

LSW シリーズ  
SERIES

105°C 3000時間品  
Load Life : 105°C 3000 hours

RoHS  
compliance



◆規格表 / SPECIFICATIONS

項目 Items	特 性 Characteristics																																																																															
カテゴリ温度範囲 Category Temperature Range	-40~+105°C	-25~+105°C																																																																														
定格電圧範囲 Rated Voltage Range	10~100Vdc	160~400Vdc																																																																														
静電容量許容差 Capacitance Tolerance	±20% (20°C, 120Hz)																																																																															
漏れ電流 Leakage Current (MAX)	I=0.02CV又は5mAいずれか小なる値以下 (定格電圧印加5分後) I=0.02CV or 5mA whichever is smaller. (After 5 minutes application of rated voltage) I=漏れ電流(μA)      C=静電容量(μF)      V=定格電圧(Vdc) Leakage Current      Capacitance      Rated Voltage																																																																															
損失角の正接 (tanδ) Dissipation Factor (MAX)	<table border="1"> <thead> <tr> <th>Vdc \ φD</th> <th>36</th> <th>51</th> <th>64</th> <th>77</th> <th>90</th> <th>Vdc \ φD</th> <th>36</th> <th>51</th> <th>64</th> <th>77</th> <th>90</th> <th>(20°C, 120Hz)</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>0.75</td> <td>1.0</td> <td>1.3</td> <td>1.5</td> <td>1.5</td> <td>63</td> <td>0.2</td> <td>0.25</td> <td>0.3</td> <td>0.4</td> <td>0.4</td> <td></td> </tr> <tr> <td>16</td> <td>0.6</td> <td>0.7</td> <td>0.8</td> <td>1.0</td> <td>1.0</td> <td>80</td> <td>0.2</td> <td>0.2</td> <td>0.25</td> <td>0.3</td> <td>0.3</td> <td></td> </tr> <tr> <td>25</td> <td>0.4</td> <td>0.5</td> <td>0.7</td> <td>0.8</td> <td>0.8</td> <td>100</td> <td>0.15</td> <td>0.2</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> <td></td> </tr> <tr> <td>35</td> <td>0.3</td> <td>0.5</td> <td>0.6</td> <td>0.7</td> <td>0.7</td> <td>160~250</td> <td>0.15</td> <td>0.15</td> <td>0.2</td> <td>0.2</td> <td>0.2</td> <td></td> </tr> <tr> <td>50</td> <td>0.25</td> <td>0.3</td> <td>0.5</td> <td>0.6</td> <td>0.6</td> <td>315~400</td> <td>0.2</td> <td>0.2</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> <td></td> </tr> </tbody> </table>		Vdc \ φD	36	51	64	77	90	Vdc \ φD	36	51	64	77	90	(20°C, 120Hz)	10	0.75	1.0	1.3	1.5	1.5	63	0.2	0.25	0.3	0.4	0.4		16	0.6	0.7	0.8	1.0	1.0	80	0.2	0.2	0.25	0.3	0.3		25	0.4	0.5	0.7	0.8	0.8	100	0.15	0.2	0.25	0.25	0.25		35	0.3	0.5	0.6	0.7	0.7	160~250	0.15	0.15	0.2	0.2	0.2		50	0.25	0.3	0.5	0.6	0.6	315~400	0.2	0.2	0.25	0.25	0.25	
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耐 久 性 Endurance	<p>105°C中で3000時間定格電圧(リップル重畳)印加後、下記項目を満足すること。 After applying rated voltage with rated ripple current for 3000 hours at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>静電容量変化率 Capacitance Change</td> <td>初期値の±15%以内 Within ±15% of the initial value.</td> </tr> <tr> <td>損失角の正接 Dissipation Factor</td> <td>規格値の175%以下 Not more than 175% of the specified value.</td> </tr> <tr> <td>漏れ電流 Leakage Current</td> <td>規格値以下 Not more than the specified value.</td> </tr> </table>		静電容量変化率 Capacitance Change	初期値の±15%以内 Within ±15% of the initial value.	損失角の正接 Dissipation Factor	規格値の175%以下 Not more than 175% of the specified value.	漏れ電流 Leakage Current	規格値以下 Not more than the specified value.																																																																								
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高温無負荷特性 Shelf Life	<p>105°C中で500時間無負荷放置した後、JIS C 5101-4 4.1項の電圧処理を行い下記を満足すること。 After storage for 500 hours with no voltage applied at 105°C, the capacitors shall be subjected to the voltage treatment in JIS C 5101-4 item 4.1 and shall be meet the following requirements.</p> <table border="1"> <tr> <td>静電容量変化率 Capacitance Change</td> <td>初期値の±15%以内 Within ±15% of the initial value.</td> </tr> <tr> <td>損失角の正接 Dissipation Factor</td> <td>規格値の150%以下 Not more than 150% of the specified value.</td> </tr> <tr> <td>漏れ電流 Leakage Current</td> <td>規格値以下 Not more than the specified value.</td> </tr> </table>		静電容量変化率 Capacitance Change	初期値の±15%以内 Within ±15% of the initial value.	損失角の正接 Dissipation Factor	規格値の150%以下 Not more than 150% of the specified value.	漏れ電流 Leakage Current	規格値以下 Not more than the specified value.																																																																								
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◆リップル電流補正係数 / MULTIPLIER FOR RIPPLE CURRENT

