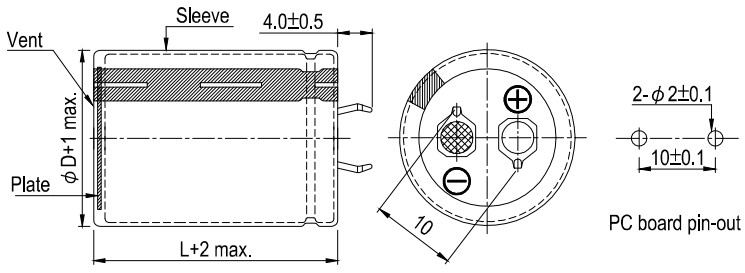
LSP Series

Features
- Snap-in terminal type
- 105℃, 7,000 hours assured
- Suitable for high voltage circuits
- RoHS compliant

Specifications

Items	Performance
Category Temperature Range	-25℃ ~ +105℃
Capacitance Tolerance	± 20% (at 120 Hz, 20℃)
Leakage Current (at 20℃)	$I = 3\sqrt{CV}$ or 1.5 mA whichever is smaller (after 5 minutes) Where, C = rated capacitance in μF, V = rated DC Rated Voltage in V
Tanδ (at 120 Hz, 20℃)	Rated Voltage: 350 / 400 / 450 Tanδ(max.): 0.105 / 0.105 / 0.105
Low Temperature Characteristics (at 120 Hz)	Impedance ratio shall not exceed the values given in the table below. Rated Voltage: 350 / 400 / 450 Impedance Ratio Z(-25℃) / Z(+20℃): 4 / 8 / 8
Endurance	Test Time: 7,000 Hrs Capacitance Change: Within ± 20% of initial value Tanδ: Less than 250% of specified value Leakage Current: Within specified value * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied with rated ripple current for 7,000 hours at 105℃.
Shelf Life Test	Test Time: 1,000 Hrs Capacitance Change: Within ± 15% of initial value Tanδ: Less than 150% of specified value Leakage Current: Within specified value * The above specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5101-4 4.1).
Ripple Current and Frequency Multipliers	Frequency (Hz): 50 / 60 / 100 / 120 / 300 / 1k / 10k up Multiplier: 0.8 / 1.0 / 1.1 / 1.3 / 1.4
Failure percentage Failure rate	When the failure percentage / failure rate is required, please contact with us for further discussion.

