

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 SOLDERING APPLICABLE
- TAPE AND REEL PACKAGING



SURFACE MOUNT

SPECIFICATIONS	Case Sizes				
	0805	1206	1210	1913	2416
Capacitance Range	100pF ~ .01μF	3300pF ~ .047μF	.015μF ~ .1μF	.047μF ~ .1μF	0.12μF ~ 0.22μF
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 @ 1 KHz				
Insulation Resistance (20°C)	3 Gigohms Minimum				
Dielectric Withstanding Voltage	175% of Rated Voltage (5 Seconds)				
	150% of Rated Voltage (60 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*: 1000 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 for 5 Seconds Flow and Reflow	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 10% Wt Rosin-Methanol Flux	90% Minimum Coverage After 5 Second Dip into 235°C Solder Pot		

* +105°C for 2416 Case Size NOTE 1: At 90 ~ 95% Relative Humidity and Rated Voltage

PART NUMBERING SYSTEM

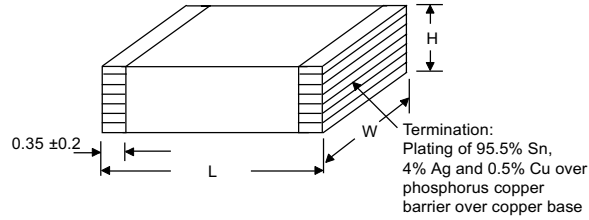
NSPC 103 J 16 TR A2 E

- NSPC: Series
- 103: Capacitance in pF, 1st two digits are significant, 3rd digit is no. of zeros
- J: Tolerance Code: J=±5%, G=±2%
- 16: Voltage
- TR: Tape & Reel
- A2: Size Code
- E: Lead Free (Optional)



STANDARD PRODUCTS AND SIZE CODE

Cap.	Code	Working Voltage (Vdc)	
		16	50
100 pF	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 μ F	102		A1
0.0012	122		A1
0.0015	152		A1
0.0018	182		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
0.01	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
0.1	104	C3	D2
0.12	124		E1
0.15	154		E3
0.18	184		E4
0.22	224		E5

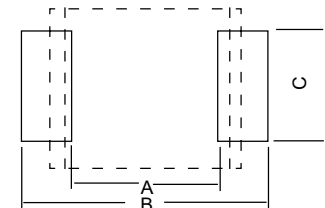


DIMENSION (mm) AND CASE CODE

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	
C1	3.2	2.5 ± 0.2	1.0	1210
C2			1.4	
C3			2.0	
D1			2.8	
D2	4.8	3.3 ± 0.3	1.4	1913
D3			2.0	
D4			2.4	
D5			2.8	
E1	6.0	4.1 ± 0.3	1.8	2416
E2			2.0	
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



NSPC 103 J 50 TR B2 F
 —Series
 —Capacitance in pF, 1st two digits are significant, 3rd digit is no. of zeros
 —Tolerance Code: J= $\pm 5\%$, G= $\pm 2\%$
 —Voltage
 —Tape & Reel
 —Size Code
 —Lead Free

