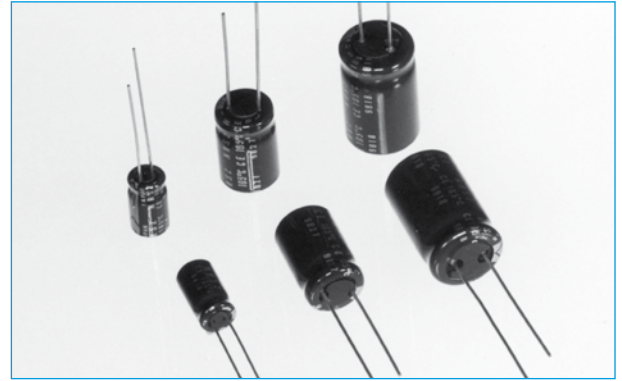


CAPACITORS

ULTRA LOW IMPEDANCE REDUCED SIZE DSHR

SECTION 1

- Very low impedance
- Up to 3000 hrs life
- -55° - 105°C
- Suited for power supply applications
- Smaller sizes than DSH



SPECIFICATION

Rated Voltage Range	6.3 ~ 50Vdc						
Rated Capacitance Range	22 ~ 15000F						
Operating Temperature Range	-55° ~ +105°C						
Capacitance Tolerance	±20% (M)						
Maximum Leakage Current After 2 minutes At 20°C	0.01CV, or 3µA, whichever is greater						
Maximum Tanδ At 20°C & 120Hz	W.V. (Vdc)	6.3	10	16	25	35	50
	C ≤ 1,000	0.28	0.24	0.2	0.16	0.14	0.12
	C = 2,200	0.3	0.26	0.22	0.18	0.16	0.14
	C = 3,300	0.32	0.28	0.24	0.2	0.18	
	C = 4,700	0.34	0.3	0.26	0.22		
	C = 6,800	0.38	0.34	0.3			
	C = 10,000	0.56	0.42				
Low Temperature Stability (Impedance Ratio)	Z-40°C/Z+20°C	3	3	2	2	2	2
	Z-40°C/Z+20°C	6	5	4	4	3	3
Load Life Test at Rated W.V 105°C 1,000 Hrs. = 8ø & less 105°C 2,000 Hrs. = 10ø 105°C 3,000 Hrs. = 12.5ø & up	Capacitance Change	Within ±25% of initial measured value					
	Tan	Less than 200% of specified maximum value					
	Leakage Current	Less than specified value					

RANGE & CASE SIZE DØ x Lmm

ORDERING INFORMATION

Cap. (µF)	6.3	10	16	25	35	50
22						5x11
33					5x11	5x11
47					5x11	6.3x11
100			5x11	6.3x11	6.3x11	8x11.5
220	5x11	6.3x11	6.3x11	8x11.5	8x12.5	10x12.5
330	6.3x11	6.3x11	8x11.5	8x12.5	10x12.5	10x16
470	6.3x11	8x11.5	8x12.5	10x12.5	10x16	10x20
1000	8x11.5	10x12.5	10x16	10x20	12.5x20	12.5x25
2200	10x16	10x20	12.5x20	12.5x25	16x25	16x31.5
3300	10x20	12.5x20	12.5x25	16x25	16x35.5	
4700	12.5x20	12.5x25	16x25	16x31.5		
6800	12.5x25	16x25	16x31.5			
10,000	16x25	16x31.5				
15,000	16x35.5					

DSHR	330	10	/TR
Series DSHR	Capacitance µF	Voltage	Options Blank = Loose TA = Tape Ammo TR = Tape Reel
TA, TR = 5mm pitch For others add pitch e.g. TA2MM = 2mm pitch			

MAXIMUM E.S.R AT 20 °C & 100 KHz (Ω)

PERMISSIBLE RIPPLE CURRENT

W.V. (Vdc /Cap. (μF)	6.3	10	16	25	35	50
22						1.40
33					0.72	1.40
47					0.50	0.74
100			0.50	0.30	0.24	0.46
220	0.50	0.30	0.24	0.16	0.15	0.22
330	0.30	0.24	0.16	0.15	0.086	0.18
470	0.24	0.16	0.15	0.086	0.066	0.11
1000	0.15	0.086	0.066	0.047	0.042	0.072
2200	0.066	0.047	0.042	0.040	0.026	0.045
3300	0.047	0.042	0.040	0.026	0.022	
4700	0.042	0.031	0.026	0.022		
6800	0.031	0.026	0.022			
10000	0.026	0.022				
15000	0.022					

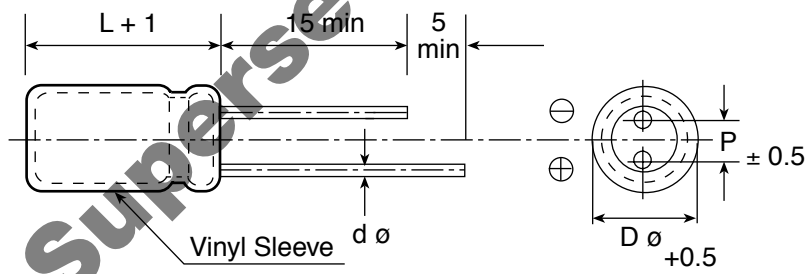
MAXIMUM (mA AT 105 °C & 10Hz-200KHz)

W.V. (Vdc /Cap. (μF)	6.3	10	16	25	35	50
22						120
33					180	130
47					180	190
100			180	280	280	320
220	180	280	280	410	560	520
330	280	280	410	510	710	670
470	280	410	560	710	950	820
1000	560	710	950	1150	1460	1200
2200	950	1150	1460	1650	2000	1750
3300	1150	1460	1650	2000	2200	
4700	1460	1780	2000	2200		
6800	1780	2000	2200			
10000	2000	2200				
15000	2200					

RIPPLE CURRENT CORRECTION FACTOR

Frequency (Hz)	100≤f≤1K	1K≤f≤10K	10K≤f
22≤C<100	0.55	0.8	1.0
100≤C≤1000	0.7	0.9	1.0
1000≤C	0.9	0.95	1.0

OUTLINE DRAWING



Dimensions in mm

Case Size (D)	5	6.3	8	10	12.5	16	18
Lead Space (P)	2	2.5	3.5	5	7.5		
Lead Dia (d)	0.5		0.6				0.8