



Multilayer Ceramic Chip Capacitors



FEATURES

- Ideal for telephone line (Tip 'N Ring) filtering.
- Replaces high voltage, leaded, film capacitors.
- Rated for telecommunications voltages.
- Saves board space and weight.
- Surface mount (EIA size) packages.
- Low ESR.
- Wide band operation, excellent high frequency filtering.

GENERAL SPECIFICATIONS

NOTE: Electrical characteristics @ + 25°C unless otherwise specified.

Capacitance Range: 0.033µF to 1.0µF.

Temperature Coefficient of Capacitance (TCC):
± 15% from - 55°C to + 125°C.

Dissipation Factor (DF):
2.5% maximum @ 1.0 Vrms and 1kHz.

Insulation Resistance (IR):

@ + 25°C and rated voltage 100000 Megohms minimum or 1000 ohm-farads, whichever is less.

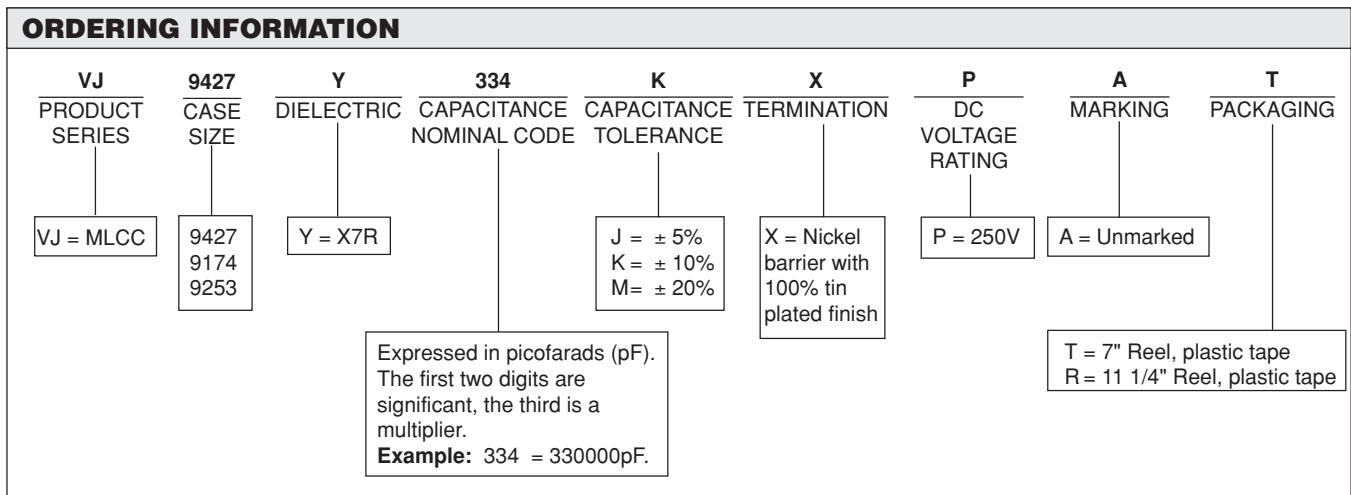
@ + 125°C and rated voltage 10000 Megohms minimum or 100 ohm-farads, whichever is less.

Dielectric Withstanding Voltage (DWV):

250% of rated voltage for 5 ± 1 seconds, 50 milliamps current maximum.

Aging Rate: 1% maximum per decade.

DIMENSIONS in inches [millimeters]		
CASE SIZE	STYLE/DIELECTRIC	THICKNESS (T) (Max.)
1812	VJ9427/X7R	0.086 [2.18]
1825	VJ9174/X7R	0.086 [2.18]
2225	VJ9253/X7R	0.086 [2.18]

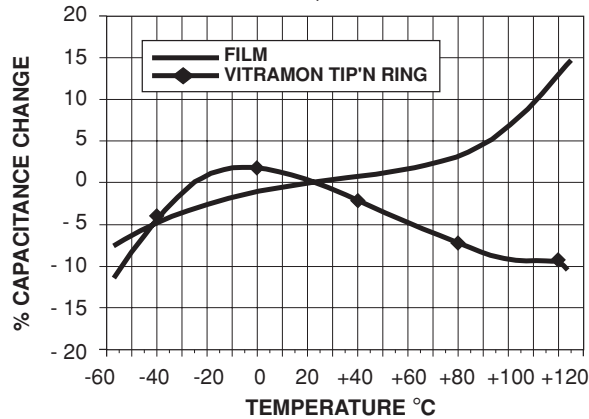




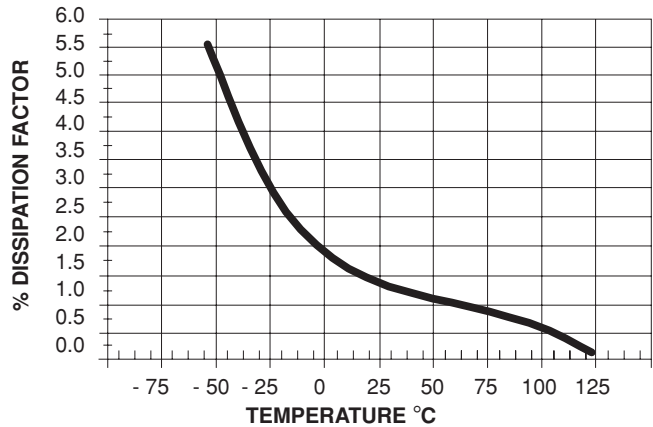
TIP 'N RING - X7R DIELECTRIC				
STYLE		VJ9427	VJ9174	VJ9253
E.I.A. TYPE		1812	1825	2225
VOLTAGE (Vdc)		250	250	250
Capacitance Code	Capacitance μF			
333	0.033			
393	0.039			
473	0.047			
563	0.056			
683	0.068			
823	0.082			
104	0.10			
124	0.12			
154	0.15			
184	0.18			
224	0.22			
274	0.27			
334	0.33			
394	0.39			
474	0.47			
564	0.56			
684	0.68			
824	0.82			
105	1.0			

TIP 'N RING™ - TYPICAL PARAMETERS

TEMPERATURE COEFFICIENT
OF CAPACITANCE COMPARISONS
FILM vs VITRAMON VJ9174Y474KXP
TIP 'N RING CERAMIC
.47 μ F, 250V



X7R
DISSIPATION FACTOR vs TEMPERATURE



IMPEDANCE vs FREQUENCY
VITRAMON TIP 'N RING
VJ9174Y474KXP

