

LSW SERIES

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)																																																																																					
Dissipation Factor(MAX) (tanδ)	<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)	300	500	10k≤
Coefficient	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

◆PART NUMBER

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

◆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	
	90	54.0	60.0	4.5	6.0	14	31.4	
Y type	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]	60[A r.m.s.]