

FEATURES

- CYLINDRICAL LEADLESS TYPE FOR SURFACE MOUNTING
- VERY LOW IMPEDANCE & HIGH RIPPLE CURRENT AT 100K Hz
- SUITABLE FOR DC-DC CONVERTER, DC-AC INVERTER, ETC.
- NEW EXPANDED CV RANGE, UP TO 3300 μ F
- ANTI-SOLVENT (2 MINUTES)
- DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING



CHARACTERISTICS

Rated Voltage Range	6.3 ~ 50 Vdc							
Rated Capacitance Range	4.7 ~ 3300 μ F							
Operating Temp. Range	-55 ~ +105°C							
Capacitance Tolerance	\pm 20%(M), \pm 10%(K)*							
Max. Leakage Current After 2 Minutes @ 20°C	0.01CV or 3 μ A, whichever is greater							
Tan δ @ 120Hz/20°C	W.V. (Vdc)	6.3	10	16	25	35	50	
	S.V. (Vdc)	8.0	13	20	32	44	63	
	4 ~ 6mm Dia.	0.24	0.20	0.16	0.14	0.12	0.10	
	8mm Dia ~ up	C \leq 1000 μ F	0.28	0.24	0.20	0.16	0.14	0.12
		C =1500 μ F	0.29	0.25	0.21	-	-	-
C =2200 μ F		0.30	0.26	-	-	-	-	
C =3300 μ F		0.32	-	-	-	-	-	
Low Temperature Stability	W.V. (Vdc)	6.3	10	16	25	35	50	
	Z-40°C/Z +20°C	3	2	2	2	2	2	
Impedance Ratio @ 120Hz	Z-55°C/Z +20°C	5	4	4	3	3	3	
Load LifeTest @ 105°C 4~6mm Dia 1,000 Hours 8~12.5mm Dia 2,000 Hours	Capacitance Change	Within \pm 25% of initial measured value						
	Tan δ	Less than 200% of specified max. value						
	Leakage Current	Less than specified max. value						

LOW ESR COMPONENT
LIQUID ELECTROLYTE
For Performance Data
see www.LowESR.com

LOW IMPEDANCE
AT HIGH FREQUENCY.
INDUSTRY STANDARD
STYLE FOR SWITCHERS
AND CONVERTERS

* Optional \pm 10% (K) Tolerance available on most values. Contact factory for availability.

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA rms AT 100KHz AND 105°C)

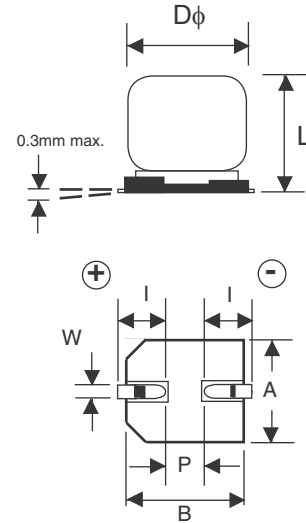
Cap (μ F)	Working Voltage (Vdc)					
	6.3	10	16	25	35	50
4.7	-	-	-	-	80	-
10	-	-	-	80	150	165
15	-	-	80	150	150	-
22	-	80	150	150	150	165
27	80	-	-	-	-	-
33	-	150	-	230	230	185
47	150	-	230	230	230	185
56	150	-	-	230	-	-
68	-	230	230	230	280	300
100	230	-	230	280	-	300
120	-	230	-	-	-	-
150	230	-	280	450	450	670
220	230	280	280	450	450	670
330	280	450	450	450	670	620
470	450	450	450	670	-	790
680	450	-	670	-	900	-
1000	450	670	-	900	-	-
1500	670	-	900	-	-	-
2200	-	900	-	-	-	-
3300	900	-	-	-	-	-

MAXIMUM IMPEDANCE (Ω AT 20°C AND 100KHz)

