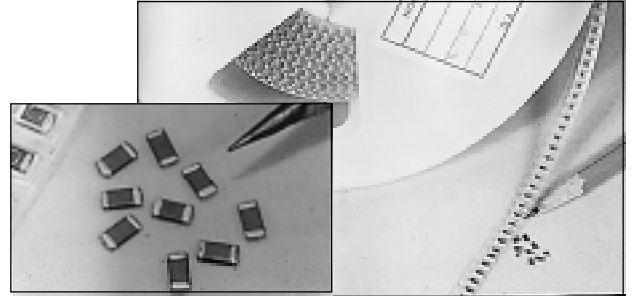


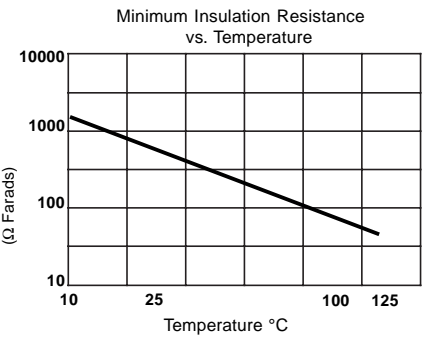
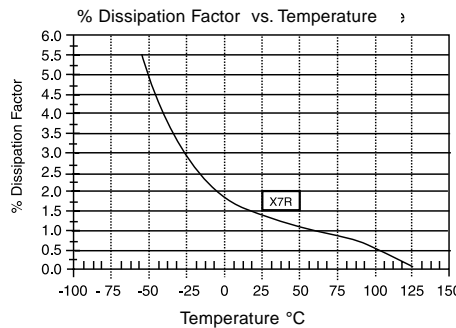
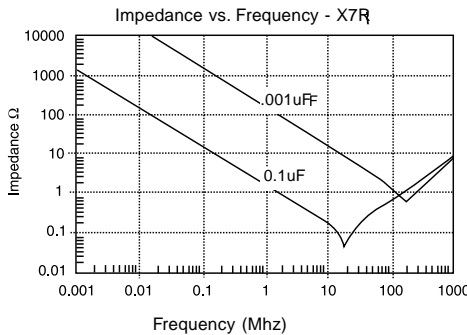
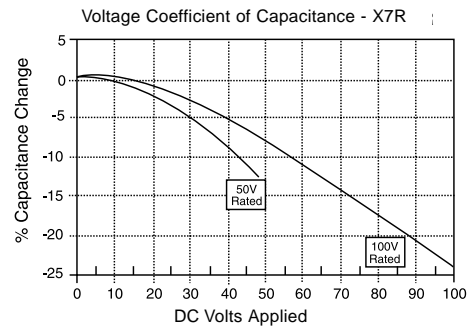
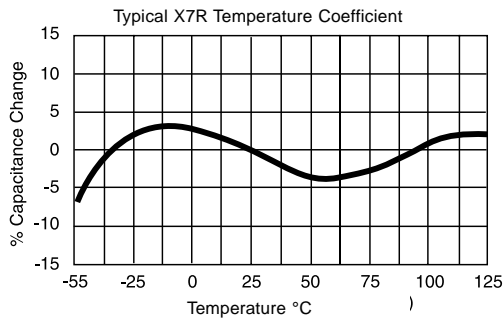
### FEATURES

- CLASS II DIELECTRIC, TEMPERATURE STABLE
- EXCELLENT FREQUENCY CHARACTERISTICS, NON-LINEAR CAPACITANCE CHANGE
- HIGHER CAPACITANCE THAN NPO
- NICKEL BARRIER TERMINATIONS AND EXCELLENT MECHANICAL STRENGTH
- EIA MARKING AVAILABLE

