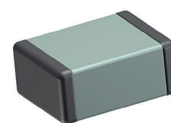


• Applications

NPO COG : Ultra stable ceramic
 Typical uses : passing, coupling, filtering, blocking
 That require very stable dielectric characteristics



• Electrical Parameters

Electrical Characteristics at + 25°C unless otherwise specified
Operating Temperature - 55°C, + 125°C
Temperature Coefficient ± 30ppm
Dissipation Factor < 10.10⁻⁴ at 1Vrms and 1kHz (or 1MHz)

Insulation Resistance (IR)
 25°C/Un 10⁵ MOhm or 1000 Ohm-Farad whichever is less
 125°C/Un 10⁴ MOhm or 100 Ohm-Farad whichever is less
Dielectric Strength Test
 Performed per method 103 of EIA 198-2-E

• Quick Reference Data

	1206	1210	1808	1812	2220	2225	3640	4055	5440	6660	8060
2000V	1pF - 220pF	1pF - 470pF	1pF - 470pF	10pF - 820pF	10pF - 2.2nF	10pF - 4.7nF	10pF - 12nF	10pF - 15nF	10pF - 18nF	10pF - 27nF	10pF - 47nF
3000V	1pF - 68pF	1pF - 150pF	1pF - 180pF	10pF - 560pF	10pF - 1.5nF	10pF - 2.2nF	10pF - 5.6nF	10pF - 6.8nF	10pF - 6.8nF	10pF - 10nF	10pF - 18nF
4000V			1pF - 56pF	10pF - 220pF	10pF - 680pF	10pF - 820pF	10pF - 2.2nF	10pF - 2.7nF	10pF - 2.7nF	10pF - 3.3nF	10pF - 5.6nF
5000V			0.47pF - 47pF	8.2pF - 120pF	10pF - 470pF	10pF - 560pF	10pF - 1.2nF	10pF - 1.5nF	10pF - 1.5nF	10pF - 2.2nF	10pF - 3.3nF
10 000V								10pF - 220pF	10pF - 270pF	10pF - 390pF	10pF - 560pF

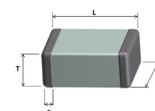
• Ordering Information

0805	A	220	J	A	P	B	XX
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	SPECIAL PARAMETERS
1206 1210 1808 1812 2220 2225 3640 4055 5440 6660 8060	A = COG	Expressed in picofarads (pF). The first two digits are significant, the third digit give the number of noughts. Example : 102 = 1 000pF	C = ± 0.25pF D = ± 0.5pF F = ± 1% G = ± 2% J = ± 5% K = ± 10% M = ± 20% Z = - 20%, + 80%	H = 2000V I = 3000V K = 4000V L = 5000V 10 = 10kV	F = Palladium-Silver W = Silver with Gold plated finish X = Nickel with Tin plated finish P = Polymer with Tin plated finish C = Copper with Tin plated finish	B = 7" reel V = Bulk	

• Dimensions in millimeters

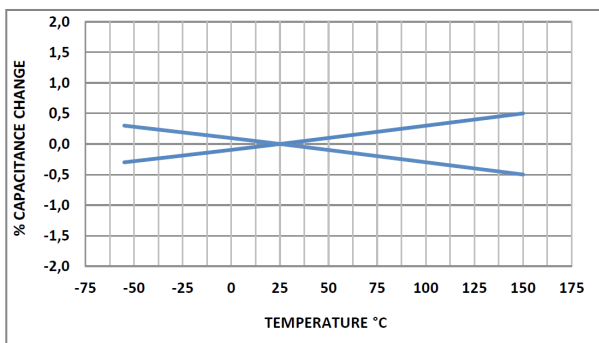
Designation	1206	1210	1808	1812	2220	2225	3640	4055	5440	6660	8060
Length (L)	3.20 ± 0.2	3.20 ± 0.2	4.6 ± 0.25	4.50 ± 0.3	5.70 ± 0.4	5.70 ± 0.4	9.2 ± 0.4	10.2 ± 1	13.80 ± 1	16.5 ± 1	20 ± 1
Width (W)	1.60 ± 0.2	2.50 ± 0.2	2 ± 0.25	3.20 ± 0.2	5.00 ± 0.4	6.40 ± 0.4	10.2 ± 0.4	13.8 ± 1	10.2 ± 1	15 ± 1	15 ± 1
Thickness (T)	1.70	1.70	2.00	2.80	4.00	4.50	6.00	6.00	6.00	6.00	6.00
Termination (P)	Min	0.25	0.25	0.25	0.25	0.25	0.80	0.80	0.80	0.80	0.80
	Max	0.70	0.80	1.00	1.00	1.00	1.50	1.50	1.50	1.50	2.00

