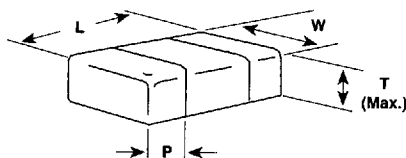
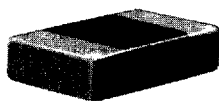


NPO DIELECTRIC - HIGH VOLTAGE Ceramic Capacitors

Monolithic Chips, Surge Suppression



FEATURES

- High voltage ratings
- Stable NPO dielectric
- Ideal for snubber and surge suppression applications

DIMENSIONS [Numbers in brackets indicate millimeters]

E.I.A. TYPE	STYLE	LENGTH (L)	WIDTH (W)	THICKNESS (T) Max.	TERM. (P)	
					Min.	Max.
0603	VJ0603	.063 ± .005 [1.60 ± 0.12]	.031 ± .005 [0.80 ± 0.12]	.035 [0.89]	.005 [0.12]	.015 [0.38]
0805	VJ0805	.079 ± .008 [2.00 ± 0.20]	.049 ± .008 [1.25 ± 0.20]	.051 [1.30]	.010 [0.25]	.028 [0.71]
1206	VJ1206	.126 ± .008 [3.20 ± 0.20]	.063 ± .008 [1.60 ± 0.20]	.059 [1.50]	.010 [0.25]	.028 [0.71]
1210	VJ1210	.126 ± .008 [3.20 ± 0.20]	.098 ± .008 [2.50 ± 0.20]	.059 [1.50]	.010 [0.25]	.028 [0.71]
—	VJ1808	.180 ± .010 [4.57 ± 0.25]	.080 ± .010 [2.03 ± 0.25]	.065 [1.65]	.010 [0.25]	.030 [0.76]
1812	VJ1812	.177 ± .010 [4.50 ± 0.25]	.126 ± .008 [3.20 ± 0.20]	.067 [1.70]	.010 [0.25]	.030 [0.76]
1825	VJ1825	.177 ± .010 [4.50 ± 0.25]	.252 ± .010 [6.40 ± 0.25]	.067 [1.70]	.010 [0.25]	.030 [0.76]
—	VJ2225	.220 ± .010 [5.59 ± 0.25]	.250 ± .010 [6.35 ± 0.25]	.070 [1.78]	.010 [0.25]	.030 [0.76]

PART NUMBERING SYSTEM

VJ1812	Style		
A	Temperature Characteristic: A = NPO.		
102	Capacitance: Expressed in picofarads (pF). The first two digits are significant figures. The last digit is the number of zeros to follow. An R denotes a decimal point in which case all figures are significant. (See Capacitance Codes on next page.) Example: Capacitance Code 102 = 1000 pF.		
K	Capacitance Tolerance: G = ± 2%. J = ± 5%. K = ± 10%.		
X	Termination Material: X = Nickel Barrier, Tin Plated Finish. F = Palladium Silver.		
E	Voltage: C = 200V. E = 500V. G = 1000V.		
A	Marking Options:		
		No Marking Use Code "A"	Marked Use Code "M"
	0603	✓	
T	All Other Sizes	✓	✓
	Packaging Options: Tape and Reel Packaging per EIA-481A: T = 7" Reel, Plastic Tape. C = 7" Reel, Paper Tape. R = 13" Reel, Plastic Tape. P = 13" Reel, Paper Tape. Bulk Packaging: B = Bulk, Plastic Vials.		

GENERAL SPECIFICATIONS

Electrical characteristics @ + 25°C unless otherwise specified.

Capacitance Range:

1 pF to .039 µF.

Capacitance Tolerance:

G = ± 2%.

J = ± 5%.

K = ± 10%.

Operating Temperature Range:

- 55°C to + 125°C.

Temperature Characteristic:

0 ± 30PPM/°C.

Voltage Ratings:

200, 500, 1000 Vdc @ + 125°C.

Dissipation Factor:

0.1% (max.) @ 1.0 Vrms and 1 kHz for values > 1000 pF and @ 1.0 Vrms and 1MHz for values ≤ 1000 pF.

Insulation Resistance @ + 25°C and Rated Vdc:

100,000 Megohms (min.) or 1000 ohm-farads (min.), whichever is less.

Insulation Resistance @ + 125°C and Rated Vdc:

10,000 Megohms (min.) or 100 ohm-farads (min.), whichever is less.

Dielectric Withstanding Voltage:

(200V) 250%, (500V) 200%, (1000V) 150% of rated voltage for 5 ± 1 seconds, 50 milliamps (max.).