Diagram of Dimensions Unit: mm



Dimension and Permissible Ripple Current

Rated Voltage V_{DC}	Capacitance 120 Hz, 20℃ μF	φD×L mm	Ripple Current 120 Hz, 105℃ A/rms	Tan δ at 120 Hz, 20℃	ESR 120 Hz, 20℃ Ω	LC 5 minutes mA	Part Number
350V	100	22 × 25	0.67	0.105	1.474	0.56	LSP101M2V--A2225
	120	22 × 30	0.77	0.105	1.228	0.61	LSP121M2V--A2230
	120	25 × 25	0.76	0.105	1.228	0.61	LSP121M2V--A2525
	150	22 × 35	0.88	0.105	0.982	0.69	LSP151M2V--A2235
	150	25 × 30	0.88	0.105	0.982	0.69	LSP151M2V--A2530
	180	22 × 40	0.99	0.105	0.819	0.75	LSP181M2V--A2240
	180	25 × 30	0.96	0.105	0.819	0.75	LSP181M2V--A2530
	180	30 × 25	0.98	0.105	0.819	0.75	LSP181M2V--A3025
	220	22 × 45	1.12	0.105	0.737	0.83	LSP221M2V--A2245
	220	25 × 35	1.11	0.105	0.737	0.83	LSP221M2V--A2535
	220	30 × 30	1.11	0.105	0.737	0.83	LSP221M2V--A3030
	270	25 × 40	1.26	0.105	0.600	0.92	LSP271M2V--A2540
	270	30 × 35	1.28	0.105	0.600	0.92	LSP271M2V--A3035
	330	25 × 45	1.40	0.105	0.491	1.02	LSP331M2V--A2545
	330	30 × 35	1.42	0.105	0.491	1.02	LSP331M2V--A3035
	330	35 × 30	1.45	0.105	0.491	1.02	LSP331M2V--A3530
	390	30 × 40	1.60	0.105	0.453	1.11	LSP391M2V--A3040
	390	35 × 35	1.61	0.105	0.453	1.11	LSP391M2V--A3535
	470	30 × 50	1.86	0.105	0.376	1.22	LSP471M2V--A3050
	470	35 × 40	1.85	0.105	0.376	1.22	LSP471M2V--A3540
	560	35 × 40	2.02	0.105	0.316	1.33	LSP561M2V--A3540
	680	35 × 50	2.36	0.105	0.260	1.39	LSP681M2V--A3550
400V	68	22 × 25	0.55	0.105	2.167	0.49	LSP680M2G--A2225
	82	22 × 30	0.63	0.105	1.797	0.54	LSP820M2G--A2230
	100	22 × 30	0.70	0.105	1.474	0.60	LSP101M2G--A2230
	100	25 × 25	0.70	0.105	1.474	0.60	LSP101M2G--A2525
	120	22 × 35	0.79	0.105	1.228	0.66	LSP121M2G--A2235
	120	25 × 30	0.79	0.105	1.228	0.66	LSP121M2G--A2530
	150	22 × 40	0.90	0.105	0.982	0.73	LSP151M2G--A2240
	150	25 × 30	0.88	0.105	0.982	0.73	LSP151M2G--A2530
	150	30 × 25	0.90	0.105	0.982	0.73	LSP151M2G--A3025
	180	22 × 45	0.99	0.105	0.819	0.80	LSP181M2G--A2245
	180	25 × 35	1.01	0.105	0.819	0.80	LSP181M2G--A2535
	180	30 × 30	1.01	0.105	0.819	0.80	LSP181M2G--A3030
	220	25 × 40	1.14	0.105	0.670	0.89	LSP221M2G--A2540
	220	30 × 35	1.16	0.105	0.670	0.89	LSP221M2G--A3035
	270	25 × 50	1.32	0.105	0.546	0.99	LSP271M2G--A2550
	270	30 × 40	1.33	0.105	0.546	0.99	LSP271M2G--A3040
	270	35 × 30	1.31	0.105	0.546	0.99	LSP271M2G--A3530
	330	30 × 45	1.52	0.105	0.447	1.09	LSP331M2G--A3045
	330	35 × 35	1.48	0.105	0.447	1.09	LSP331M2G--A3535
	390	30 × 50	1.69	0.105	0.378	1.18	LSP391M2G--A3050
	390	35 × 40	1.68	0.105	0.378	1.18	LSP391M2G--A3540
	470	35 × 45	1.91	0.105	0.314	1.30	LSP471M2G--A3545
	560	35 × 50	2.14	0.105	0.263	1.42	LSP561M2G--A3550
450V	47	22 × 25	0.46	0.105	3.135	0.44	LSP470M2W--A2225
	56	22 × 30	0.52	0.105	2.843	0.48	LSP560M2W--A2230
	68	22 × 30	0.58	0.105	2.631	0.52	LSP680M2W--A2230
	68	25 × 25	0.58	0.105	2.631	0.52	LSP680M2W--A2525
	82	22 × 35	0.65	0.105	1.797	0.58	LSP820M2W--A2235
	82	25 × 30	0.65	0.105	1.797	0.58	LSP820M2W--A2530
	100	22 × 40	0.74	0.105	1.474	0.64	LSP101M2W--A2240
	100	25 × 30	0.72	0.105	1.474	0.64	LSP101M2W--A2530
	100	30 × 25	0.73	0.105	1.474	0.64	LSP101M2W--A3025
	120	22 × 45	0.83	0.105	1.228	0.70	LSP121M2W--A2245
	120	25 × 35	0.82	0.105	1.228	0.70	LSP121M2W--A2535
	120	30 × 30	0.82	0.105	1.228	0.70	LSP121M2W--A3030
	150	25 × 40	0.94	0.105	0.982	0.78	LSP151M2W--A2540
	150	30 × 35	0.96	0.105	0.982	0.78	LSP151M2W--A3035
	180	30 × 35	1.05	0.105	0.819	0.85	LSP181M2W--A3035
	180	35 × 30	1.07	0.105	0.819	0.85	LSP181M2W--A3530
	220	30 × 40	1.20	0.105	0.670	0.94	LSP221M2W--A3040
	220	35 × 35	1.21	0.105	0.670	0.94	LSP221M2W--A3535

