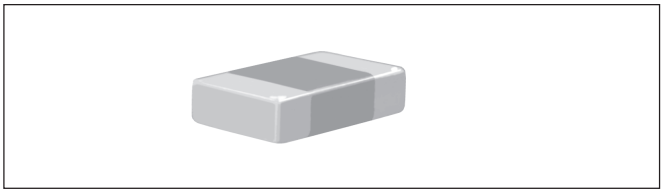
Multilayer Ceramic Chip Capacitors
High Voltage



FEATURES

- High voltage ratings.
- Stable C0G dielectric.
- Ideal for snubber and surge suppression applications.

GENERAL SPECIFICATIONS

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

Capacitance Range: 1.0pF to 0.039µF.

Temperature Coefficient of Capacitance (TCC):
0 ± 30PPM/°C from - 55°C to + 125°C.

Dissipation Factor (DF):
0.1% maximum @ 1.0 Vrms and 1kHz for values > 1000pF.
0.1% maximum @ 1.0 Vrms and 1MHz for values ≤ 1000pF.

Insulation Resistance (IR):
@ + 25°C and rated voltage 100,000 Megohms minimum or 1000 ohm-farads, whichever is less.
@ + 125°C and rated voltage 10,000 Megohms minimum or 100 ohm-farads, whichever is less.

Dielectric Withstanding Voltage (DWV):
200V : 250% rated voltage for 5 ± 1 seconds, 50 milliamps current maximum.
500V: 200% rated voltage for 5 ± 1 seconds, 50 milliamps current maximum
1000V: 150% rayed voltage for 5 ± 1 seconds, 50 milliamps current maximum

ORDERING INFORMATION

VJ	0805	A	102	K	X	C	A	T
PRODUCT SERIES	CASE SIZE	DIELECTRIC	CAPACITANCE NOMINAL CODE	CAPACITANCE TOLERANCE	TERMINATION	DC VOLTAGE RATING	MARKING	PACKAGING*
VJ = MLCC	0603 0805 1206 1210 1808 1812 1825 2220 2225	A = C0G (NPO)	Expressed in picofarads (pF). The first two digits are significant, the third is a multiplier. An "R" indicates a decimal point. **Examples:** 102 = 1000pF. 1R8 = 1.8pF.	G = ± 2% (≥ 10pF) J = ± 5% (≥ 10pF) K = ± 10% (≥ 10pF)	X = Nickel barrier with 100% tin plated finish F = Palladium silver	C = 200V E = 500V G = 1000V H = 3000V	A = Unmarked	T = 7" Reel, plastic tape C = 7" Reel, paper tape R = 11 1/4" Reel, plastic tape P = 11 1/4" Reel, paper tape B = Bulk **NOTE:** 0402 and 0603 available in paper tape only

*See page 57 for cassette case packaged capacitors.

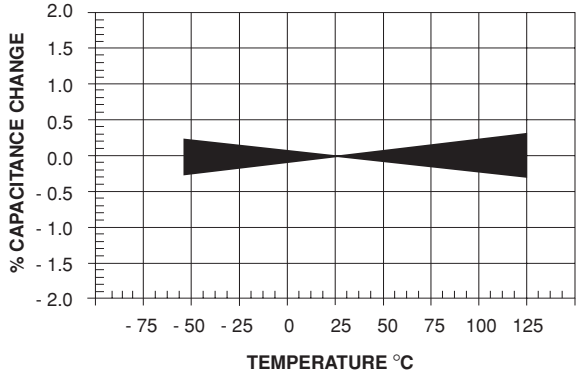
NPO DIELECTRIC - HIGH VOLTAGE

STYLE		VJ0603		VJ0805		VJ1206		VJ1210		VJ1808			VJ1812*				VJ1825*		VJ2220*			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	3000	200	500	200	500	1000	200	500
Capacitance Code	Capacitance																						
1R0	1.0pF																						
1R2	1.2pF																						
1R5	1.5pF																						
1R8	1.8pF																						
2R2	2.2pF																						
2R7	2.7pF																						
3R3	3.3pF																						
3R9	3.9pF																						
4R7	4.7pF																						
5R6	5.6pF																						
6R8	6.8pF																						
8R2	8.2pF																						
100	10pF																						
120	12pF																						
150	15pF																						
180	18pF																						
220	22pF																						
270	27pF																						
330	33pF																						
390	39pF																						
470	47pF																						
560	56pF																						
680	68pF																						
820	82pF																						
101	100pF																						
121	120pF																						
151	150pF																						
181	180pF																						
221	220pF																						
271	270pF																						
331	330pF																						
391	390pF																						
471	470pF																						
561	560pF																						
681	680pF																						
821	820pF																						
102	1000pF																						
122	1200pF																						
152	1500pF																						
182	1800pF																						
222	2200pF																						
272	2700pF																						
332	3300pF																						
392	3900pF																						
472	4700pF																						
562	5600pF																						
682	6800pF																						
822	8200pF																						
103	.010µF																						
123	.012µF																						
153	.015µF																						
183	.018µF																						
223	.022µF																						
273	.027µF																						
333	.033µF																						
393	.039µF																						
473	.047µF																						
563	.056µF																						

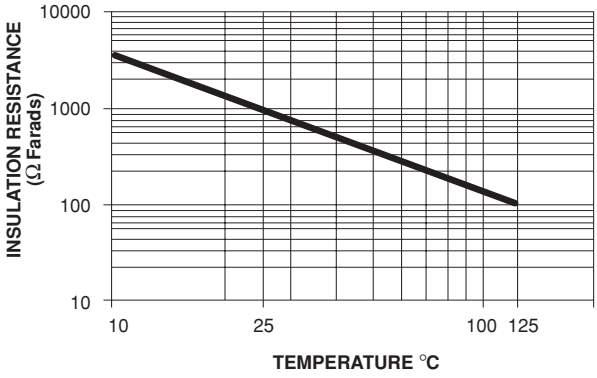
*See page 61 for soldering recommendations.

NPO DIELECTRIC - HIGH VOLTAGE - TYPICAL PARAMETERS

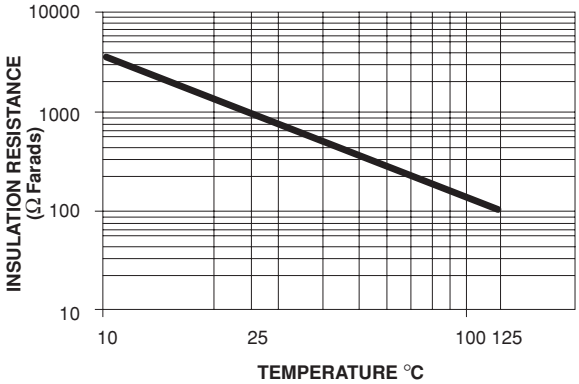
TEMPERATURE COEFFICIENT OF CAPACITANCE



MINIMUM INSULATION RESISTANCE vs TEMPERATURE



MINIMUM INSULATION RESISTANCE vs TEMPERATURE



VOLTAGE COEFFICIENT OF CAPACITANCE 1000V RATED