

LSR Series

Features

- Snap-in terminal type
- 105°C, 3,000 hours assured
- High Ripple current.
- RoHS compliant

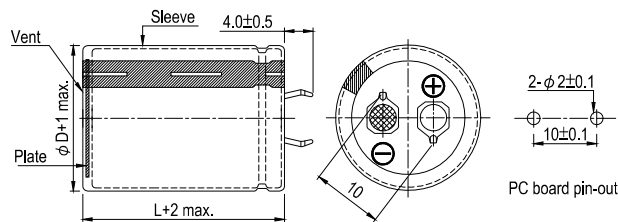


Specifications

Items	Performance																													
Category Temperature Range	400 ~ 450V																													
	-25℃ ~ +105℃																													
Capacitance Tolerance	± 20% (at 120 Hz, 20℃)																													
Leakage Current (at 20℃)	I = 3√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℃)	<table><tr><td>Rated Voltage</td><td>400</td><td>450</td></tr><tr><td>Tanδ(max.)</td><td>0.15</td><td>0.15</td></tr></table>						Rated Voltage	400	450	Tanδ(max.)	0.15	0.15																		
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Low Temperature Characteristics (at 120 Hz)	Impedance ratio shall not exceed the values given in the table below. <table><tr><td colspan="2">Rated Voltage</td><td>400</td><td>450</td></tr><tr><td>Impedance Ratio</td><td>Z(-25℃) / Z(+20℃)</td><td>8</td><td>8</td></tr></table>						Rated Voltage		400	450	Impedance Ratio	Z(-25℃) / Z(+20℃)	8	8																
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Endurance	<table><tr><td>Test Time</td><td colspan="5">3,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="5">Within ± 20% of initial value</td></tr><tr><td>Tanδ</td><td colspan="5">Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="5">Within specified value</td></tr></table> * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied with rated ripple current for 3,000 hours at 105℃.						Test Time	3,000 Hrs					Capacitance Change	Within ± 20% of initial value					Tanδ	Less than 200% of specified value					Leakage Current	Within specified value				
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Shelf Life Test	<table><tr><td>Test Time</td><td colspan="5">1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="5">Within ± 15% of initial value</td></tr><tr><td>Tanδ</td><td colspan="5">Less than 150% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="5">Within specified value</td></tr></table> * 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).						Test Time	1,000 Hrs					Capacitance Change	Within ± 15% of initial value					Tanδ	Less than 150% of specified value					Leakage Current	Within specified value				
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Ripple Current and Frequency Multipliers	<table><tr><td>Frequency (Hz)</td><td>50 / 60</td><td>100 / 120</td><td>300</td><td>1k</td><td>10k up</td></tr><tr><td>Multiplier</td><td>0.8</td><td>1.0</td><td>1.1</td><td>1.3</td><td>1.4</td></tr></table>						Frequency (Hz)	50 / 60	100 / 120	300	1k	10k up	Multiplier	0.8	1.0	1.1	1.3	1.4												
Frequency (Hz)	50 / 60	100 / 120	300	1k	10k up																									
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Failure percentage Failure rate	When the failure percentage / failure rate is required, please contact with us for further discussion.																													

Diagram of Dimensions

Unit: mm



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Dimension and Permissible Ripple Current

