

High Voltage

NP0/COG: SPECIFICATIONS:

Class I dielectric; ultra stable electrical characteristics over time, voltage, frequency and temperature changes. Low dielectric loss.	OPERATING TEMPERATURE RANGE:	-55°C to +125°C
	TEMPERATURE COEFFICIENT:	0 ± 30PPM/°C
	TEMPERATURE VOLTAGE COEFFICIENT:	0 ± 30PPM/°C
	DISSIPATION FACTOR:	0.1% MAX.
	INSULATION RESISTANCE:	>1000 ohms F or 100 G ohms, whichever is less at 25°C, VDCW. (The IR at 125°C is 10% of the value at 25°C)
	WITHSTANDING VOLTAGE:	See below
	TEST PARAMETERS:	1MHZ ± 50KHZ at 1.0 ± 0.2 Vrms ≤ 100 pF, 25°C 1KHZ ± 50HZ at 1.0 ± 0.2 Vrms > 100 pF, 25°C
CAPACITANCE TOLERANCE:	J,K	

X7R: SPECIFICATIONS:

Stable Class II dielectric.	OPERATING TEMPERATURE RANGE:	-55°C to +125°C
	TEMPERATURE COEFFICIENT:	0 ± 15%Δ°C MAX.
	TEMPERATURE VOLTAGE COEFFICIENT:	X7R not applicable
	DISSIPATION FACTOR:	2.5% MAX.
	INSULATION RESISTANCE:	>1000 ohms F or 100 G ohms, whichever is less at 25°C, VDCW. (The IR at 125°C is 10% of the value at 25°C)
	WITHSTANDING VOLTAGE:	See below
	TEST PARAMETERS:	1KHz ± 50Hz at 1.0 ± 0.2 Vrms, 25°C
CAPACITANCE TOLERANCE:	J, K, M	

How To Order

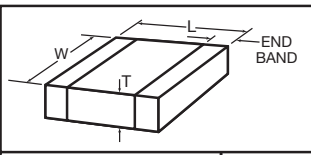
C1206 Series See Chart	COG Temperature Characteristic	501 — Rated Voltage 1st two digits are significant, followed by number of zeros 201 = 200V 251 = 250V 501 = 500V 601 = 600V *631 = 630V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V	101 Capacitance (pico - Farads) 1st two digits are significant followed by number of zeroes. 101 = 100 pF R denotes decimal 6R8 = 6.8 pF	J Tolerance Code: J = ± 5% K = ± 10% M = ± 20%	N Termination P = Palladium Silver N = Nickel barrier, Tinned Termination Standard termination finish for this product is 100% matte Tin (Sn)	□ Marking 6 = EIA "J" Code "Leave blank if No Marking"	E Packaging E = Embossed Tape
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* 630V Caps are available for any 500V capacitor ranges.

Dielectric Strength is equal to 1.5 times rated voltage (WVDC) for 500 volt capacitors and 1.2 times (WVDC) for 1,000 through 5,000 volt capacitors. Circuit applications in excess of 1,000 volts may require a surface coating to prevent external arcing.

All components in this section are RoHS compliant per the EU directives and definitions.

Ceramic Chip Capacitors



CAPACITOR CASE SIZE			RATED WVDC	10 pF	100 pF	1000 pF	.01 μF	.1 μF
0805 SIZE * L * W T(Max) Max E/B	in. .080 .050 .065 .020	mm 2.03 1.27 1.65 .508	250V	102 273				
			500V	821 123				
			1,000V	471 272				
1206 SIZE * L * W T(Max) Max E/B	.125 .062 .080 .020	3.18 1.58 2.03 .508	250V	332 473				
			500V	102 473				
			1,000V	681 562				
			2,000V	151 102				
1210 SIZE * L * W T(Max) Max E/B	.125 .095 .085 .020	3.18 2.41 2.16 .508	250V	472 104				
			500V	222 563				
			1,000V	102 153				
			2,000V	221 152				
1808 SIZE * L * W T(Max) Max E/B	.180 .080 .095 .020	4.57 2.03 2.41 .508	250V	562 124				
			500V	332 683				
			1,000V	152 183				
			2,000V	221 222				
			3,000V	121 102				
			4,000V	470 471 102				
1812 SIZE * L * W T(Max) Max E/B	.177 .125 .118 .020	4.49 3.18 2.75 .508	250V	682 224				
			500V	472 124				
			1,000V	222 273				
			2,000V	471 103				
			3,000V	221 222				
			4,000V	101 681				
1825 SIZE * L * W T(Max) Max E/B	.180 .250 .128 .020	4.57 6.35 2.75 .508	500V	103 224				
			1,000V	562 104				
			2,000V	102 682				
			3,000V	471 472				
			4,000V	271 821				
			5,000V	101 391				
2225 SIZE * L * W T(Max) Max E/B	.225 .250 .128 .020	5.72 6.35 2.75 .508	500V	183 394				
			1,000V	822 104				
			2,000V	122 223				
			3,000V	102 392				
			4,000V	471 152				
			5,000V	181 681				

* Tolerance: ± 0.010"

NOTE: (1) Standard ranges begin at 10pF. Please consult your sales representative if values below 10pF are required.
 (2) Thickness may exceed the T(Max) specification if capacitance and rated voltage are near the end of the range. Please advise your sales representative if thickness is a concern.

NPO or X7R
X7R only
X7R non-RoHS compliant