周波数 (Hz) Frequency	60 (50)	120 (100)	300	500	10k≦
10~50Vdc	0.80	1.00	1.03	1.04	1.08
63~100Vdc	0.80	1.00	1.04	1.05	1.10
160~400Vdc	0.80	1.00	1.06	1.10	1.18

◆呼称方法 / PART NUMBER

□□□ LSW      □□□□□ M      □□□      □□      D×L  
 定格電圧      シリーズ名      静電容量      静電容量許容差      副記号      バンド記号      ケースサイズ  
 Rated Voltage      Series      Capacitance      Capacitance Tolerance      Option      Clamp Code      Case Size

◆寸法図 / DIMENSIONS

		(mm)					
	φD	W1	W2	W3	W4	W5	F
I type	36	24.0	30.0	3.5	7.0	10	12.7
	51	34.0	40.0	3.5	6.0	12	21.8
	64	40.0	45.0	4.5	7.0	12	28.2
	77	47.0	53.0	4.5	6.0	12	31.4
Y type	90	54.0	60.0	4.5	6.0	14	31.4
	51	32.5	37.5	4.5	6.0	12	21.8
	64	38.0	43.0	4.5	8.0	14	28.2
	77	44.5	49.0	4.5	7.0	14	31.4
90	50.8	56.0	4.5	8.0	16	31.4	

◆標準品一覧表 / STANDARD SIZE

Cap(μF) \ Vdc	10	16	25	35	50	63	80
3300							36×50 3.0
3900							36×63 3.3
4700						36×50 3.2	36×83 3.6
5600						36×63 3.5	36×83 3.9
6800				36×50 2.5	36×50 3.6	36×63 3.8	36×83 4.3
8200				36×50 2.8	36×63 3.9	36×83 4.3	36×98 5.1
10000				36×50 3.8	36×83 4.2	36×83 4.7	36×118 5.8
12000				36×63 4.3	36×83 5.0	36×98 5.6	51×83 7.0
15000			36×50 4.2	36×83 4.7	36×98 5.5	36×118 6.4	51×83 7.6
18000			36×63 4.6	36×83 5.1	36×98 5.7	51×83 7.5	51×98 7.7
22000		36×50 4.0	36×83 5.2	36×98 6.6	36×118 7.5	51×83 7.5	51×118 9.0
27000	36×50 4.4	36×63 5.0	36×83 5.4	36×118 6.7	51×83 7.5	51×98 8.7	64×99 10.1
33000	36×63 5.5	36×83 5.2	36×98 6.5	51×83 7.1	51×98 9.3	51×118 10.3	64×119 11.6
39000	36×63 6.0	36×83 5.8	36×98 7.5	51×83 8.4	51×98 9.4	64×99 11.2	64×139 13.5
47000	36×83 6.6	36×98 6.8	36×118 8.9	51×98 9.9	51×118 11.7	64×119 12.9	77×101 15.8
56000	36×83 7.5	36×98 6.9	51×83 10.0	51×98 10.3	64×99 12.4	64×139 15.2	77×121 17.0
68000	36×98 7.6	36×118 8.4	51×98 10.7	51×118 11.4	64×119 15.1	77×101 16.0	77×141 20.4
82000	36×118 9.0	51×83 8.4	51×98 12.0	64×99 12.5	77×101 15.5	77×121 17.7	77×151 21.5
100000	51×83 10.2	51×98 11.3	51×118 13.1	64×119 15.5	77×101 16.3	77×141 21.5	90×151 22.3
120000	51×83 11.0	51×98 11.4	64×99 13.7	77×101 15.5	77×121 19.1	90×141 22.4	
150000	51×98 13.4	51×118 12.5	64×119 16.4	77×121 17.9	77×141 23.4		
180000	51×118 14.0	64×99 14.2	77×101 16.7	77×141 20.0	90×141 23.7		
220000	64×99 14.5	64×119 16.6	77×121 20.5	77×151 24.1			
270000	64×119 16.0	77×101 17.5	77×141 21.3	90×141 26.5			
330000	77×101 18.0	77×121 24.3	77×151 26.0				
390000	77×101 19.5	77×141 25.2	90×141 27.2				
470000	77×121 20.0	77×151 26.7					
560000	77×141 24.1	90×141 29.1					
680000	90×141 26.5						

