

## FEATURES

- STACKED METALLIZED POLYETHYLENE NAPHTHALATE (PEN) FILM
- STANDARD EIA 1206, 1210, 1913, 2416, 2820, 3022 AND 3925 SIZES
- WIDE TEMPERATURE RANGE UP TO +125°C\*
- HIGH HEAT AND MOISTURE RESISTANT
- VERY STABLE TEMPERATURE, FREQUENCY AND VOLTAGE BIAS CHARACTERISTICS
- REFLOW SOLDERING ONLY
- TAPE AND REEL PACKAGING

**NSWC IS  
RECOMMENDED  
FOR NEW DESIGNS**



**RoHS  
Compliant**

includes all homogeneous materials

\*See Part Number System for Details

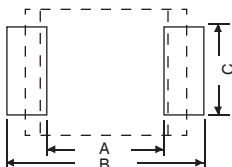
SPECIFICATIONS	Case Sizes						
	1206	1210	1913	2416	2820	3022	3925
Capacitance Range	0.001 ~ 0.0047μF	0.0056 ~ 0.01μF	0.012 ~ 0.082μF	0.1 ~ 0.15μF	0.18 ~ 0.33μF	0.39 ~ 0.47μF	0.56 ~ 1.0μF
Voltage Ratings	100Vdc						
Capacitance Tolerance	0.001 ~ 0.01μF 5% (J) only, 0.012 ~ 0.15μF 5% (J) or 10% (K), 0.18 ~ 1.0μF 10% (K) only						
Temperature Range	-55°C ~ +105°C (0.001μF ~ 0.01μF) -55°C ~ +125°C (0.012μF ~ 1.0μF with derating above +85°C)						
Dissipation factor (20°C)	1.0% max. @ 1KHz						
Insulation resistance (20°C)	3 Gigohms or 1000Ω/F whichever is lower						
Dielectric Withstanding Voltage	150% of Rated Voltage 60 Seconds						

## ENVIRONMENTAL CHARACTERISTICS

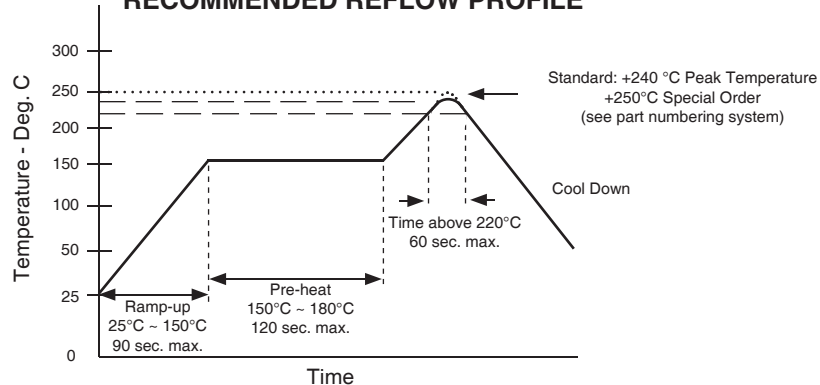
Life Test At +105°C 1,000 Hours at 125% of Rated Voltage (125°C for 0.012μF ~ 1.0μF)	Capacitance Change	Within +1%/-6% of Initial Value	
	Dissipation Factor	1.1% Maximum	
	Insulation Resistance	1 Gigohm Minimum or 300Ω/F whichever is lower	
Resistance to Soldering Heat: +240°C Peak	Capacitance Change	Within ±5% for 0.012 ~ 1.0μF or ±3% for 0.001 ~ 0.01μF of initial value	
	Dissipation Factor	1.1% Max. for 0.012 ~ 1.0μF or 0.66% Max. for 0.001 ~ 0.01μF	
	Insulation Resistance	1 Gigohm Minimum or 300Ω/F whichever is lower	
Humidity Load Life (90% ~ 95% RH) (1) 1,000 Hours, +40°C 500 Hours for 0.012μF ~ 1.0μF (2) 500 Hours, +60°C for 0.001 ~ 0.01μF	Capacitance Change	(1) +8%/-5%	(2) ±10% of Initial Value
	Dissipation Factor	(1) 1.5% Max.	(2) 2.0% Max.
	Insulation Resistance	(1) 100 Megohm Min. or 30Ω/F (2) 10 Megohm Min. or 3Ω/F whichever is lower	
Solderability with 25% Wt Rosin-Methanol Flux	90% Minimum Coverage After 2.5 Second Dip Into 245°C Solder Pot		

## RECOMMENDED LAND PATTERN (mm)

EIA Size	A	B	C
1206	1.8	3.6	1.4
1210	1.8	3.6	2.3
1913	2.6	6.6	3.0
2416	3.8	7.8	3.8
2820	4.5	9.0	4.6
3022	5.1	9.7	5.0
3925	7.2	11.9	5.7



## RECOMMENDED REFLOW PROFILE



## PART NUMBER SYSTEM

NSWC 823 J 100 TR D4 N E

- NSWC: Series
- 823: Capacitance in pF, 1st two digits are significant, 3rd digit is no. of zeros
- J: Tolerance Code: J = ±5%
- 100: Voltage
- TR: Tape & Reel
- D4: Size Code
- N: Optional High Temp. Reflow (+250°C)\*
- E: RoHS Compliant