Dimension and Permissible Ripple Current

Rated Voltage V_{DC}	Capacitance 120 Hz, 20℃ μF	φD×L mm	Ripple Current 120 Hz, 105℃ A/rms	Tan δ at 120 Hz, 20℃	ESR 120 Hz, 20℃ Ω	LC 5 minutes mA	Part Number
450V	270	30 × 50	1.41	0.105	0.546	1.05	LSP271M2W--A3050
	270	35 × 40	1.40	0.105	0.546	1.05	LSP271M2W--A3540
	330	35 × 45	1.60	0.105	0.447	1.16	LSP331M2W--A3545
	390	35 × 50	1.79	0.105	0.378	1.26	LSP391M2W--A3550

Part Numbering System

LSP Series	100μF	± 20%	400V		4.0±0.5mm	30φ×35L	General Purpose
LSP	**221**	**M**	**2G**	**- -**	**A**	**3035**	
Series Name	Capacitance	Capacitance tolerance	Rated voltage	Terminal type	Terminal length	Case size	Application

Example:

Cap.	Symbol
56	560
220	221
470	471

M = ± 20%
K = ± 10%

Example:

V	Symbol
400	2G
450	2W

Example:

Type	Symbol
2 pins	- -
5 pins	L5

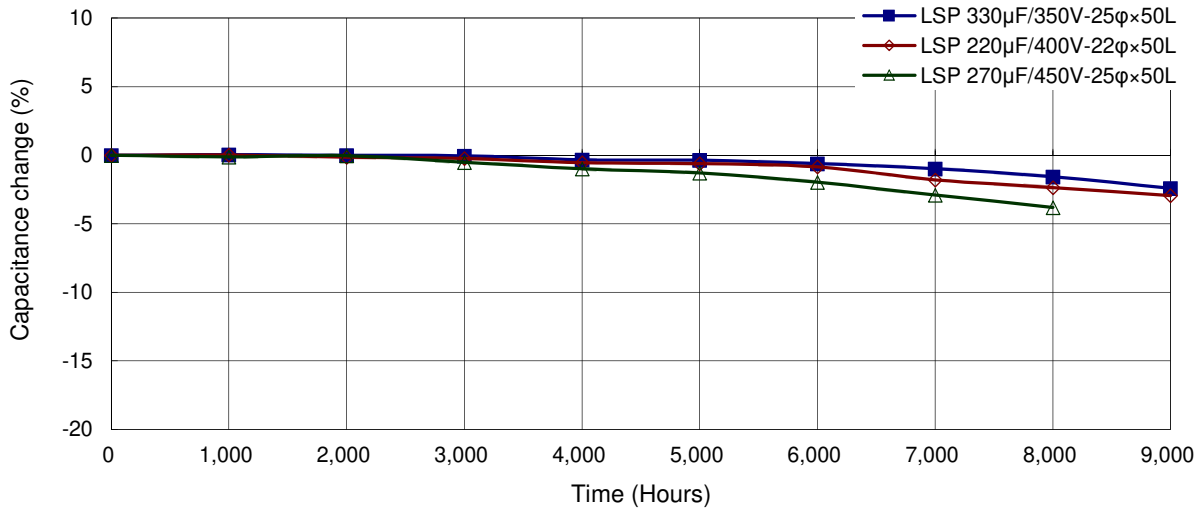
"-":
6.3 ± 1.0 mm

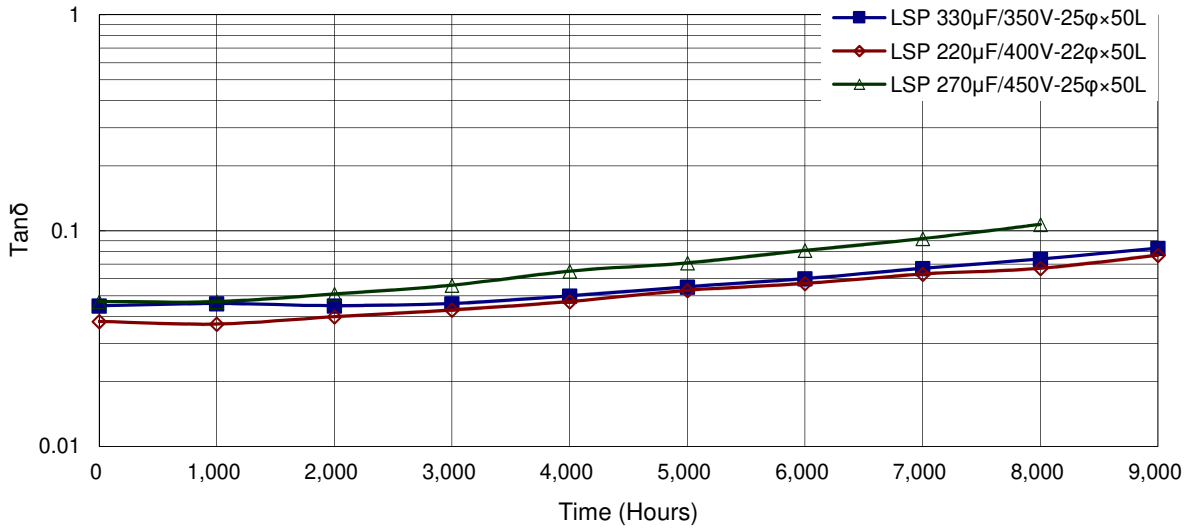
Example:

