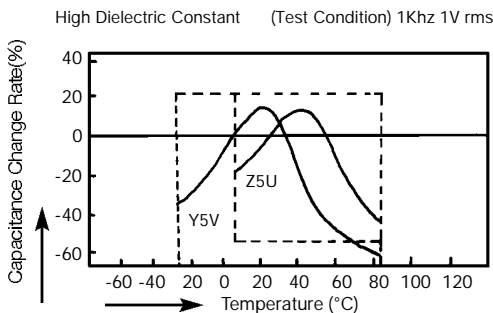
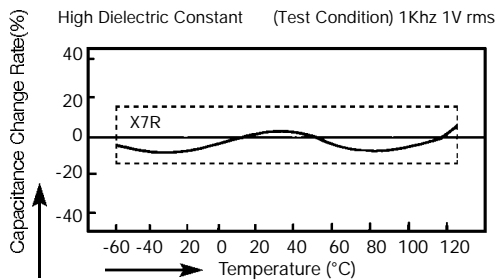
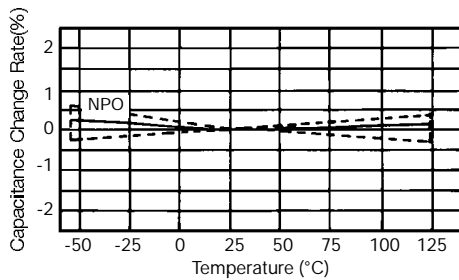
## Multilayer Ceramic Capacitor

### Part Numbering System



## Typical Performance Characteristics

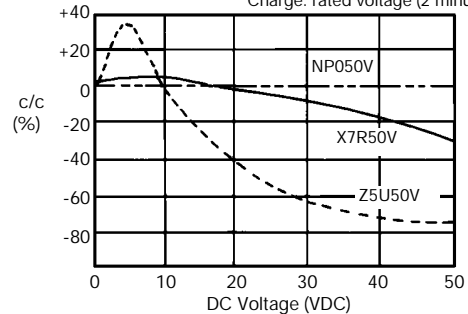
Temperature value - Temperature Characteristics  
 Capacitance value - Temperature Characteristics  
 Temperature Compensating (Test Condition) 1MHz, 1V rms.



## DC Voltage Characteristics

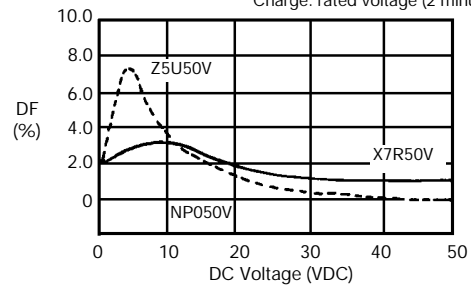
Capacitance - DC voltage characteristics

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

