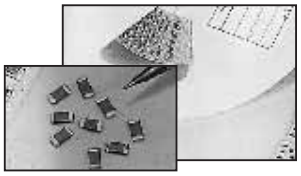
Multilayer Ceramic Chip Capacitors

NMC Series X8S

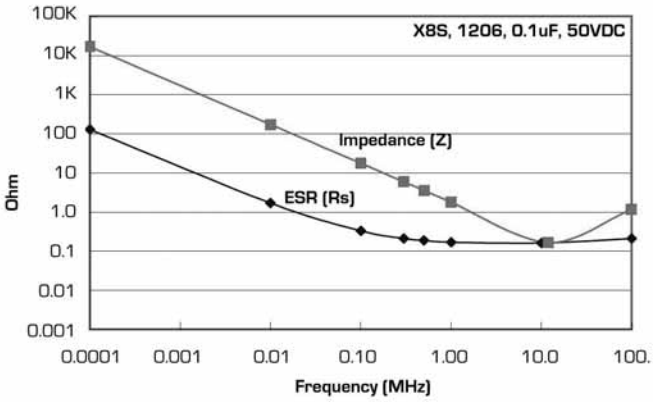
FEATURES

- CLASS II DIELECTRIC, TEMPERATURE STABLE
- EXCELLENT FREQUENCY CHARACTERISTICS, NON-LINEAR CAPACITANCE CHANGE
- **HIGH TEMPERATURE DIELECTRIC +150°C**
- NICKEL BARRIER TERMINATIONS AND EXCELLENT MECHANICAL STRENGTH

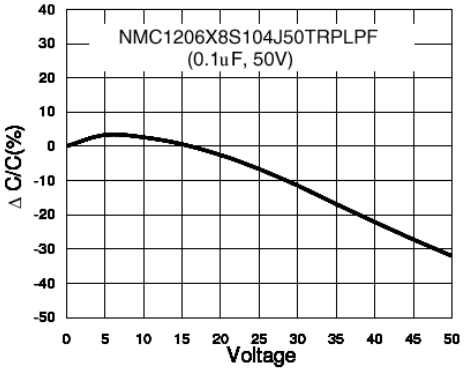


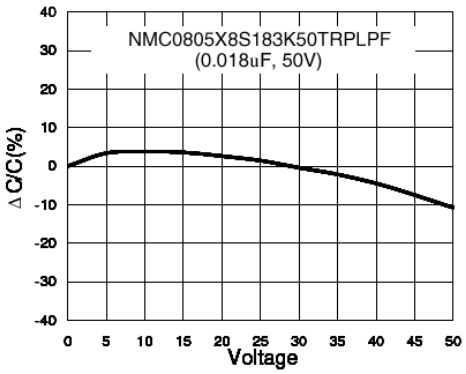
Capacitance Range	1,000pF ~ 0.27µF
Capacitance Tolerance	±10% (K), ±20% (M)
Operating Temperature Range	-55°C ~ +150°C
Temperature Characteristics	±22%Δ max. over temperature range (with 0 Vdc applied)
Rated Voltages	25Vdc & 50Vdc
Dissipation Factor	2.0% max. @ 1.0Vrms and 1KHz, +25°C
insulation Resistance	10,000Megohms min. or 500Megohm/µF min. whichever is less @ +25°C
Dielectric Withstanding Voltage	250% of Rated Voltage for 5 ±1 seconds, 50mA maximum current
Test Conditions (EIA-198-2E)	1KHz, 1.0V ±0.2Vrms

Typical Impedance and ESR versus Frequency



Typical Voltage Coefficent





PART NUMBER SYSTEM

NMC 0805 X8S 102 K 50 TRP or TRPLP F

- F — RoHS Compliant
- TRPLP — Tape & Reel (Embossed Plastic Carrier)
- TRP — Tape & Reel (Punched carrier)
- 50 — Voltage (Vdc)
- K — Capacitance Tolerance Code (see chart)
- 102 — Capacitance Code, expressed in pF, first 2 digits are significant, 3rd digit is no. of zeros, "R" indicates decimal for under 10pF
- X8S — Temperature Characteristic
- 0805 — Size Code (see chart)
- NMC — Series

X8S CAPACITOR SIZE CHART (mm)

EIA Case Size	0603	0805	1206		1210	1812	2220
Length (L)	1.60 ± 0.10	2.00 ± 0.20	3.20 ± 0.30		3.20 ± 0.30	4.60 ± 0.30	5.70 ± 0.40
Width (W)	0.80 ± 0.10	1.35 ± 0.25	1.60 ± 0.20		2.50 ± 0.20	3.20 ± 0.30	5.00 ± 0.40
Thickness (T)	0.90 max.	1.45 max.	1.80 max.		2.60 max.	3.00 max.	3.00 max.
Termination Width (P)	0.15 min.	0.20 min.	0.30 min.		0.30 min.	0.30 min.	0.30 min.
Capacitance	Working Voltage (Vdc)						
	50	50	25	50	50	50	50
0.001							
0.0012µF							
0.0015µF							
0.0018µF							
0.0022µF							
0.0027µF							
0.0033µF							
0.0039µF							
0.0047µF							
0.0056µF							
0.0068µF							
0.0082µF							
0.01µF							
0.012µF							
0.015µF							
0.018µF							
0.022µF							
0.027µF							
0.033µF							
0.039µF							
0.047µF							
0.056µF							
0.068µF							
0.082µF							
0.1µF							
0.15µF							
0.22µF							
0.27µF							

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)