

Features

- CYLINDRICAL LEADLESS TYPE FOR SURFACE MOUNTING
- CAPACITANCE VALUES UP TO 1000 μ F
- LOW ESR & HIGH RIPPLE CURRENT AT 100K Hz
- 6.3x6mm ~ 10x8mm CASE SIZES
- COMPATIBLE WITH REFLOW SOLDERING



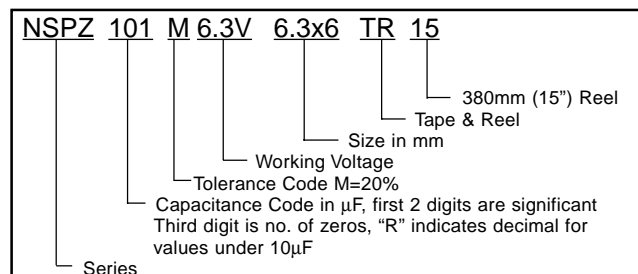
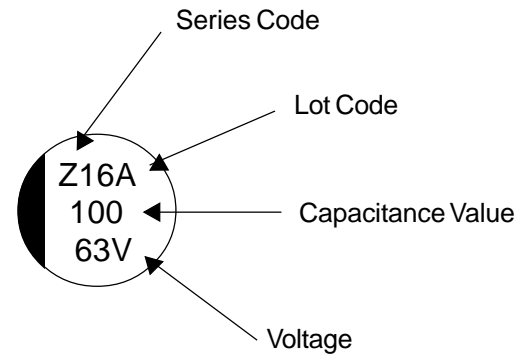
Characteristics

Rated Voltage Range	2.5 ~ 25 Vdc							
Rated Capacitance Range	10 ~ 1000 μ F							
Operating Temp. Range	-55 ~ +105°C							
Capacitance Tolerance	\pm 20%(M)							
Max. Leakage Current After 2 Minutes @ 20°C	Less than 0.2CV							
Working and Surge Voltage Ratings	W.V. (Vdc)	2.5	4.0	6.3	10	16	20	25
	S.V. (Vdc)	2.8	4.6	7.2	11.5	18.4	23	28.7
Tan δ @ 120Hz/20°C	All Case Sizes	0.12						
Load Life Test @ 105°C 2,000 Hours	Capacitance Change	Within \pm 20% of initial measured value						
	Tan δ	Less than specified max. value						
	Leakage Current	Less than specified max. value						

Standard Products and Case Sizes (mm)

Cap (μ F)	Code	Working Voltage (Vdc)							
		2.5	4.0	6.3	10	16	20	25	
10	100	-	-	-	-	-	-	6.3x6	
22	220	-	-	-	-	-	6.3x6	8x7	
33	330	-	-	-	-	6.3x6	-	-	
39	390	-	-	-	-	6.3x6	8x7	10x8	
47	470	-	-	-	6.3x6	-	8x7	-	
56	560	-	-	-	6.3x6	-	-	-	
68	680	-	-	6.3x6	-	-	-	-	
82	820	-	-	6.3x6	-	8x7	10x8	-	
100	101	-	6.3x6	6.3x6	-	-	-	-	
120	121	-	-	6.3x6	8x7	-	-	-	
150	151	-	6.3x6	8x7	8x7	10x8	-	-	
180	181	-	-	-	-	10x8	-	-	
220	221	6.3x6	8x7	8x7	-	-	-	-	
270	271	-	-	-	10x8	-	-	-	
330	331	-	8x7	10x8	10x8	-	-	-	
470	471	-	10x8	10x8	-	-	-	-	
560	561	8x7	-	-	-	-	-	-	
680	681	-	10x8	-	-	-	-	-	
1000	102	10x8	-	-	-	-	-	-	