Rated Voltage V _{oc}	Capacitance 120 Hz, 20°C μF	φ D×L mm	Ripple Current 120 Hz, 105°C A/rms	Tan δ at 120 Hz, 20°C	ESR 120 Hz, 20°C Ω	LC 5 minutes mA	Part Number
400	100	22 × 25	1.02	0.15	1.194	0.60	LSR101M2G--A2225S
	120	22 × 30	1.22	0.15	0.995	0.66	LSR121M2G--A2230S
	120	25 × 25	1.22	0.15	0.995	0.66	LSR121M2G--A2525S
	150	22 × 35	1.33	0.15	0.796	0.73	LSR151M2G--A2235S
	180	22 × 40	1.43	0.15	0.664	0.80	LSR181M2G--A2240S
	180	25 × 30	1.43	0.15	0.664	0.80	LSR181M2G--A2530S
	180	30 × 25	1.68	0.15	0.664	0.80	LSR181M2G--A3025S
	220	22 × 45	1.55	0.15	0.543	0.89	LSR221M2G--A2245S
	220	25 × 35	1.65	0.15	0.543	0.89	LSR221M2G--A2535S
	220	30 × 30	1.79	0.15	0.543	0.89	LSR221M2G--A3030S
	270	22 × 50	1.68	0.15	0.442	0.99	LSR271M2G--A2250S
	270	25 × 40	1.83	0.15	0.442	0.99	LSR271M2G--A2540S
	270	30 × 35	2.12	0.15	0.442	0.99	LSR271M2G--A3035S
	270	35 × 25	2.12	0.15	0.442	0.99	LSR271M2G--A3525S
	330	25 × 50	2.12	0.15	0.362	1.09	LSR331M2G--A2550S
	330	30 × 40	2.33	0.15	0.362	1.09	LSR331M2G--A3040S
	330	35 × 30	2.33	0.15	0.362	1.09	LSR331M2G--A3530S
	390	30 × 45	2.52	0.15	0.306	1.18	LSR391M2G--A3045S
	390	35 × 35	2.52	0.15	0.306	1.18	LSR391M2G--A3535S
	470	30 × 50	2.85	0.15	0.254	1.30	LSR471M2G--A3050S
	470	35 × 40	2.85	0.15	0.254	1.30	LSR471M2G--A3540S
	560	35 × 45	3.18	0.15	0.213	1.42	LSR561M2G--A3545S
	680	35 × 50	3.21	0.15	0.176	1.50	LSR681M2G--A3550S
450	82	22 × 25	0.96	0.15	1.456	0.58	LSR820M2W--A2225S
	100	22 × 30	1.04	0.15	1.194	0.64	LSR101M2W--A2230S
	100	25 × 25	1.04	0.15	1.194	0.64	LSR101M2W--A2525S
	120	22 × 35	1.15	0.15	0.995	0.70	LSR121M2W--A2235S
	120	25 × 30	1.22	0.15	0.995	0.70	LSR121M2W--A2530S
	150	22 × 40	1.22	0.15	0.796	0.78	LSR151M2W--A2240S
	150	25 × 35	1.31	0.15	0.796	0.78	LSR151M2W--A2535S
	150	30 × 25	1.31	0.15	0.796	0.78	LSR151M2W--A3025S
	180	22 × 45	1.35	0.15	0.664	0.85	LSR181M2W--A2245S
	180	25 × 40	1.35	0.15	0.664	0.85	LSR181M2W--A2540S
	180	30 × 30	1.60	0.15	0.664	0.85	LSR181M2W--A3030S
	180	35 × 25	1.60	0.15	0.664	0.85	LSR181M2W--A3525S
	220	25 × 45	1.55	0.15	0.543	0.94	LSR221M2W--A2545S
	220	30 × 35	1.71	0.15	0.543	0.94	LSR221M2W--A3035S
	270	25 × 50	1.74	0.15	0.442	1.05	LSR271M2W--A2550S
	270	30 × 40	1.90	0.15	0.442	1.05	LSR271M2W--A3040S
	270	35 × 30	1.90	0.15	0.442	1.05	LSR271M2W--A3530S
	330	30 × 45	2.20	0.15	0.362	1.16	LSR331M2W--A3045S
	330	35 × 35	2.20	0.15	0.362	1.16	LSR331M2W--A3535S
	390	30 × 50	2.40	0.15	0.306	1.26	LSR391M2W--A3050S
	390	35 × 40	2.42	0.15	0.306	1.26	LSR391M2W--A3540S
	470	35 × 45	2.67	0.15	0.254	1.38	LSR471M2W--A3545S
	560	35 × 50	2.85	0.15	0.213	1.50	LSR561M2W--A3550S

Part Numbering System

LSR Series

LSR

Series Name

220μF

221

Capacitance

Example:

