

FEATURES

- CYLINDRICAL LEADLESS TYPE FOR SURFACE MOUNTING
- CAPACITANCE VALUES UP TO 1500 μ F
- LOW ESR & HIGH RIPPLE CURRENT AT 100K Hz
- 6.3x6mm ~ 10x12.7mm CASE SIZES
- COMPATIBLE WITH REFLOW SOLDERING

CHARACTERISTICS

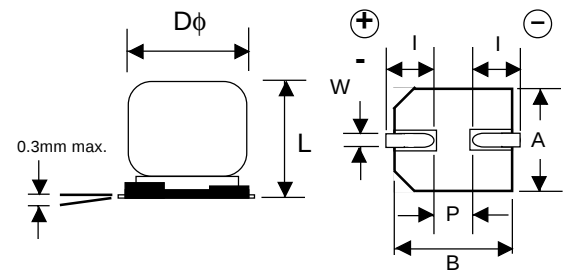
Rated Voltage Range	2.5 ~ 25 Vdc	LOW ESR COMPONENT SOLID POLYMER ELECTROLYTE For Performance Data see www.LowESR.com						
Rated Capacitance Range	10 ~ 1500 μ F							
Operating Temp. Range	-55 ~ +105°C							
Capacitance Tolerance	±20%(M)							
Max. Leakage Current After 2 Minutes @ 20°C	Less than 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 LifeTest @ 105°C 2,000 Hours	Capacitance Change	Within ± 20% of initial measured value						
	Tan δ	Less than specified max. value						
	Leakage Current	Less than specified max. value						



SURFACE MOUNT

STANDARD CASE SIZES AND VALUES (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	-	-	-	-	-
820	821	-	-	10x12.7	-	-	-	-
1000	102	10x8	-	-	-	-	-	-
1200	122	-	10x12.7	-	-	-	-	-
1500	152	10x12.7	-	-	-	-	-	-



SEE PAGE 38
For Case Size Data
SEE PAGE 39
For Taping/Packaging Data

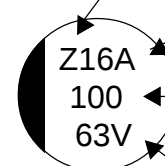
Part Marking

Series Code

Lot Code

Capacitance Value

Voltage



NSPZ	101	M	6.3V	6.3x6	TR	15	E
Series	Capacitance Code in μ F, first 2 digits are significant Third digit is no. of zeros, "R" indicates decimal for values under 10 μ F	Tolerance Code M=20%	Working Voltage	Size in mm	Tape & Reel	380mm (15") Reel	Lead Free 97% Sn (min.), 3% Bi (max.)

CASE DIMENSIONS (mm)

D ϕ $\pm$ 0.5	L max.	A $\pm$ 0.2	W $\pm$ 0.2	I $\pm$ 0.2	P $\pm$ 0.2
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	3.3	4.5
10	12.7	10.3	0.9	3.3	4.5

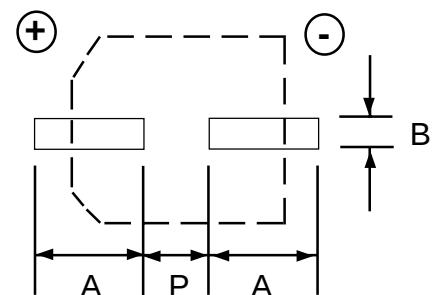
STANDARD VALUES AND SPECIFICATIONS

Voltage (Vdc)	Cap. (μ F)	Max. ESR (m Ω) 20°C/100KHz	Ripple Current (mA) 105°C/100KHz
2.5	220	28	2,200
	560	25	2,700
	1000	20	3,800
	1500	10	5,500
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	1200	10	5,500
	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
10	470	22	3,500
	820	10	5,500
	47	40	2,100
	56	40	2,100
	120	32	2,200
	150	32	2,200
	270	25	3,200
	330	25	3,200
16	33	45	2,000
	39	45	2,000
	82	43	2,100
	150	33	3,000
	180	33	3,000
20	22	65	1,350
	39	50	1,400
	47	45	2,000
	82	40	1,600
25	10	65	1,500
	22	50	1,800
	39	45	2,100

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

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

