

FEATURES

- STACKED METALLIZED POLYPHENYLENE SULFIDE (PPS) FILM
- STANDARD EIA 0805, 1206, 1210, 1913 AND 2416 SIZES
- WIDE TEMPERATURE RANGE (-55° +125°C)
- HIGH HEAT AND MOISTURE RESISTANT
- VERY STABLE TEMPERATURE, FREQUENCY, VOLTAGE, BIAS AND DIELECTRIC ABSORPTION CHARACTERISTICS
- REFLOW & FLOW SOLDERING APPLICABLE
- TAPE AND REEL PACKAGING

**NSHC IS
RECOMMENDED
FOR NEW DESIGNS**



**RoHS
Compliant**
includes all homogeneous materials

*See Part Number System for Details

SPECIFICATIONS	Case Sizes				
	0805	1206	1210	1913	2416
Capacitance Range	100pF ~ .01μF	3300pF ~ .047μF	.015μF ~ .1μF	.047μF ~ .1μF	.12μF ~ .22μF
Voltage Ratings*	16Vdc (12Vrms), 50Vdc (40Vrms)				
Capacitance Tolerance	±5% Std, ±2% Opt.				
Temperature Range	-55°C ~ +125°C				
Dissipation Factor (20°C)	0.6% max. @ 1KHz				
Insulation Resistance (20°C)	3 Gigohms Minimum				
Dielectric Withstanding Voltage	150% of Rated Voltage 60 Seconds				
	175% of Rated Voltage for 5 Seconds				
Temperature Characteristic	±3% ΔC Maximum Over Temperature Range				
Dielectric Absorption	0.05 ~ 0.10% Typical				

* -AC Voltage Ratings (Vrms) From 60 hz to 30Khz. Contact NIC For Derating At Higher Frequencies.

ENVIRONMENTAL CHARACTERISTICS

Life Test At +125°C 1,000 Hours at 125% of Rated Voltage	Capacitance Change	Within ±2% of Initial Value
	Dissipation Factor	0.66% Maximum
	Insulation Resistance	1 Gigohm Minimum
Resistance to Soldering Heat +260°C Peak	Capacitance Change	Within ±3% of Initial Value
	Dissipation Factor	0.66% Maximum
	Insulation Resistance	1 Gigohm Minimum
Humidity Load Life (Note 1): (1) 1000 Hours, +40°C (2) 500 Hours, +60°C	Capacitance Change	Within ±2% of Initial value
	Dissipation Factor	0.90% Maximum
	Insulation Resistance	(1) 1 Gigohm Minimum (2) 0.5 Gigohm Minimum
Solderability with 25% Wt Rosin-Methanol Flux	90% Minimum Coverage After 2.5 Second Dip into 255°C Solder Pot	

NOTE 1: At 90 ~ 95% Relative Humidity and Rated Voltage

PART NUMBER SYSTEM

NSPC 103 J 16 TR A2 E

Series

Capacitance in pF, 1st two digits are significant, 3rd digit is no. of zeros

Tolerance Code: J=±5%, G=±2%

Voltage

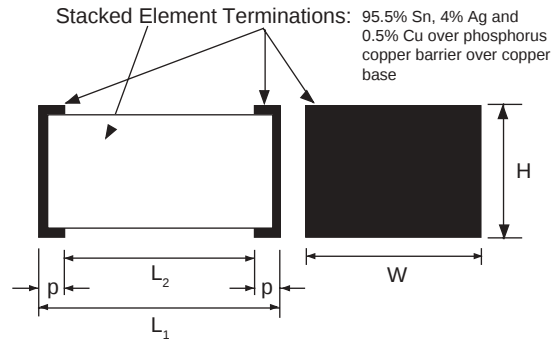
Tape & Reel

Size Code

RoHS Compliant

STANDARD PRODUCTS AND SIZE CODE

Cap.	Code	Working Voltage (Vdc)	
		16	50
100pF	101	-	A1
120	121	-	A1
150	151	-	A1
180	181	-	A1
220	221	-	A1
270	271	-	A1
330	331	-	A1
390	391	-	A1
470	471	-	A1
560	561	-	A1
680	681	-	A1
820	821	-	A1
0.001	102	-	A1
0.0012	122	-	A1
0.0015	152	-	A1
0.0022	222	-	A1
0.0027	272	-	A1
0.0033	332	A1	B1
0.0039	392	A1	B1
0.0047	472	A1	B1
0.0056	562	A1	B1
0.0068	682	A1	B1
0.0082	822	A2	B2
0.010	103	A2	B2
0.012	123	B1	C1
0.015	153	B1	C1
0.018	183	B1	C2
0.022	223	B1	C2
0.027	273	B2	C2
0.033	333	B2	C3
0.039	393	B3	C3
0.047	473	B3	D1
0.056	563	C2	D1
0.068	683	C2	D1
0.082	823	C3	D2
0.10	104	C3	D2
0.12	124	-	E1
0.15	154	-	E3
0.18	184	-	E4
0.22	224	-	E5

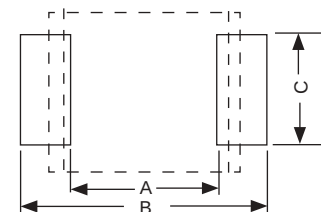


DIMENSION (mm) AND CASE CODE

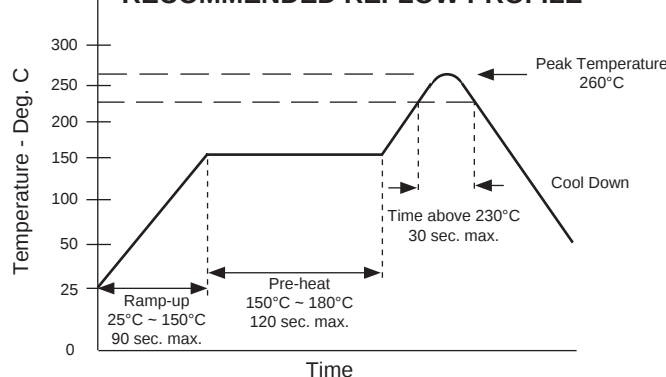
Case Code	Length L ± 0.2	Width W	Height H ± 0.2	EIA
A1	2.0	1.25 ± 0.2	0.8	0805
A2			1.0	
B1	3.2	1.6 ± 0.2	0.8	1206
B2			1.0	
B3			1.4	1210
C1	3.2	2.5 ± 0.2	1.0	
C2			1.4	
C3			2.0	
D1	4.8	3.3 ± 0.3	1.4	1913
D2			2.0	
E1	6.0	4.1 ± 0.3	1.8	2416
E3			2.4	
E4			2.8	
E5			3.2	

RECOMMENDED LAND PATTERN (mm)

EIA Size	A	B	C
0805	1.0	2.7	1.1
1206	2.2	3.8	1.4
1210	2.2	3.8	2.3
1913	2.6	6.6	3.0
2416	3.8	7.8	3.8



RECOMMENDED REFLOW PROFILE



Solder within 1 year. Storage at +30°C and 60% RH