Cap(μF) \ Vdc	100	160	200	250	315	350	400
220						36×50 0.9	36×50 1.0
270					36×50 1.0	36×50 1.0	36×63 1.0
330					36×50 1.2	36×63 1.2	36×63 1.2
390					36×63 1.3	36×83 1.3	36×83 1.4
470				36×50 1.3	36×83 1.5	36×83 1.5	36×98 1.5
560			36×50 1.4	36×63 1.6	36×83 1.6	36×98 1.7	36×98 1.7
680			36×50 1.5	36×83 1.7	36×98 1.9	36×98 1.9	51×83 2.3
820		36×50 1.4	36×83 1.9	36×83 1.9	36×118 2.2	36×118 2.1	51×98 2.4
1000		36×63 1.9	36×83 2.2	36×98 2.3	51×83 2.3	51×98 2.5	51×118 2.7
1200		36×83 2.3	36×83 2.3	36×98 2.4	51×98 2.7	51×98 2.7	51×118 3.0
1500		36×83 2.6	36×98 2.9	36×118 2.9	51×98 3.1	51×118 3.3	64×99 3.5
1800		36×83 2.6	36×98 2.9	36×118 3.0	51×118 3.6	64×99 3.8	64×119 3.6
2200	36×50 2.9	36×98 3.2	36×118 3.3	51×98 3.8	64×99 4.2	64×119 4.6	77×101 4.1
2700	36×63 3.4	36×118 3.2	51×83 3.8	51×118 4.5	64×119 4.3	77×101 4.6	77×121 4.8
3300	36×83 3.9	36×118 3.7	51×98 4.7	64×99 5.2	77×101 4.9	77×121 5.3	77×141 5.7
3900	36×83 4.2	51×98 4.3	51×118 5.4	64×119 5.2	77×121 5.8	77×141 6.2	90×141 6.7
4700	36×83 4.6	51×98 4.8	64×99 6.2	64×119 5.7	77×121 6.3	90×141 7.4	90×141 7.4
5600	36×98 4.9	51×118 5.5	64×99 6.3	77×101 6.4	77×141 7.3	90×141 8.1	
6800	36×118 5.5	64×99 6.3	64×119 7.3	77×121 7.6	90×141 8.9		
8200	51×83 6.2	64×119 7.1	77×101 8.5	77×141 8.3			
10000	51×98 6.7	77×101 7.9	77×121 9.5	90×141 9.9			
12000	51×98 7.3	77×121 9.0	77×141 10.5	90×141 10.8			
15000	51×118 8.6	77×141 11.3	90×141 12.5				
18000	64×99 8.9	90×141 13.0	90×141 13.3				
22000	64×119 10.3	90×141 14.3					
27000	64×139 12.1						
33000	77×121 14.1						
39000	77×141 16.5						
47000	77×141 18.3						
56000	90×141 19.2						
68000	90×151 20.1						

↑ リプル電流 Ripple Current (A r.m.s./120Hz, 105°C)  
↑ ケースサイズ Case Size φD×L(mm)

◆ネジの締め付けトルクと許容電流値 / Tightening torque of bolt and Permissible current of terminal

取り付けバンドネジ Clamp Bolt	推奨締め付けトルク Recommended Tightening torque
M3	0.6 [N·m]
M4	1.3 [N·m]

端子 Terminal	推奨締め付けトルク(許容値) Recommended Tightening torque (Permissible Range)	端子許容電流 Permissible Current of Terminal
M5	2.2(1.5~3.2) [N·m]	60[A r.m.s.]