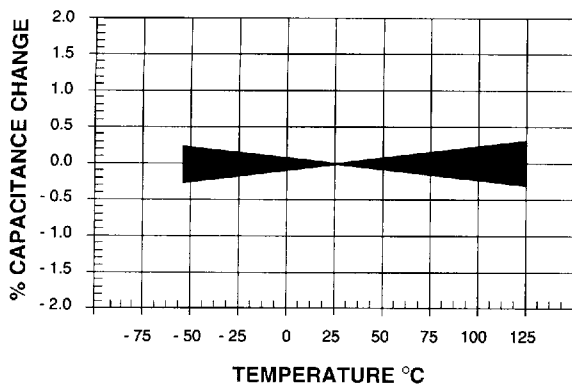
NPO DIELECTRIC - HIGH VOLTAGE

STYLE	VJ0603		VJ0805		VJ1206		VJ1210		VJ1808			VJ1812			VJ1825*		VJ2225*	
E.I.A. TYPE	0603		0805		1206		1210		—			1812			1825		—	
Voltage (Vdc)	200	—	200	500	200	500	200	500	200	500	1000	200	500	1000	200	500	200	500
Capacitance Code	Capacitance																	
1R0	1.0 pF																	
1R2	1.2 pF																	
1R5	1.5 pF																	
1R8	1.8 pF																	
2R2	2.2 pF																	
2R7	2.7 pF																	
3R3	3.3 pF																	
3R9	3.9 pF																	
4R7	4.7 pF																	
5R6	5.6 pF																	
6R8	6.8 pF																	
8R2	8.2 pF																	
100	10 pF																	
120	12 pF																	
150	15 pF																	
180	18 pF																	
220	22 pF																	
270	27 pF																	
330	33 pF																	
390	39 pF																	
470	47 pF																	
560	56 pF																	
680	68 pF																	
820	82 pF																	
101	100 pF																	
121	120 pF																	
151	150 pF																	
181	180 pF																	
221	220 pF																	
271	270 pF																	
331	330 pF																	
391	390 pF																	
471	470 pF																	
561	560 pF																	
681	680 pF																	
821	820 pF																	
102	1000 pF																	
122	1200 pF																	
152	1500 pF																	
182	1800 pF																	
222	2200 pF																	
272	2700 pF																	
332	3300 pF																	
392	3900 pF																	
472	4700 pF																	
562	5600 pF																	
682	6800 pF																	
822	8200 pF																	
103	.010 μF																	
123	.012 μF																	
153	.015 μF																	
183	.018 μF																	
223	.022 μF																	
273	.027 μF																	
333	.033 μF																	
393	.039 μF																	
473	.047 μF																	
563	.056 μF																	

* IR and Vapor Phase soldering only recommended.

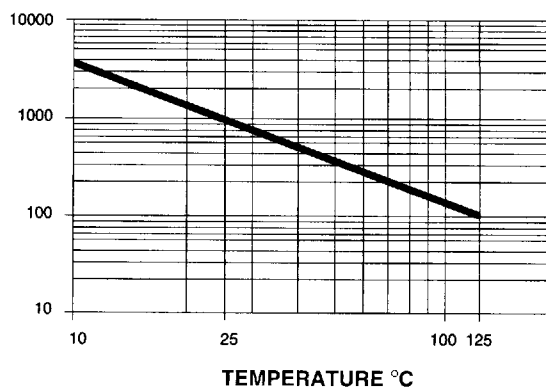
NPO DIELECTRIC - HIGH VOLTAGE - TYPICAL PARAMETERS

TEMPERATURE COEFFICIENT OF CAPACITANCE

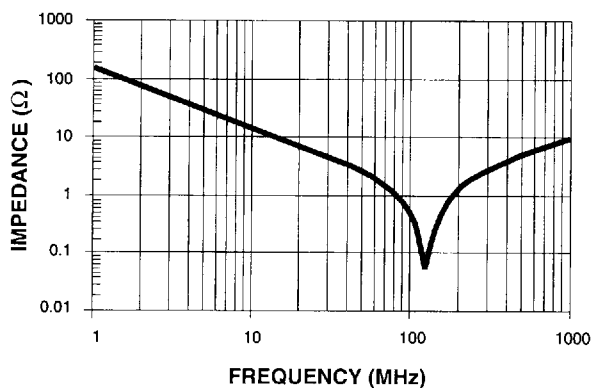


INSULATION RESISTANCE (Ω Farads)

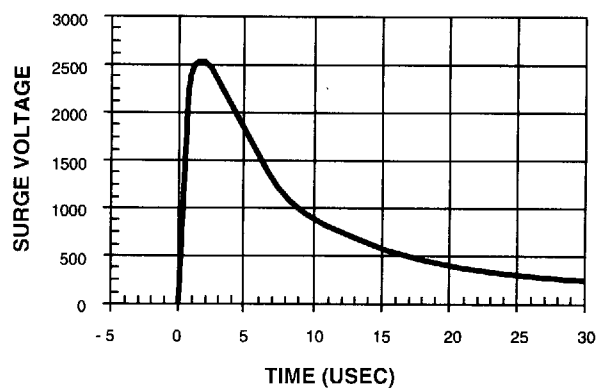
MINIMUM INSULATION RESISTANCE VS TEMPERATURE



IMPEDANCE VS FREQUENCY
1000V RATED - NPO



SURGE WAVEFORM
2500V, 2/10USEC, 500 AMPS



VOLTAGE COEFFICIENT OF CAPACITANCE
1000V RATED

