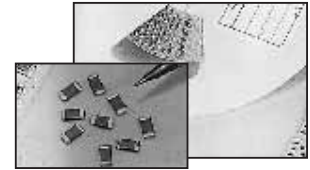


### FEATURES

- CLASS II DIELECTRIC, TEMPERATURE STABLE
- EXCELLENT FREQUENCY CHARACTERISTICS, NON-LINEAR CAPACITANCE CHANGE
- NICKEL BARRIER TERMINATIONS AND EXCELLENT MECHANICAL STRENGTH

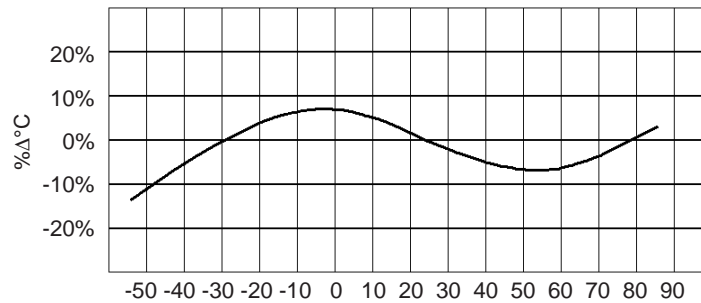
**Expanded  
01005  
Case Size**



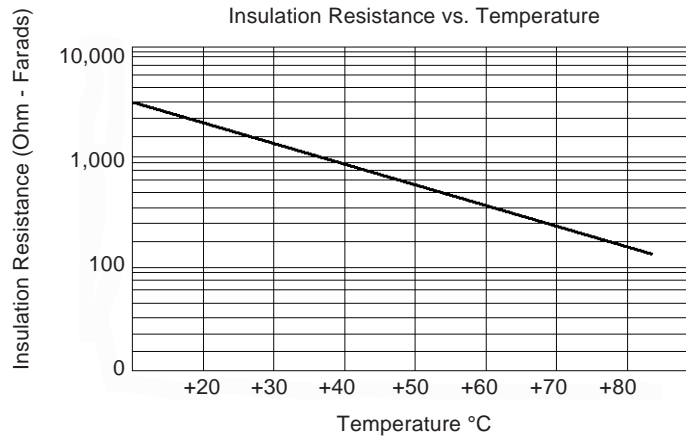
### CHARACTERISTICS

Capacitance Range	100pF ~ 0.82μF (see high CV datasheet for higher capacitance values)
Capacitance Tolerance	±10% (K), ±20% (M)
Operating Temperature Range	-55°C ~ +85°C
Temperature Characteristics	±15%Δ max. over temperature range (with 0 Vdc applied)
Rated Voltages	6.3Vdc, 16Vdc & 25Vdc (see NMC-H Series for higher voltages)
Dissipation Factor	3.5% max. (25Vdc) 5% max. (16Vdc), 7.5% (10Vdc), 10% (6.3Vdc) @ 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

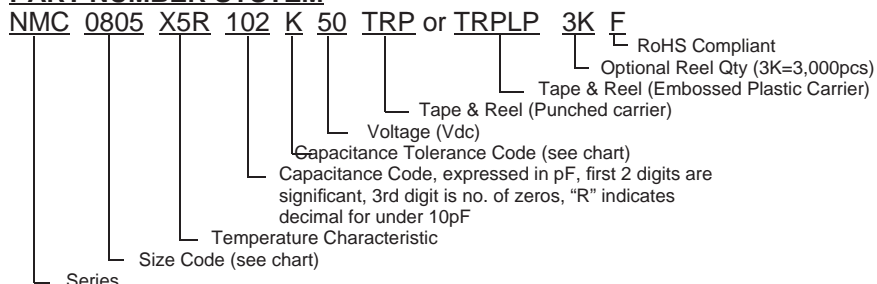
Typical X5R Temperature Coefficient



Insulation Resistance vs. Temperature



### PART NUMBER SYSTEM

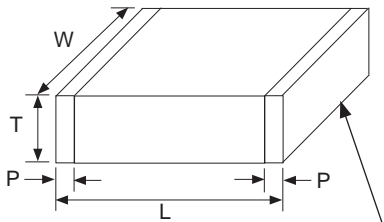


# Multilayer Ceramic Chip Capacitors

NMC Series X5R

EIA Case Size	01005	
Length (L)	0.4±0.02	
Width (W)	0.2±0.02	
Thickness max. (T)	0.22	
Termination Width (P)	0.1±0.03	
Capacitance	Working Voltage (Vdc)	
	6.3	10
100pF		
150pF		
220pF		
330pF		
470pF		
680pF		
1,000pF		
1,500pF		
2,200pF		
3,300pF		
4,700pF		
6,800pF		
10,000pF		

EIA Case Size	0201		0402			0603			
Length (L)	0.6 ± 0.05		1.0±0.05			1.6±0.15			
Width (W)	0.3 ± 0.05		0.5±0.05			0.8±0.15			
Thickness max. (T)	0.33		0.6			1.0			
Termination Width (P)	0.10 ~ 0.20		0.2±0.1			0.12 ~ 0.51			
Capacitance	Working Voltage (Vdc)								
	6.3	10	6.3	10	16	6.3	10	16	
0.0012µF									
0.0015µF									
0.0018µF									
0.0022µF									
0.0027µF									
0.0033µF									
0.0039µF									
0.0047µF									
0.0056µF									
0.0068µF									
0.0075µF									
0.0082µF									
0.01µF									
0.015µF									
0.018µF									
0.022µF									
0.027µF									
0.033µF									
0.036µF									
0.039µF									
0.047µF									
0.056µF									
0.068µF									
0.075µF									
0.082µF									
0.1µF									
0.15µF									
0.18µF									
0.22µF									
0.27µF									
0.33µF									
0.36µF									
0.39µF									
0.47µF									
0.68µF									
0.82µF									



100% Sn over Ni barrier

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)

See NMC High Capacitance datasheet for higher capacitance values or NMC-H High Voltage datasheet for higher voltage ratings

