

COG (NPO) DIELECTRIC CAPACITORS

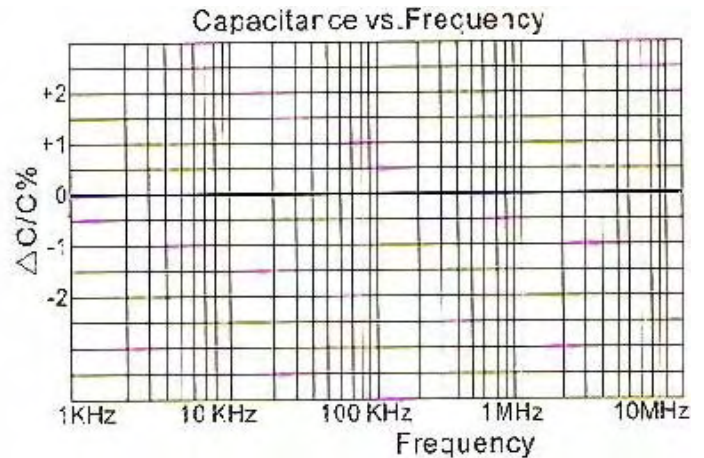
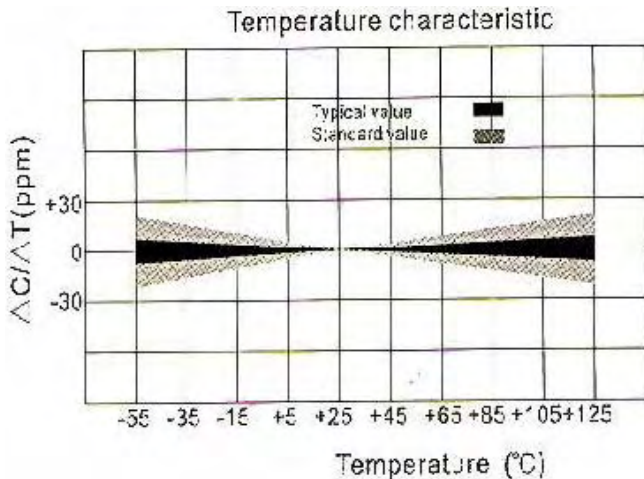
FEATURES

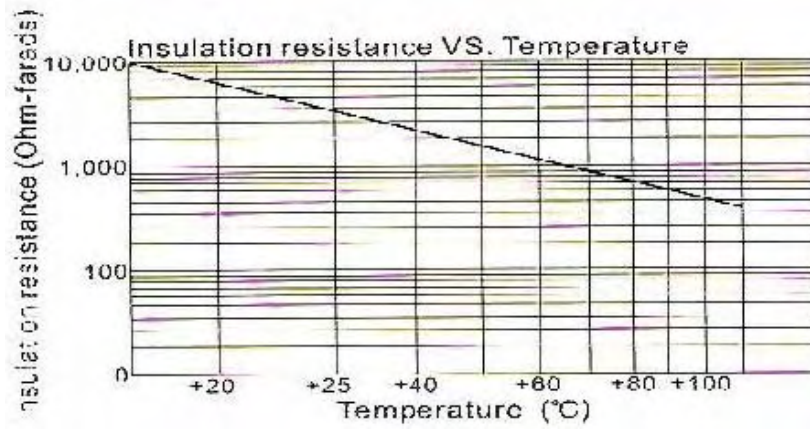
COG (NPO) is the most popular formulation of the “ temperature compensation” , capacitor according to EIA, it is Class 1 dielectric and temperature coefficient is within $0 \pm 30\text{ppm}/^\circ\text{C}$. Typical capacitance change With frequency and voltages is negligible at less than $\pm 0.05\%$ COG (NPO) formulations show no aging Characteristics. COG (NPO) formulations usually have a “Q” in excess of 1000 and shows little capacitanc

Performance Characteristics

Capacitance Range	0.2pF ~ 10nF
Capacitance tolerance	$\pm 5\%$, $\pm 10\%$ Preferred $\pm 5\%$, $\pm 10\%$ CR $\leq 10\text{pF}$, $\pm 0.25\text{ pF}$, $\pm 0.5\text{ pF}$ For values $\leq 10\text{pF}$, Preferred tolerance is $\pm 0.5\text{ pF}$, also available $\pm 0.25\text{ pF}$
Operating temperature range	$-55 \sim 125^\circ$
Temperature coefficient	$0 \pm 30\text{ ppm}$
Rated voltage	25V,50V,100V
Dissipation factor and “Q”	CR $\geq 30\text{ pF}$, Q ≥ 1000 CR $\leq 30\text{pF}$, Q $\geq 400+20\text{CR}$
Insulation resistance	more than $10\text{G}\Omega$
Dielectric withstanding voltage	250 rated voltage
Test voltage	$1 \pm 0.2\text{ Vrms}$
Test frequency	CR $> 1000\text{pF}$, 1 KHZ $\pm 10\%$ For values $> 1000\text{pF}$: 1 KHZ $\pm 10\%$

Typical Characteristics curves





Capacitance Range VS. Chip Size

Size	25V	50V	100V
0402	0.2pF ~ 470pF	0.2pF ~ 1.0nF	
0603	0.2pF ~ 2.2nF	0.2pF ~ 1.5nF	0.2pF ~ 1.0nF
0805	0.5pF ~ 10nF	0.5pF ~ 2.2nF	0.5pF ~ 1.25F
1206	0.5pF ~ 10nF	0.5pF ~ 4.7nF	0.5pF ~ 2.2nF