FEATURES

- **UL X1/Y2** SAFETY CAPACITORS
- NPO & X7R DIELECTRICS
- FOR ACROSS THE LINE & LINE BYPASS APPLICATIONS

RoHS Compliant

*See Part Number System for Details

SPECIFICATIONS	NPO	X7R
Operating Temperature Range	-55°C ~ +125°C	-55°C ~ +125°C
Temperature Characteristics	C<10pF ±150ppm C≥10pF ±30ppm	±15%
Dissipation Factor	C<10pF Tanδ <0.4% C≥10pF Tanδ <0.1%	±2.5% @ 1Vrms/1KHz
Insulation Resistance	100,000MegΩ or 1,000MegΩ/μF whichever is less After 1 minute at 500Vdc	100,000MegΩ or 500MegΩ/μF whichever is less After 1 minute at 500Vdc
Capacitance Range	2.0pF ~ 430pF	150pF ~ 1,500pF
Capacitance Tolerance	±5% (J)	±10% (K)
Rated Voltage	250Vac	250Vac
Impulse Voltage	5KVdc	5KVdc
Load Life Load Life 1,000 hours at 125°C (X1 @ 312.5Vac, Y2 @ 425Vac)	No visible damage after 24 ±2 hours ΔC/C ±10% or 1pF, whichever is greater Tanδ < 2 x specified value IR > 1,000MegΩ	No visible damage after 24 ±2 hours ΔC/C ±15% or ???pF, whichever is greater Tanδ ≤ 7% IR ≥ 2,000MegΩ
Dielectric Withstanding Voltage	X = 2,000Vac Y = 2,000Vac for 1 minute; 50mA max.	X = 2,000Vac Y = 2,000Vac for 1 minute; 50mA max.

AVAILABLE VALUES (NPO) AND THICKNESS DIMENSIONS (T in mm)

Capacitance Value	NPO	
	1808	1812
2pF	1.60 ± 0.2mm	N/A
2.2		
2.7		
3.3		
3.9		1.6 ± 0.2mm
4.7		
5.0		
5.6		
6.8		
8.2		
10		
12		
15		
18		
22		
27		
33		
39		
47		
56		
68		
82		
100	2.0 ± 0.2mm	2.0 ± 0.2mm
120		
150		
180		
220		
240		
270		N/A
330		
390		
430		

AVAILABLE VALUES (X7R) AND THICKNESS DIMENSIONS (T in mm)

Capacitance Value	1808	1812
150pF	1.6 ± 0.20	
180		
220		1.6 ± 0.20
270	2.0 ± 0.20	
330		
390		2.0 ± 0.20
470		
560		
680		
820		
1000		
1200		
1500		

SAFETY APPROVALS

Agency	Standard
UL	1414

CERTIFICATE

PART NUMBER SYSTEM

NMC-H 1808 NPO 330 J 5KV X1Y2 TRPLP F

- F — Pb-free/RoHS Compliant
- TRPLP — Tape & Reel (Paper carrier)
- X1Y2 — Safety Classification
- 5KV — Voltage (Vdc)
- J — Capacitance Tolerance Code (see chart)
- 330 — 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 (NPO or X7R)
- 1808 — Size Code (see chart)
- NMC-H — Series

FEATURES

- **UL &TUV X2/Y3** SAFETY CAPACITORS
- NPO AND X7R DIELECTRICS
- FOR ACROSS THE LINE AND LINE BYPASS APPLICATIONS

RoHS Compliant

*See Part Number System for Details

SPECIFICATIONS	NPO	X7R
Operating Temperature Range	-55˚C to +125˚C	-55˚C to +125˚C
Temperature Characteristic	C<10pF 0±150ppm, C≥10pF 0±30ppm	±15% with 0 VDC Applied
Dissipation Factor	0.3% max. @ 1MHz for <1000pF 0.1% max. @ 1KHz for ≥ 1000pF	2.5% max. @ 1KHz, 1.0Vrms and 25˚C
Insulation Resistance	100,000 Megohms min. or 1,000Megohm/µF whichever is less (+25˚C after 1 minute at 500VDC)	1,000 Megohms min. or 1,000Megohm/µF whichever is less (+25˚C after 1 minute at 500VDC)
Capacitance Range	5pF to 330pF	150pF ~ 0.0015µF
Capacitance Tolerances	±5%(J) ±10%(K)	±10%(K)
Rated Voltage	3KVdc/250Vac	
Load Life 1,000 hours @ 125˚C (X2 @ 312.5Vac, Y3 @ 425Vac)	No visible damage after 24 ± 2 hours ΔC/C ± 10% or 1pF whichever is greater, DF ≤ 200%, IR ≥ 1000MΩ	No visible damage after 48 ± 4 hour ΔC/C ± 15% , DF ≤ 7%, IR ≥ 2000MΩ
Dielectric Withstanding Voltage	X = 1075Vac Y = 1500Vac for 1 minute, 50 milliamps max.	

AVAILABLE VALUES AND THICKNESS DIMENSIONS (T in mm)

Capacitance Value	NPO	X7R
5pF	1.60 ±0.2	
10		
12		
15		
18		
22		
27		
33		
39		
47		
56		
68		
82		
100		
120		
150		1.60 ±0.2
180	2.00 ±0.2	
220		
270		
330		
470		
560		
680		
820		2.00 ±0.2
0.001µF		
0.0012		
0.0015		

SAFETY APPROVALS

Agency	Standard
UL	1414
TUV	EN132400

CERTIFICATE

CERTIFICATE

PART NUMBER SYSTEM

NMC-H 1808 NPO 330 J 3KV X2Y3 TRPLP F

- F — Pb-free/RoHS Compliant
- TRPLP — Tape & Reel (Paper carrier)
- X2Y3 — Safety Classification
- 3KV — Voltage (Vdc)
- J — Capacitance Tolerance Code: J=5%, K=10%
- 330 — 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: NPO or X7R (see chart)
- 1808 — Size Code (see chart)
- NMC-H — Series

CASE DIMENSIONS (mm)

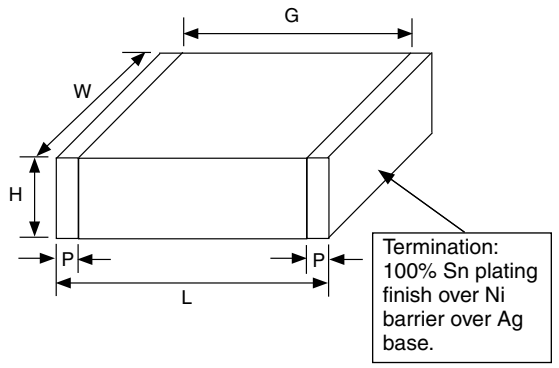
EIA Code	L	W	P	G
1808	4.8 ± 0.30	2.0 ± 0.30	0.30 min.	3.2 min.

QUANTITY PER REEL (T)

Part Thickness	Quantity
1.6 ± 0.2	2,000
2.0 ± 0.2	1,000

CASE DIMENSIONS (mm)

EIA Code	L	W	P	G
1808	4.8 ± 0.30	2.0 ± 0.30	0.30 min.	3.2 min.
1812	4.8 ± 0.30	3.2 ± 0.30	0.30 min.	3.2 min.



QUANTITY PER REEL (T)

Part Thickness	Quantity	
	1808	1812
1.6 ± 0.2	2,000	1,000
2.0 ± 0.2	2,000	1,000