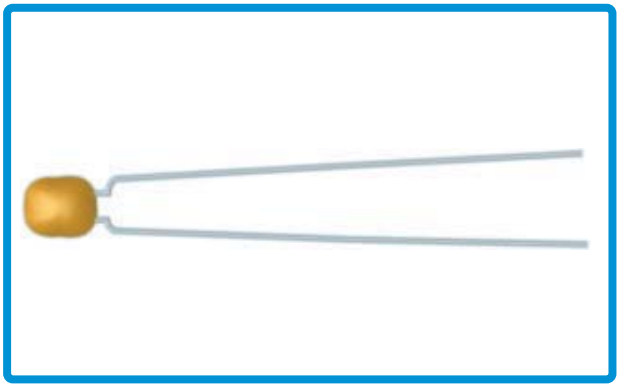
Radial Leaded, Epoxy Dipped, Multilayer Ceramic Capacitors

RoHS

RD Series

MERITEK



MERITEK Radial Leaded, Epoxy Dipped Multilayer Ceramic Capacitors are constructed with a moisture and shock resistant epoxy coating, and can be supplied in bulk or tape and reel packaging for automatic insertion in printed circuit boards. They have a wide range of applications in computers, data processors, telecommunication, industrial controls and instrumentation equipment, etc.

PART NUMBERING SYSTEM

RD 15 YV 104 Z 500 RR

Meritek Series

Size

Dielectric

CODE	CG	XR	YV
	NPO	X7R	Y5V

Capacitance Code

CODE	101	223	104
(pF)	100	22000	100000
(µF)	---	0.022	0.1

Tolerance

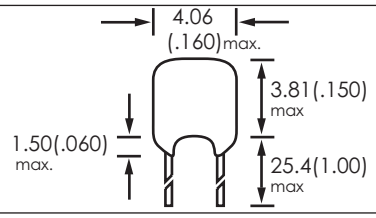
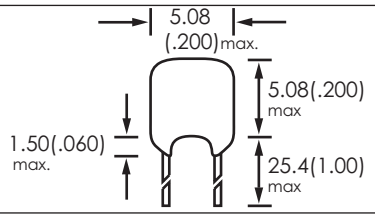
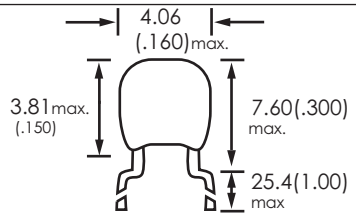
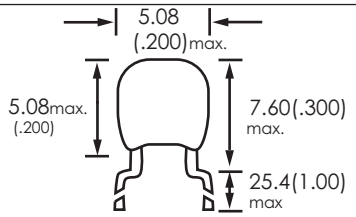
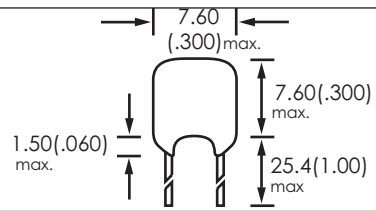
CODE	J	K	M	Z
	± 5%	±10%	±20%	+80% to –20%

Rated Voltage

CODE	500	101	201
	50V	100V	200V

Packaging

CODE	Blank	RR
	Bulk	Radial Leaded, Reel Package

Lead Spacing	Size Code and Dimensions in mm (inches)	
	RD15	**RD20**
2.5 ± 0.8 (.10 ± 0.032)		
	RD16	**RD21**
5.0 ± 0.8 (.20 ± 0.032)		
	RD30	
5.0 ± 0.8 (.20 ± 0.032)		Lead length can be cut upon customer's request. Standard cut lead lengths are: 3.3 ± 0.8(.13 ± .03) 6.0 ± 1.0(.24 ± .04) 10.0 ± 2.0(.39 ± .08)

Special lead styles available upon request.

Specifications are subject to change without notice.

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Multilayer Ceramic Capacitors

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PERFORMANCE SPECIFICATIONS

1.ELECTRICAL

DIELECTRIC CODE / EIA	NPO	X7R	Y5V
Temperature Characteristic	0 ±30ppm /°C, C > 20pF 0 +120/-40 ppm / °C, C ≤ 20pF	△C ±15% maximum Over -55°C to +125°C	△C ±22%/-82% maximum Over -30 °C to +85 °C
Operating Temperature Range	-55 °C to + 125 °C	-55 °C to +125 °C	-30 °C to +85 °C
Measuring Conditions for Capacitance and D.F.	1 MHz, 1 Vrms, C < 1000pF	1 KHz, 1 Vrms	1 KHz, 0.5 Vrms
Dissipation Factor (D.F.) and Tangent of Loss Angle (tan)	≤ 0.1%	≤ 2.5%	≤ 5.0%
Insulation Resistance (I.R.) after 60 secs, charging at rated voltage, 25°C, 55% RH max.	≥ 100G ohms or ≥ 1000MμF Whichever is less	≥ 100G ohms or ≥ 1000MμF Whichever is less	≥ 10G ohms or ≥ 1000MμF Whichever is less
Voltage Proof 25°C, 1-5 secs	2.5 x Rated Voltage	2.5 x Rated Voltage	2.5 x Rated Voltage
Capacitance Aging	0	2.5% per decade hour	7% per decade hour

2.ENVIROMENTAL

Test	Test Condition	Post-Test Inspection Requirements
Solderability	Solder 60Sn/40Pb, 235 ±5°C Immersion 2 ±0.5 sec. Depth of Immersion: 1.5 – 2.0mm	At least 95% of leads should be well tinned
Resistance to Soldering Heat	Immersion in solder bath at 260 ±5°C for 10 ±1 sec. Recovery: 24 ±2 hrs. (NPO) 48 ±4 hrs. (X7R, Y5V)	No visible damage. △C/ °C: NPO ≤ ±5%; X7R ±10%; Y5V ±20%
Rapid Change Of Temperature	-55 to +125°C (NPO. X7R) -25 TO +85°C (Y5V) 5 cycles, duration : 30 mins. Recovery: 24 ±2 hrs. (NPO) 48 ±4 hrs. (X7R, Y5V)	No visible damage
Endurance	1000 hrs. at maximum temperature with 1.5 x rated voltage applied Recovery: 24 ±2 hrs. (NPO) 48 ±4 hrs. (X7R, Y5V)	No visible damage △C/°C: NPO ≤ ±2%; X7R ≤ ±20%; Y5V ≤ ±30% DF: NPO ≤ 0.3%; X7R ≤ 5%; Y5V ≤ 10% IR: R.C>25S

3.Capacitance Range

SIZE	NPO	X7R	Y5V
RD15, RD16	10pF to 1000pF	1000pF to 0.1μF	8200pF to 0.1μF
RD20, RD21		0.1μF to 1.0μF	0.15μF to 1μF