

FEATURES

- HIGH VOLTAGE 200Vdc ~ 5KVdc
- NPO AND X7R DIELECTRICS
- CASE SIZES FROM 0603 ~ 2225
- NICKEL BARRIER TERMINATION AND EXCELLENT MECHANICAL STRENGTH

RoHS Compliant

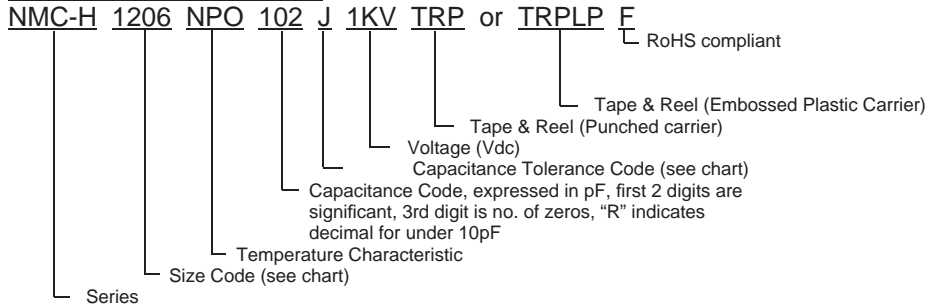
Includes all homogeneous materials

*See Part Number System for Details

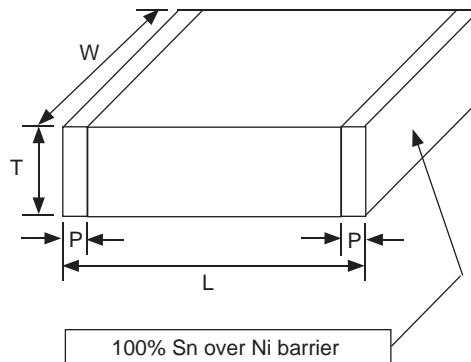


SPECIFICATIONS	NPO	X7R
Operating Temperature Range	-55°C ~ +125°C	-55°C ~ +125°C
Temperature Characteristic	±30ppm	±15%
Dissipation Factor	≤ 0.1%	≤ 2.5%
Insulation Resistance	≥ 500MegΩ or 500MegΩ-μF whichever is less Test Method: Voltage rating ≤ 500V measured after 1 minute at rated voltage, Voltage rating > 500V measured after 1 minute at 500V	
Capacitance Range	2.0pF ~ 0.039μF	150pF ~ 0.47μF
Capacitance Tolerance	±0.1pF(B), ±0.25pF(C), ±0.5pF(D) ±1%(F), ±2%(G), ±5%(J), ±10%(K), ±20(M)	±5%(J), ±10%(K), ±20(M)
Rated Voltage	200Vdc ~ 5KVdc	200Vdc ~ 3KVdc
Dielectric Withstanding Voltage	Working Voltage 200 & 250Vdc x 1.5 + 100Vdc for 5 seconds Working Voltage 500Vdc x 1.5 for 5 seconds Working Voltage greater than 500Vdc x 1.2 for 5 seconds	
Test Conditions (C & DF)	C ≤ 1000pF = 1MHz, 1Vrms @ 25°C C ≤ 1000pF = 1KHz, 1Vrms @ 25°C	1KHz, 1Vrms @ 25°C

PART NUMBER SYSTEM



CONSTRUCTION



NPO-HIGH VOLTAGE SIZE CHART (mm)