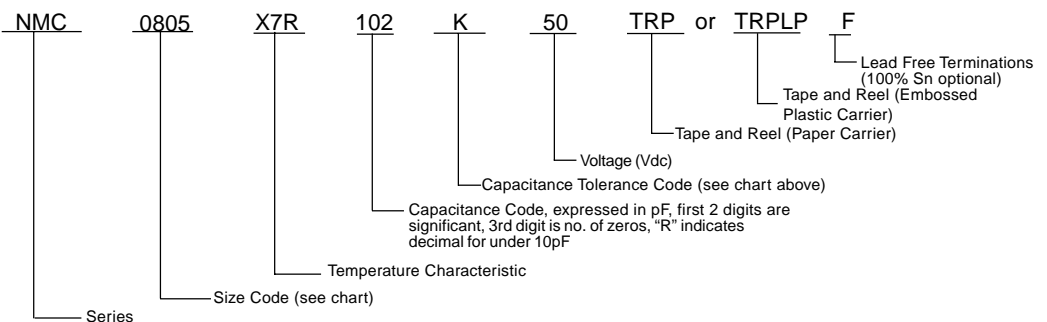


### SPECIFICATIONS X7R

Capacitance Range	47pF to 10μF
Capacitance Tolerances	±5%(J), ±10%(K), ±20%(M)
Operating Temperature Range	-55°C to +125°C
Temperature Characteristics	±15% Δ max. over temperature range (with 0 Vdc applied)
Rated Voltages	16Vdc, 25Vdc, 50Vdc, 100Vdc (see NMC-H Series for Higher Voltages)
Dissipation Factor	2.5% max. (50Vdc, 100Vdc); 3.5% max. (16Vdc, 25Vdc), 5% max. (10Vdc) @ 1.0Vrms and khz, +25°C
Insulation Resistance	100,000 Megohms min. or 1000 ohm/F min. whichever is less @ 25°C
Dielectric Withstanding Voltage	250% of Rated Voltage for 5 ± 1 seconds, 50 milliamps maximum
Test Conditions (EIA-198-2E)	1khz, 1.0V ±0.2 Vrms



### PART NUMBERING SYSTEM



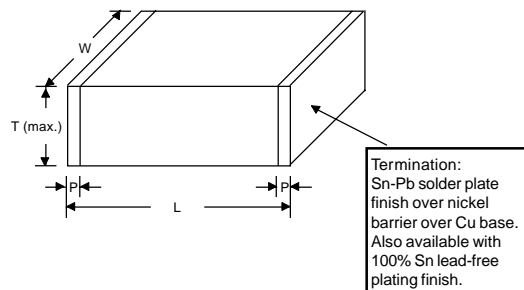
(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)

For Values Under 47pF SEE NPO

### X7R 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	0.3±0.03				0.6				1.0				1.30			
Termination Width P	0.15±0.05				0.2±0.1				.12-.51				.25-.71			
Capacitance	Working Voltage (Vdc)															
	16	25	50	10	16	25	50	10	16	25	50	100	16	25	50	100
47pF																
56																
68																
82																
100																
150																
220																
330																
470																
680																
820																
1000																
1500																
1800																
2200																
2700																
3300																
3900																
4700																
5600																
6800																
8200																
.01µF																
.015																
.018																
.022																
.027																
.033																
.039																
.047																
.056																
.068																
.082																*
0.1														*	*	
0.15																
0.22																

Note: \* 1.35mm maximum thickness



### X7R 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		5.7±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	1.30		1.80		1.80		1.80		1.80											
Termination Width P	.25-.71		.25-.71		.25-.71		.25-.76		.25-1.02											
Capacitance	Working Voltage (Vdc)																			
	10	16	25	50	10	16	25	50	100	10	16	25	50	100	25	50	100	25	50	100
1000pF																				
1200																				
1500																				
1800																				
2200																				
2700																				
3300																				
3900																				
4700																				
5600																				
6800																				
8200																				
.01µF																				
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.47																				
.68																				
1.0																				
1.5																				
2.2																				
3.3																				
4.7																				
6.8																				
10																				**

Notes: \* 1.35mm maximum thickness,\*\* 1.90mm maximum thickness