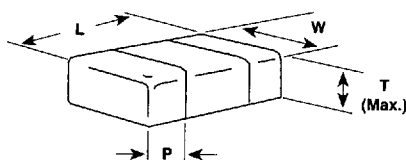
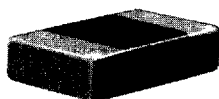


NPO DIELECTRIC - HIGH VOLTAGE Ceramic Capacitors

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"
	0603	Marked Use Code "M"
	All Other Sizes	
T	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.).

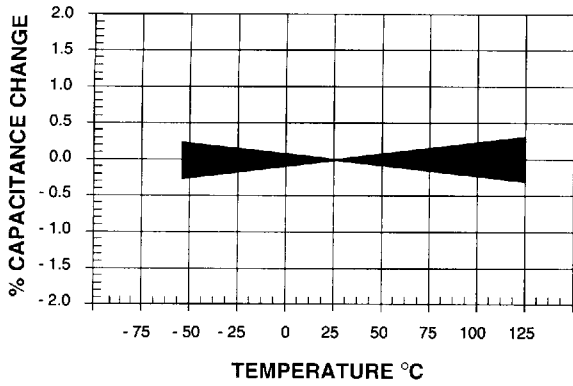
NPO DIELECTRIC - HIGH VOLTAGE

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
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									

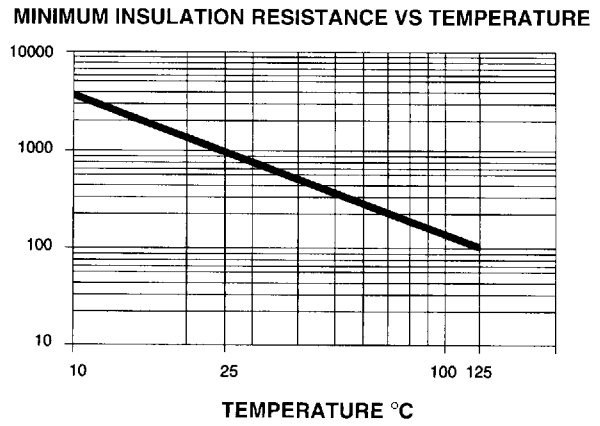
* IR and Vapor Phase soldering only recommended.

NPO DIELECTRIC - HIGH VOLTAGE - TYPICAL PARAMETERS

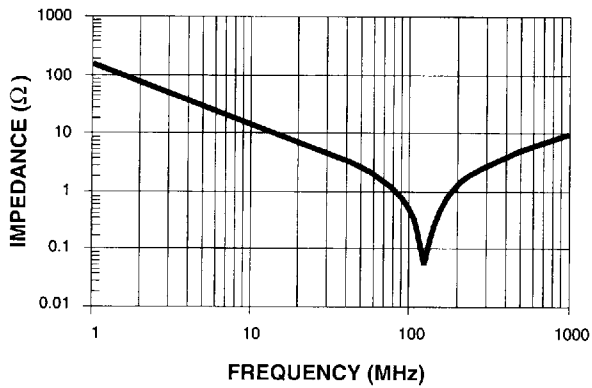
TEMPERATURE COEFFICIENT OF CAPACITANCE



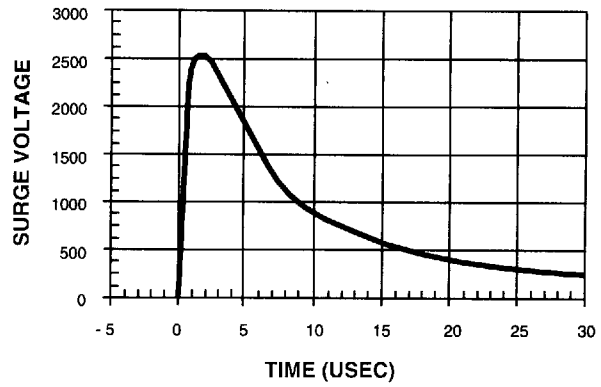
MINIMUM INSULATION RESISTANCE VS TEMPERATURE



**IMPEDANCE VS FREQUENCY
1000V RATED - NPO**



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



**VOLTAGE COEFFICIENT OF CAPACITANCE
1000V RATED**