EIA Case Size	0603	0805	1206						1210			
Length (L)	1.6 ± 0.10	2.0 ± 0.15	3.2 ± 0.15						3.2 ± 0.30			
Width (W)	0.80 ± 0.10	1.25 ± 0.10	1.6 ± 0.20						2.5 ± 0.20			
Thickness (T)	0.90 max.	1.45 max.	1.80 max.						2.60 max.			
Termination Width (P)	0.25 ~ 0.65	0.25 ~ 0.75	0.25 ~ 0.80						0.25 ~ 1.00			
Capacitance	Working Voltage (Vdc)											
	200	250	500	200	250	500	1K	2K	3K	200	250	500
2.0pF ~ 8.2pF												
10												
12												
15												
18												
22												
27												
33												
39												
47												
56												
68												
82												
100												
120												
150												
180												
220												
270												
330												
390												
470												
560												
680												
820												
0.001µF												
0.0012												
0.0015												
0.0018												
0.0022												
0.0027												
0.0033												
0.0039												
0.0047												
0.0068												
0.0082												

NPO-HIGH VOLTAGE SIZE CHART (mm)

EIA Case Size	1808			1812			1825			2220			2225		
Length (L)	4.6 ± 0.40			4.6 ± 0.30			4.6 ± 0.30			5.7 ± 0.40			5.70 ± 0.40		
Width (W)	2.0 ± 0.30			3.2 ± 0.30			6.35 ± 0.40			5.00 ± 0.40			6.35 ± 0.40		
Thickness (T)	2.20 max.			3.00 max.			3.00 max.			3.00 max.			3.00 max.		
Termination Width (P)	0.25 ~ 0.75			0.25 ~ 0.75			0.3 ~ 1.05			0.30 ~ 1.10			0.30 ~ 1.10		
Capacitance	Working Voltage (Vdc)														
	1K	2K	3K	1K	2K	3K	250	500	1K	5K	250	500	1K		
2.0pF ~ 8.2pF															
10															
12															
15															
18															
22															
27															
33															
39															
47															
56															
68															
82															
100															
120															
150															
180															
220															
270															
330															
390															
470															
560															
680															
820															
0.001µF															
0.0012															
0.0015															
0.0018															
0.0022															
0.0027															
0.0033															
0.0039															
0.0047															
0.0056															
0.0068															
0.0082															
0.01µF															
0.012															
0.015															
0.018															
0.022															
0.027															
0.033															
0.039															

X7R-HIGH VOLTAGE SIZE CHART (mm)

EIA Case Size	0805				1206				1210					
Length (L)	2.0 ± 0.1				3.2 ± 0.15				3.2 ± 0.2					
Width (W)	1.25 ± 0.1				1.6 ± 0.15				2.5 ± 0.2					
Thickness (T)	1.45 max.				1.80 max.				2.20 max.					
Termination Width (P)	0.25 ~ 0.75				0.25 ~ 0.75				0.25 ~ 0.75					
Capacitance	Working Voltage (Vdc)													
	200	250	500	630	250	500	630	1K	2K	200	250	500	630	1K
150														
180														
220														
270														
330														
390														
470														
560														
680														
820														
0.001µF														
0.0012														
0.0015														
0.0018														
0.0022														
0.0027														
0.0033														
0.0039														
0.0047														
0.0056														
0.0068														
0.0082														
0.01µF														
0.012														
0.015														
0.018														
0.022														
0.027														
0.033														
0.039														
0.047														
0.056														
0.068														
0.082														
0.1µF														
0.12														
0.15														
0.18														
0.22														
0.27														
0.33														
0.47														



X7R-HIGH VOLTAGE SIZE CHART (mm)

EIA Case Size	1808				1812				2220				2225			
Length (L)	4.6 ± 0.4				4.6 ± 0.4				5.7 ± 0.40				5.70 ± 0.40			
Width (W)	2.0 ± 0.3				3.2 ± 0.3				5.00 ± 0.40				6.35 ± 0.40			
Thickness (T)	2.20 max.				2.20 max.				3.00 max.				3.00 max.			
Termination Width (P)	0.30 min.				0.30 min.				0.30 ~ 1.10				0.30 ~ 1.10			
Capacitance	Working Voltage (Vdc)															
	500	1K	2K	3K	200	250	500	1K	2K	3K	250	500	1K	2K	250	500
150																
180																
220																
270																
330																
390																
470																
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