Cap.	Symbol
56	560
220	221
470	471

± 20%

M

Capacitance tolerance

M = ± 20%
K = ± 10%

400V

2G

Rated voltage

Example:

Voltage	Symbol
400	2G
450	2W

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Terminal type

Example:

Type	Symbol
2 pins	--
5 pins	L5

4.0±0.5mm

A

Terminal length

--:

6.3 ± 1.0 mm

30 φ × 30L

3030

Case size

Example:

φ D×L	Code
22×30	2230
25×25	2525
30×40	3040

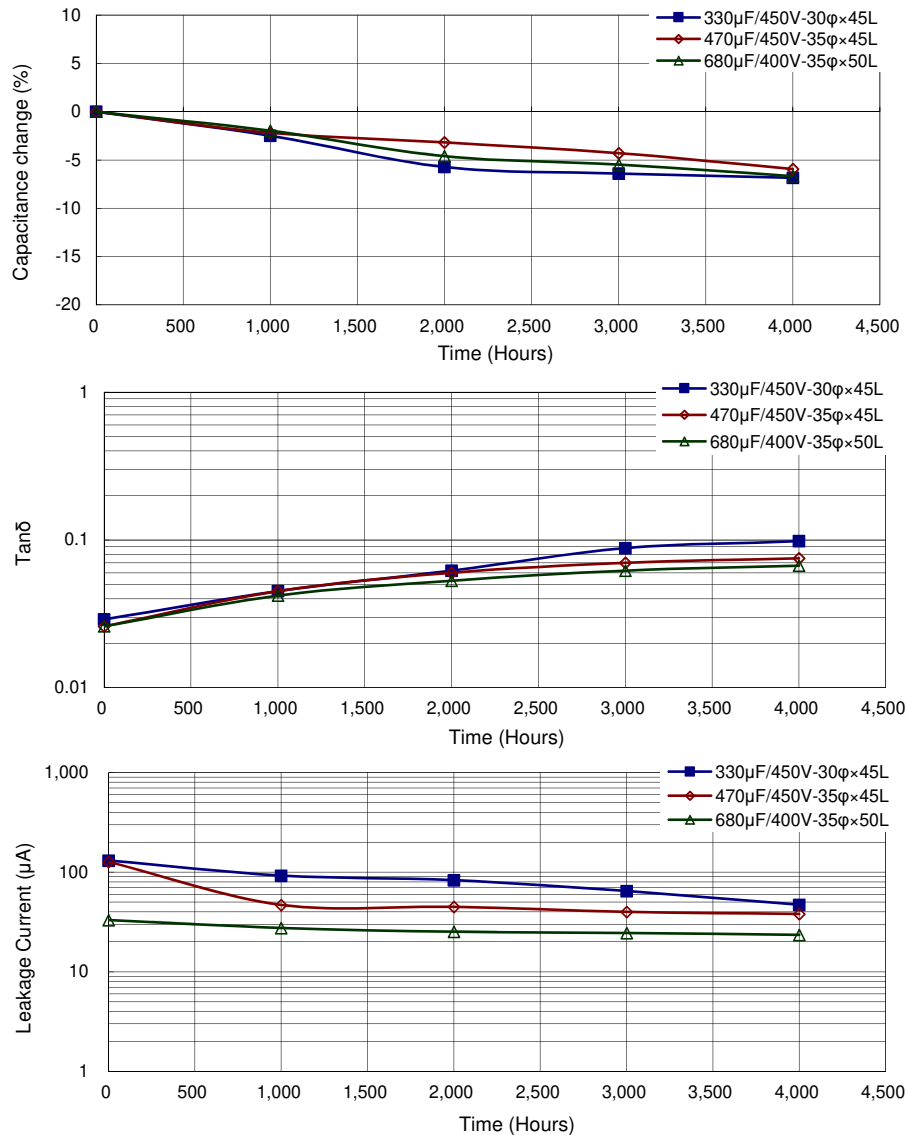
Regional Tracking Purpose

S

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

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Typical Endurance Curves



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