Cap (μ F)	Working Voltage (Vdc)					
	6.3	10	16	25	35	50
4.7	-	-	-	-	1.80	-
10	-	-	-	1.80	0.76	0.88
15	-	-	1.80	0.76	0.76	-
22	-	1.80	0.76	0.76	0.76	0.88
27	1.80	-	-	-	-	-
33	-	0.76	-	0.44	0.44	0.75
47	0.76	-	0.44	0.44	0.44	0.75
56	0.76	-	-	0.44	-	-
68	-	0.44	0.44	0.44	0.34	0.40
100	0.44	-	0.44	0.34	-	0.40
120	-	0.44	-	-	-	-
150	0.44	-	0.34	0.17	0.17	0.22
220	0.44	0.34	0.34	0.17	0.17	0.22
330	0.34	0.17	0.17	0.17	0.09	0.14
470	0.17	0.17	0.17	0.09	-	0.078
680	0.17	-	0.09	-	0.066	-
1000	0.17	0.09	-	0.066	-	-
1500	0.09	-	0.066	-	-	-
2200	-	0.066	-	-	-	-
3300	0.066	-	-	-	-	-

STANDARD PRODUCT AND CASE SIZE TABLE Df x L (mm)

Cap (μF)	Code	Working Voltage (Vdc)					
		6.3	10	16	25	35	50
4.7	4R7	-	-	-	-	4x6.3	-
10	100	-	-	-	4x6.3*	5x6.3*	6.3x6.3*
15	150	-	-	4x6.3	5x6.3	5x6.3*	-
22	220	-	4x6.3	5x6.3*	5x6.3	5x6.3*	6.3x6.3*
27	270	4x6.3*	-	-	-	-	-
33	330	-	5x6.3	-	6.3x6.3	6.3x6.3*	6.3x8*
47	470	5x6.3	-	6.3x6.3	6.3x6.3	6.3x6.3*	6.3x8*
56	560	5x6.3*	-	-	6.3x6.3	-	-
68	680	-	6.3x6.3	6.3x6.3*	6.3x6.3	6.3x8*	8x10.5*
100	101	6.3x6.3*	-	6.3x6.3*	6.3x8*	-	8x10.5*
120	121	-	6.3x6.3	-	-	-	-
150	151	6.3x6.3	-	6.3x8*	8x10.5*	8x10.5* 10x8	10x10.5*
220	221	6.3x6.3	6.3x8	6.3x8*	8x10.5* 10x8	8x10.5	10x10.5
330	331	6.3x8*	8x10.5	8x10.5* 10x8	8x10.5	10x10.5	12.5x14
470	471	8x10.5	8x10.5 10x8	8x10.5	10x10.5*	-	16x17
680	681	10x8*	-	10x10.5	-	12.5x14	-
1000	102	8x10.5*	10x10.5	-	12.5x14	-	-
1500	152	10x10.5*	-	12.5x14	-	-	-
2200	222	-	12.5x14	-	-	-	-
3300	332	12.5x14	-	-	-	-	-



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

*Denotes values available in optional 10% tolerance

DIMENSIONS (mm) and STANDARD REEL QUANTITIES

Case Size	DØ ± 0.5	L max.	A ± 0.2	B ± 0.2	l ± 0.2	W	P ± 0.2	Q'ty per Reel
4x6.3	4.0	6.3	4.3	4.3	1.8	0.5-0.8	1.0	1,200 pcs
5x6.3	5.0	6.3	5.3	5.3	2.1	0.5-0.8	1.4	800 pcs
6.3x6.3	6.3	6.3	6.6	6.6	2.5	0.5-0.8	2.2	800 pcs
6.3x8	6.3	8.0	6.6	6.6	2.5	0.5-0.8	2.2	500 pcs
8x10.5	8.0	10.5	8.3	8.3	2.9	1.1~1.4	3.2	300 pcs
10x8	10.0	8.0	10.3	10.3	3.2	1.1~1.4	4.6	300 pcs
10x10.5	10.0	10.5	10.3	10.3	3.2	1.1~1.4	4.6	300 pcs
12.5x14	12.5	14.0	12.8	12.8	4.5	1.1~1.4	4.6	200 pcs
16x17	16.0	17.0	16.3	16.3	5.0	1.8 ~ 2.1	7.0	125 pcs