Part Marking

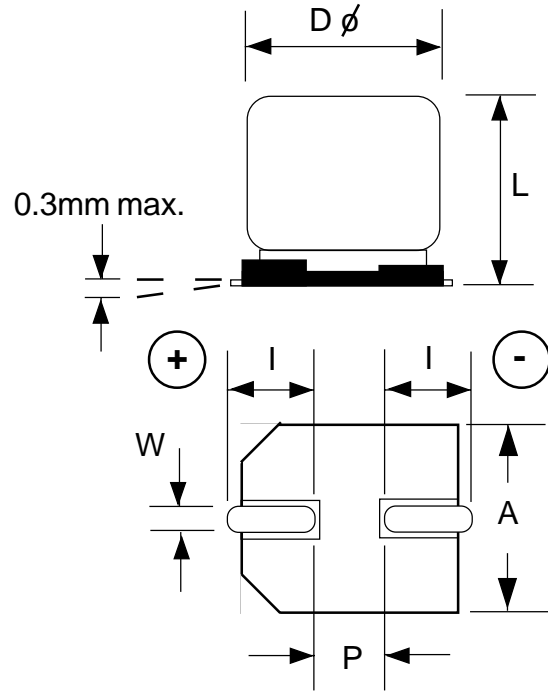


Case Dimensions (mm)

Dφ ±0.5	L max.	A ±0.2	W ±0.2	I	P
6.3	6	6.6	0.65	2.65	1.9
8.0	7.0	8.3	0.9	2.95	3.1
10	8	10.3	0.9	3.25	4.5

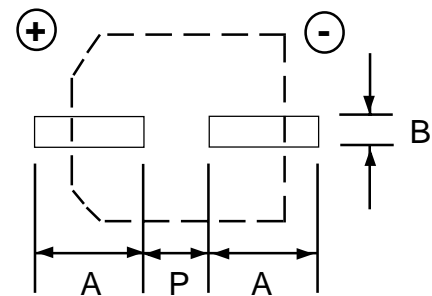
Standard Values and Specifications

Voltage (Vdc)	Cap. (μF)	Max. ESR (mΩ) 20°C/100KHz	Ripple Current (mA) 105°C/100KHz
2.5	220	28	2,200
	560	25	2,700
	1000	20	3,800
4	100	32	2,200
	150	32	2,200
	220	29	2,700
	330	29	2,700
	470	22	3,800
	680	22	3,800
6.3	68	32	2,200
	82	32	2,200
	100	32	2,200
	120	32	2,200
	150	29	2,600
	220	29	2,600
	330	22	3,500
	470	22	3,500
10	47	40	2,100
	56	40	2,100
	120	32	2,200
	150	32	2,200
	270	25	3,200
16	330	25	3,200
	33	45	2,000
	39	45	2,000
	82	43	2,100
20	150	33	3,000
	180	33	3,000
	22	65	1,350
	39	50	1,400
25	47	45	2,000
	82	40	1,600
	10	65	1,500
25	22	50	1,800
	39	45	2,100

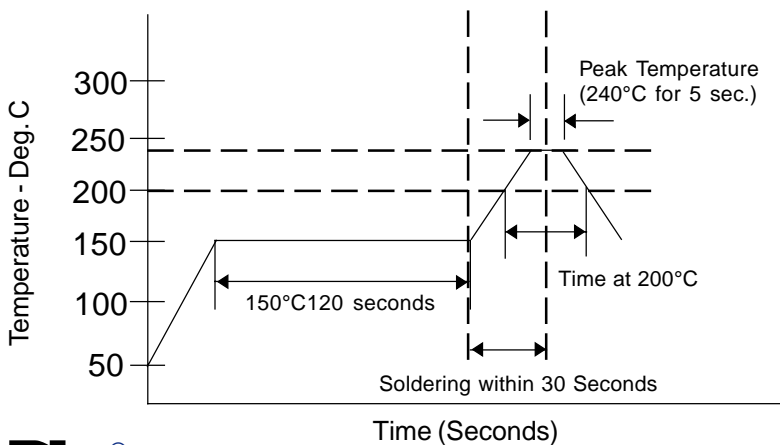


Land Pattern Dim. (mm)

Case Dia.	A	B	P
6.3	3.5	1.6	1.9
8	4.2	2.2	3.1
10	4.4	2.2	4.5



RECOMMENDED REFLOW SOLDERING PROFILE



Maximum Time Above +200°C	Peak Soldering Temperature
30 Seconds	240°C
40 Seconds	230°C
50 Seconds	220°C