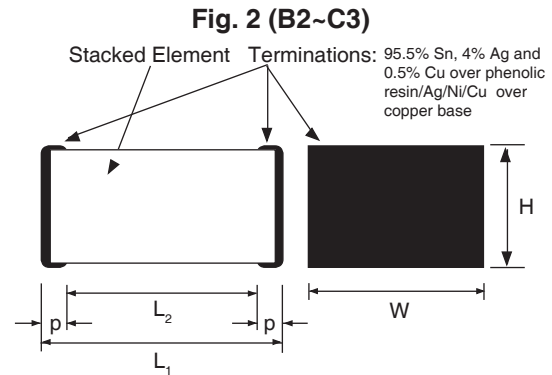
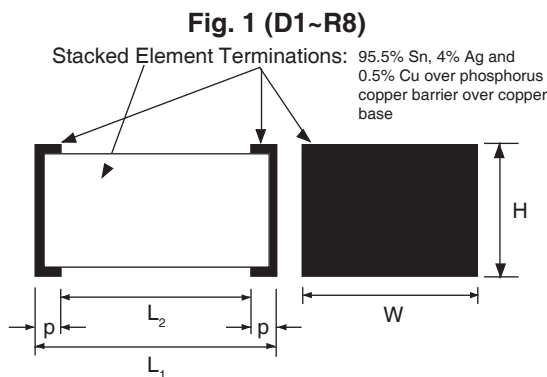
\*Special packaging and handling required.



## 100V STANDARD PRODUCTS AND CASE SIZES

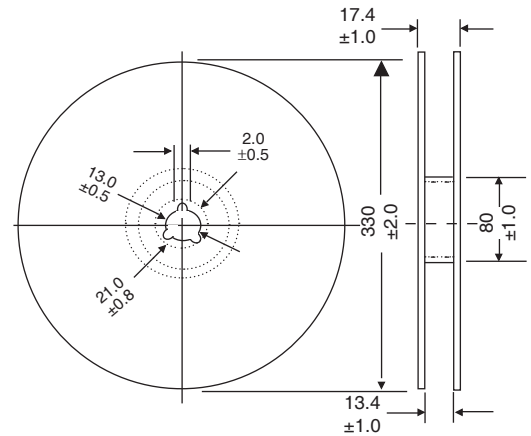
Part Number	Cap. Value	Cap. Code	Size Code	Length L ±0.2	Width W	Height H ±0.2	p	EIA			
NSWC102J100TRB2F	0.001	102	B2	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.3	0.65 ± 0.3 (Fig. 1)	1206			
NSWC122J100TRB2F	0.0012	122	B2								
NSWC152J100TRB2F	0.0015	152	B2								
NSWC182J100TRB2F	0.0018	182	B2								
NSWC222J100TRB2F	0.0022	222	B2			1.5 ± 0.3					
NSWC272J100TRB2F	0.0027	272	B2								
NSWC332J100TRB3F	0.0033	332	B3								
NSWC392J100TRB3F	0.0039	392	B3								
NSWC472J100TRB3F	0.0047	472	B3	3.2 ± 0.2	2.5 ± 0.2	1.5	1210				
NSWC562J100TRC2F	0.0056	562	C2								
NSWC682J100TRC2F	0.0068	682	C2								
NSWC822J100TRC3F	0.0082	822	C3								
NSWC103J100TRC3F	0.010	103	C3			2.1					
NSWC123*100TRD1F	0.012	123	D1								
NSWC153*100TRD1F	0.015	153	D1			4.8 ± 0.2		3.3 ± 0.3	1.4	1913	
NSWC183*100TRD1F	0.018	183	D1								
NSWC223*100TRD1F	0.022	223	D1								
NSWC273*100TRD1F	0.027	273	D1								
NSWC333*100TRD1F	0.033	333	D1								
NSWC393*100TRD1F	0.039	393	D1								
NSWC473*100TRD2F	0.047	473	D2								
NSWC563*100TRD2F	0.056	563	D2								
NSWC683*100TRD3F	0.068	683	D3								
NSWC823*100TRD4F	0.082	823	D4								
NSWC104*100TRE1F	0.1	104	E1	6.0 ± 0.2	4.1 ± 0.3		1.8		0.35 ± 0.2 (Fig. 2)		2416
NSWC124*100TRE3F	0.12	124	E3								
NSWC154*100TRE4F	0.15	154	E4								
NSWC184K100TRG1F	0.18	184	G1								
NSWC224K100TRG2F	0.22	224	G2	7.1 ± 0.2	5.0 ± 0.4		2.0		2820		
NSWC274K100TRG3F	0.27	274	G3								
NSWC334K100TRG5F	0.33	334	G5								
NSWC394K100TRQ1F	0.39	394	Q1								
NSWC474K100TRQ2F	0.47	474	Q2	7.7 ± 0.2	5.5 ± 0.4	3.4	3022				
NSWC564K100TRR1F	0.56	564	R1								
NSWC684K100TRR3F	0.68	684	R3	9.8 ± 0.2	6.3 ± 0.4	3.0	3925				
NSWC824K100TRR6F	0.82	824	R6								
NSWC105K100TRR8F	1.0	105	R8								

\*These values available in J (±5%) or K (±10%) tolerance.



## TAPE DIMENSIONS (mm)

Case Code	A±0.1	B±0.1	C±0.2	t	W±0.3	F	P±0.1	D+0.2/-0	Qty/Reel
B2	1.9	3.5	1.5	0.25	8.0	3.5	4.0	1.0	3,000
B3			1.9						2,000
C2	1.9		2,000						
C3	2.8	2.5	2,000						
D1	3.8	5.1	2.0	0.3 ±0.05	12.0	5.5 ±0.05	8.0	1.5	3,000
D2			2.6						3,000
D3, D4	3.4		2,000						
E1, E2	4.6	6.3	2.7	0.343 ±0.013	16.0	7.5 ±0.1	12.0	1.5	3,000
E3, E4			3.5						2,000
G1 ~ G5	5.5	7.4	4.7						1,500
Q1, Q2	6.91	8.43	5.685	1,000					
R1 ~ R8	8.94	10.54	5.795	1,000					



## EMBOSSED PLASTIC CARRIER

