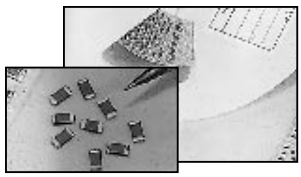
Multilayer Ceramic Chip Capacitors

NMC Series NPO

FEATURES

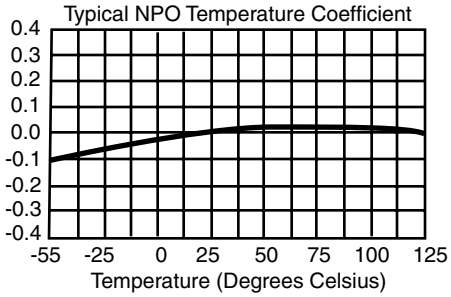
- CLASS I DIELECTRIC, TEMPERATURE COMPENSATING
- HIGH STABILITY OVER TIME, VOLTAGE AND TEMPERATURE CHANGES
- LOW DIELECTRIC LOSS
- NICKEL BARRIER TERMINATIONS AND EXCELLENT MECHANICAL STRENGTH
- EIA MARKING AVAILABLE

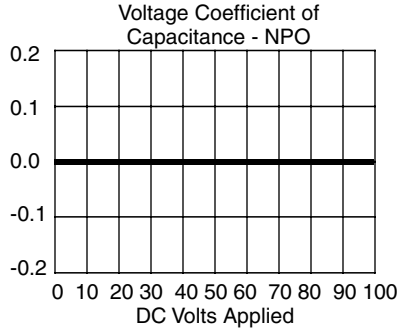
RoHS Compliant
includes all homogeneous materials
*See Part Number System for Details

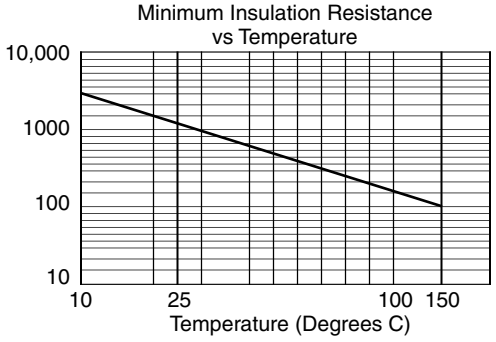


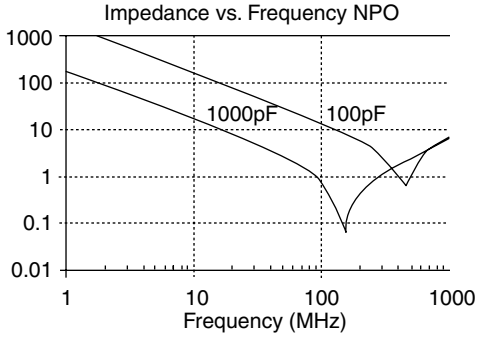
SPECIFICATIONS NPO

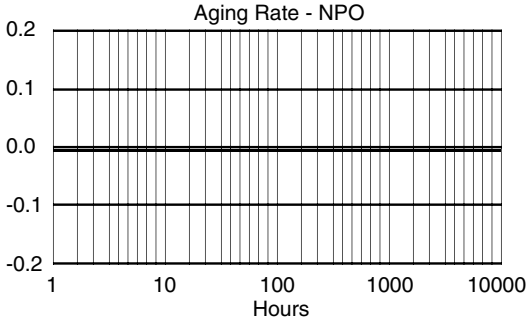
Capacitance Range	0.47pF to 0.068µF
Capacitance Tolerance	Below 10pF: ±0.1pF(B), ± 0.25pF(C), ±0.5pF(D) 10pF and above: ±1%(F), ±2%(G), ±5% (J)
Operating Temperature Range	-55°C ~ +125°C
Temperature Characteristics	0 ± 30ppm/°C
Rated Voltages	25Vdc, 35Vdc, 50Vdc (see NMC-H Series for higher voltages)
Dissipation Factor	For values >30pF 0.1% @ 25°C; For values ≤ 30pF Q=400+20 x C (C in pF)
insulation Resistance	100,000Megohms min. or 1000Megohm/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)	≤1000pF; 1MHz, 1.2Vrms max. or >1000pF; 1KHz, 1.2Vrms max.