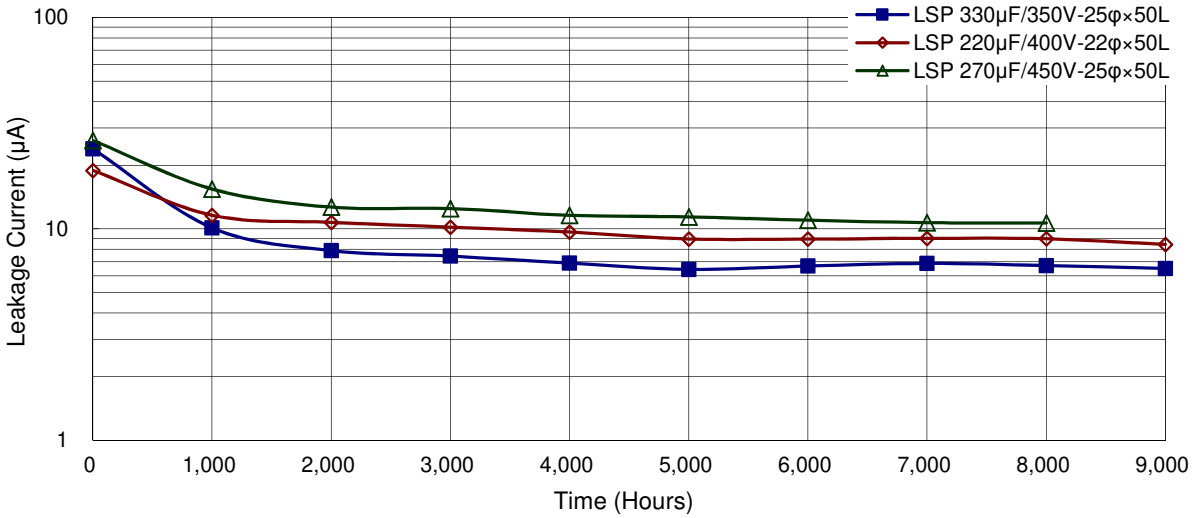
φD×L	Code
22×30	2230
25×25	2525
30×40	3040

Note: For more details, please refer to "Part Numbering System - Snap-in Type" on page 188.

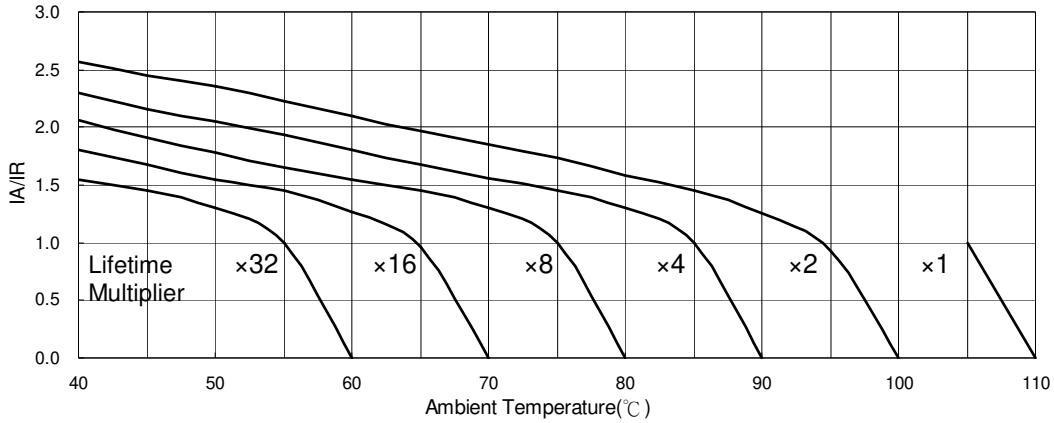
Typical Endurance Curves







Useful Life Chart



IA: Actual ripple current IR: Rated ripple current