For P termination (Polymer type) add 0.20mm to all dimensions.

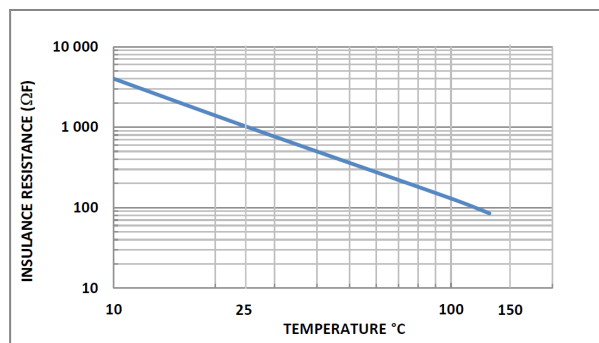


• **Typical Characteristics**

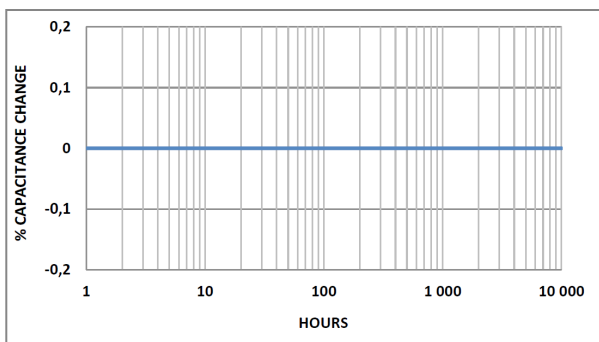
Temperature coefficient of capacitance



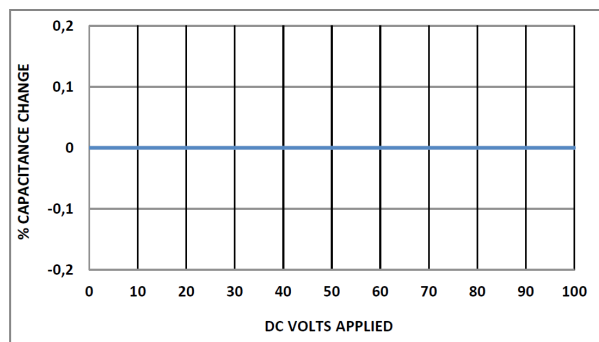
Insulation resistance vs. temperature



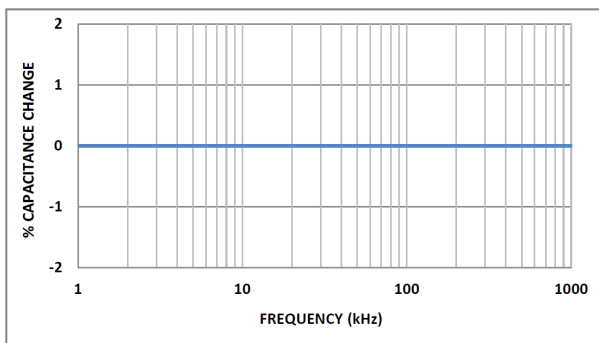
Aging rate



Voltage coefficient of capacitance



Change of Capacitance with Frequency



Dissipation factor vs. frequency