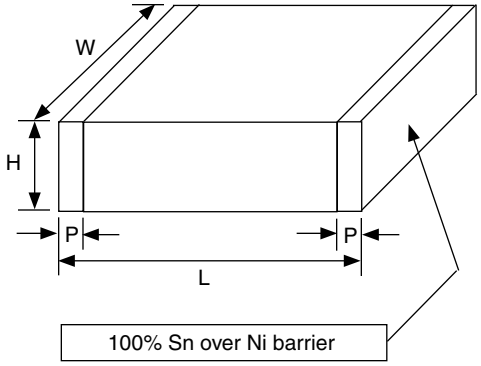


PART NUMBER SYSTEM

NMC 0805 NPO 101 J 50 TRP or TRPLP 3K F

- F — RoHS Compliant
- 3K — Optional Reel Qty (3K=3,000pcs)
- TRPLP — Tape & Reel (Embossed Plastic Carrier)
- TRP — Tape & Reel (Paper carrier)
- 50 — Voltage (Vdc)
- J — Capacitance Tolerance Code (see chart)
- 101 — Capacitance Code, expressed in pF, first 2 digits are significant, 3rd digit is no. of zeros, "R" indicates decimal for under 10pF
- NPO — Temperature Characteristic
- 0805 — Size Code (see chart)
- NMC — Series

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)



NPO CAPACITOR SIZE CHART (mm)

EIA Case Size	0201				0402				0603				0805			
Length (L)	0.6±0.03				1.0±0.05				1.6±0.15				2.0±0.2			
Width (W)	0.3±0.03				0.5±0.05				0.8±0.15				1.25±0.2			
Thickness max. (T)	0.33				0.6				1.0				1.35			
Termination Width (P)	0.15±0.05				0.2±0.1				0.12 ~ 0.51				0.25 ~ 0.71			
Capacitance	Working Voltage (Vdc)															
	10	16	25	50	16	25	50	100	16	25	50	100	16	25	50	100
0.47pF ~ 22pF																
24pF																
27pF																
30pF																
33pF																
36pF																
39pF																
43pF																
47pF																
51pF																
56pF																
62pF																
68pF																
75pF																
82pF																
91pF																
100pF																
110pF																
120pF																
130pF																
150pF																
160pF																
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200pF																
220pF																
240pF																
270pF																
300pF																
330pF																
360pF																
390pF																
430pF																
470pF																
510pF																
560pF																
620pF																
680pF																
750pF																
820pF																
910pF																
0.001µF																
0.0012µF																
0.0015µF																
0.0018µF																
0.0022µF																
0.0027µF																*
0.0033µF																*
0.0039µF															*	*
0.0047µF															*	
0.0056µF														*	*	
0.0068µF														*	*	
0.0082µF														*	*	

*1.45mm maximum thickness

NPO CAPACITOR SIZE CHART (mm)

EIA Case Size	0805				1206					1210					1812			2225	
Length (L)	2.0±0.2				3,2±0.2					3.2±0.2					4.5±0.3			5.70±0.4	
Width (W)	1.25±0.2				1.6±0.2					2.5±0.2					3.2±0.25			6.35±0.25	
Thickness max. (T)	1.45				1.80					1.80					1.80			1.80	
Termination Width (P)	0.25 ~ 0.71				0.25 ~ 0.71					0.25 ~ 0.71					0.25 ~ 0.76			0.25 ~ 1.02	
Capacitance	Working Voltage (Vdc)																		
	16	25	50	100	10	16	25	50	100	10	16	25	50	100	25	50	100	50	100
0.47pF ~ 9.1pF	See the previous page																		
10pF ~ 22pF																			
24pF ~ 0.001µF																			
0.0012µF																			
0.0015µF																			
0.0018µF																			
0.0022µF																			
0.0027µF																			
0.0033µF																			
0.0039µF																			
0.0047µF																			
0.0056µF																			
0.0068µF																			
0.0075µF																			
0.0082µF																			
0.0091µF																			
0.01µF																			
0.012µF																			
0.015µF							*	*											
0.018µF																			
0.022µF																			**
0.027µF																			**
0.033µF																			**
0.039µF																			**
0.047µF																			
0.056µF																			

*1.90mm maximum thickness, **2.60mm maximum thickness