

LSW SERIES

105°C 3000 hours, Screw Terminal Type

◆FEATURES

- Load Life : 105°C 3000 hours.
- RoHS compliance.



◆SPECIFICATIONS

Items	Characteristics																																																																																					
Category Temperature Range	-40~+105℃							-25~+105℃																																																																														
Rated Voltage Range	10~100Vdc							160~400Vdc																																																																														
Capacitance Tolerance	±20% (20℃,120Hz)																																																																																					
Leakage Current(MAX)	I=0.02CV or 5mA whichever is smaller.(After 5 minutes application of rated voltage) I=Leakage Current(μA) C=Capacitance(μF) V=Rated Voltage(Vdc)																																																																																					
(tanδ) Dissipation Factor(MAX)	<table><tr><td>Vdc \ φD</td><td>36</td><td>51</td><td>64</td><td>77</td><td>90</td></tr><tr><td>10</td><td>0.75</td><td>1.0</td><td>1.3</td><td>1.5</td><td>1.5</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></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></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></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></tr></table>						Vdc \ φD	36	51	64	77	90	10	0.75	1.0	1.3	1.5	1.5	16	0.6	0.7	0.8	1.0	1.0	25	0.4	0.5	0.7	0.8	0.8	35	0.3	0.5	0.6	0.7	0.7	50	0.25	0.3	0.5	0.6	0.6	<table><tr><td>Vdc \ φD</td><td>36</td><td>51</td><td>64</td><td>77</td><td>90</td></tr><tr><td>63</td><td>0.2</td><td>0.25</td><td>0.3</td><td>0.4</td><td>0.4</td></tr><tr><td>80</td><td>0.2</td><td>0.2</td><td>0.25</td><td>0.3</td><td>0.3</td></tr><tr><td>100</td><td>0.15</td><td>0.2</td><td>0.25</td><td>0.25</td><td>0.25</td></tr><tr><td>160~250</td><td>0.15</td><td>0.15</td><td>0.2</td><td>0.2</td><td>0.2</td></tr><tr><td>315~400</td><td>0.2</td><td>0.2</td><td>0.25</td><td>0.25</td><td>0.25</td></tr></table>						Vdc \ φD	36	51	64	77	90	63	0.2	0.25	0.3	0.4	0.4	80	0.2	0.2	0.25	0.3	0.3	100	0.15	0.2	0.25	0.25	0.25	160~250	0.15	0.15	0.2	0.2	0.2	315~400	0.2	0.2	0.25	0.25	0.25	(20℃, 120Hz)	
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Endurance	After applying rated voltage with rated ripple current for 3000 hours at 105℃, the capacitors shall meet the following requirements. <table><tr><td>Capacitance Change</td><td>Within ±15% of the initial value.</td></tr><tr><td>Dissipation Factor</td><td>Not more than 175% of the specified value.</td></tr><tr><td>Leakage Current</td><td>Not more than the specified value.</td></tr></table>														Capacitance Change	Within ±15% of the initial value.	Dissipation Factor	Not more than 175% of the specified value.	Leakage Current	Not more than the specified value.																																																																		
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Shelf Life	After storage for 500 hours with no voltage applied at 105℃, the capacitors shall be subjected to the voltage treatment in JIS C 5101-4 item 4.1 and shall be meet the following requirements. <table><tr><td>Capacitance Change</td><td>Within ±15% of the initial value.</td></tr><tr><td>Dissipation Factor</td><td>Not more than 150% of the specified value.</td></tr><tr><td>Leakage Current</td><td>Not more than the specified value.</td></tr></table>														Capacitance Change	Within ±15% of the initial value.	Dissipation Factor	Not more than 150% of the specified value.	Leakage Current	Not more than the specified value.																																																																		
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◆MULTIPLIER FOR RIPPLE CURRENT

Frequency (Hz)		60(50)	120(100)	400	1k	10k≤
Coefficient	10~50Vdc	0.80	1.00	1.03	1.05	1.08
	63~100Vdc	0.80	1.00	1.05	1.07	1.10
	160~400Vdc	0.80	1.00	1.10	1.13	1.18

◆PART NUMBER

□□□	LSW	□□□□□	M	□□□	□□	D×L
Rated Voltage	Series	Capacitance	Capacitance Tolerance	Option	Clamp Code	Case Size

◆Dimensions in mm (not to scale)

		(mm)						
I type	Y type	φD	W1	W2	W3	W4	W5	F
		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
		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

◆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						

↑ Ripple Current (A r.m.s./120Hz, 105°C)
↑ Case Size φD×L(mm)

◆Tightening torque of bolt and Permissible current of terminal.

Clamp Bolt	Recommended Tightening torque
M3	0.6 [N·m]
M4	1.3 [N·m]

Terminal	Recommended Tightening torque (Permissible Range)	Permissible Current of Terminal
M5	2.2(1.5~3.2) [N·m]	60Arms