

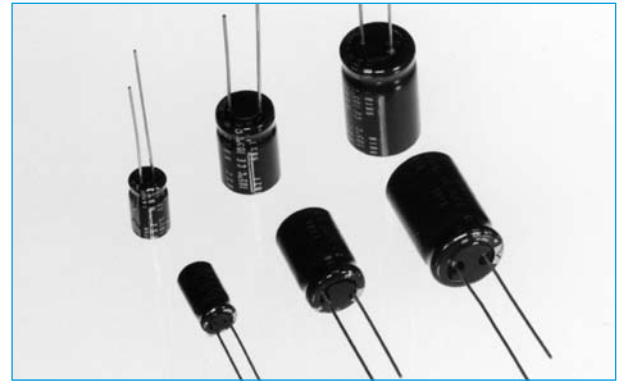


**CAPACITORS**

**LOW IMPEDANCE AND LOW ESR DSHX**

SECTION 1

- For high frequency
- Up to 6000 hours @ 105°C
- -40 to +105°C
- Suited for switching applications
- Other case sizes available on request



**SPECIFICATION**

Item	Electrical Characteristics						
Operating Temperature Range	-40° to +105°C						
Rate Working Voltage Range	6.3 to 50V						
Rate Capacitance Range	1 to 15000µF						
Capacitance Tolerance	-20 to +20%						
DC Current Leakage (µA)	I = 0.01 CV or 3(µA) whichever is greater. ( Measurements shall be Made After a 2 Minute Charge at Rated Working Voltage ) Dissipation Factor: at 120 Hz, 25°C						
	WV (V)	6.3	10	16	25	35	
	D.F (%)	22	19	16	14	10	
	For capacitor whose capacitance exceeds 1000µF. The value of D.F(%) is increased by 2% for every addition of 1000µF.						
	WV (V)	6.3	10	16	25	35	50
	Impedance: Z-25°C / Z+20°C	4	3	2	2	2	2
	Impedance: Z-40°C / Z+20°C	8	6	4	3	3	3
Load Life	Dø: 5ø to 6.3ø	8ø to 10øx12	10øx15 to 10øx30	12ø to 18ø			
	Life	3000hrs	4000hrs	5000hrs	6000hrs		
If dimension is down size, Endurance will be less 1000hrs than standard. (a)Capacitance Change : Within 20% of Initial Value (b)Dissipation Factor : NotExceed200% of Initial Requirement (c)Leakage Current : NotExceed the Initial Requirement							
Shelf Life	Shelf Life : 500 Hours, No Voltage Applied, at 105°C						
	(a)Capacitance Change : Within 25% of Initial Value						
	(b)Dissipation Factor : Not Exceed 200% of Initial Requirement (c)Leakage Current : Not Exceed 200% Initial Requirement						

**ORDERING INFORMATION**

<b>DSHX</b>	<b>330</b>	<b>10</b>	<b>/TA</b>
Series	Capacitance	Voltage	Options
Blank = loose TA = Tape and Ammo			

TA = 5mm pitch  
For others add pitch eg. TA2mm = 2mm pitch



**MAX IMPEDANCE at 20C & 100KHz**

UF/Volts	6.3v	10v	16v	25v	35v	50v
0.47uf						
1.0uf						40
2.2uf						2.5
3.3uf						2.2
4.7uf						1.9
10uf						1.5
22uf					0.754	0.91
33uf					0.754	0.39
47uf			0.754	0.074	0.286	0.39
100uf	0.754	0.754	0.286	0.286	0.169	0.17
220uf	0.286	0.286	0.286	0.169	0.104	0.084
330uf	0.286	0.169	0.169	0.104	0.078	0.055
470uf	0.169	0.169	0.169	0.06	0.06	0.045
1000uf	0.104	0.078	0.078	0.046	0.039	0.033
2200uf	0.055	0.046	0.046	0.029	0.029	0.022
3300uf	0.035	0.034	0.029	0.029	0.013	
4700uf	0.034	0.036	0.029	0.025		
6800uf	0.036	0.029	0.022			
10000uf	0.031	0.025	0.02			
15000uf	0.025					
Impedance ( Max 25C/100KHz)						

**CASE SIZE DØ X Lmm**

UF/Volts	6.3v	10v	16v	25v	35v	50v
0.47uf						
1.0uf						5x11
2.2uf						5x11
3.3uf						5x11
4.7uf						5x11
10uf						5x11
22uf					5x11	5x11
33uf					5x11	6.3x11
47uf			5x11	5x11	6.3x11	6.3x11
100uf	5x11	5x11	6.3x11	6.3x11	8x11	8x11
220uf	6.3x11	6.3x11	8x11	8x11	10x12	10x15
330uf	6.3x11	8x11	8x11	10x12	10x15	10x25
470uf	8x11	8x11	10x12	10x15	10x19	13x20
1000uf	10x12	10x15	10x20	13x20	13x25	16x25
2200uf	10x25	13x20	13x25	13x35	16x32	18x36
3300uf	13x20	13x25	13x35	16x32	16x40	
4700uf	13x30	16x25	16x32	18x36		
6800uf	16x25	16x32	16x40			
10000uf	18x25	18x36	18x40			
15000uf	18x36					

**FREQUENCY COEFFICIENT**

Frequency (Hz)	120	1K	10K	100K
22-180uF	0.40	0.75	0.90	1.00
220-560uF	0.50	0.85	0.94	1.00
680-1800uF	0.60	0.87	0.95	1.00
2200-3900uF	0.75	0.90	0.95	1.00
4700uF Higher	0.85	0.95	0.98	1.00

**MAX PERMISSABLE RIPPLE CURRENT**

(mA at 105°C + 10Hz - 200KHz)

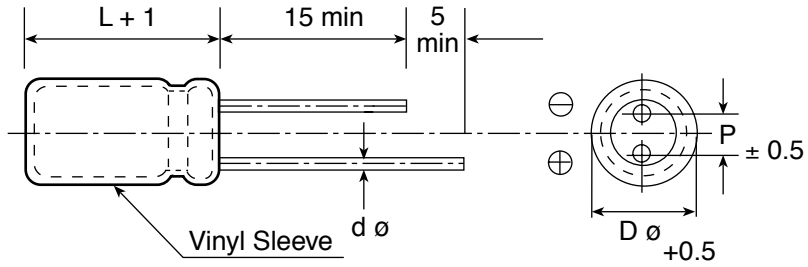
UF/Volts	6.3v	10v	16v	25v	35v	50v
0.47uf						
1.0uf						30
2.2uf						43
3.3uf						53
4.7uf						88
10uf						100
22uf						158
33uf						259
47uf					298	259
100uf	184	184	298	298	561	555
220uf	298	298	561	561	759	1050
330uf	298	561	561	759	1061	1440
470uf	561	561	759	1210	1228	1660
1000uf	759	1061	1228	1666	2151	2241
2200uf	1447	1666	1863	2406	3068	3228
3300uf	1900	2210	2406	2657	4080	
4700uf	2214	2238	2657	3191		
6800uf	2238	2657	3408			
10000uf	2430	3191	3316			
15000uf	3191					
Ripple current: (Ar.m.s 105C/100KHz)						

**TEMPERATURE COEFFICIENT**

Temperature (C)	65	85	105
Factor	1.80	1.50	1.00



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