



LSR Series

Features

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

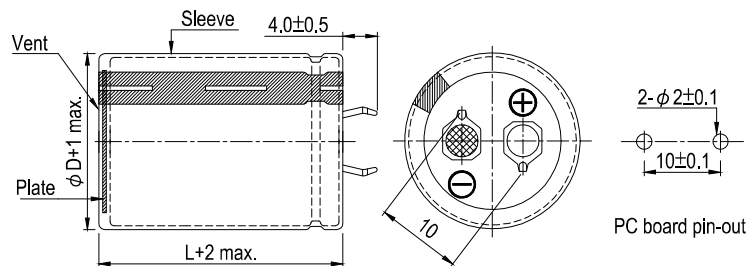


Specifications

Items	Performance																	
Category Temperature Range	400 ~ 450V																	
	-25°C ~ +105°C																	
Capacitance Tolerance	± 20% (at 120 Hz, 20°C)																	
Leakage Current (at 20°C)	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°C)	<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						
	Rated Voltage	400	450															
Tanδ(max.)	0.15	0.15																
Low Temperature Characteristics (at 120 Hz)	Impedance ratio shall not exceed the values given in the table below.																	
	<table><tr><td>Rated Voltage</td><td>400</td><td>450</td></tr><tr><td>Impedance Ratio</td><td>Z(-25°C) / Z(+20°C)</td><td>8</td><td>8</td></tr></table>						Rated Voltage	400	450	Impedance Ratio	Z(-25°C) / Z(+20°C)	8	8					
Rated Voltage	400	450																
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Endurance	<table><tr><td>Test Time</td><td>3,000 Hrs</td></tr><tr><td>Capacitance Change</td><td>Within ± 20% of initial value</td></tr><tr><td>Tanδ</td><td>Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td>Within specified value</td></tr></table>						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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Capacitance Change	Within ± 20% of initial value																	
Tanδ	Less than 200% of specified value																	
Leakage Current	Within specified value																	
* The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 3,000 hours at 105°C.																		
Shelf Life Test	<table><tr><td>Test Time</td><td>1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td>Within ± 15% of initial value</td></tr><tr><td>Tanδ</td><td>Less than 150% of specified value</td></tr><tr><td>Leakage Current</td><td>Within specified value</td></tr></table>						Test Time	1,000 Hrs	Capacitance Change	Within ± 15% of initial value	Tanδ	Less than 150% of specified value	Leakage Current	Within specified value				
	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°C after exposing them for 1,000 hours at 105 °C 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	<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												
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°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--A2225
	120	22 × 30	1.22	0.15	0.995	0.66	LSR121M2G--A2230
	120	25 × 25	1.22	0.15	0.995	0.66	LSR121M2G--A2525
	150	22 × 35	1.33	0.15	0.796	0.73	LSR151M2G--A2235
	180	22 × 40	1.43	0.15	0.664	0.80	LSR181M2G--A2240
	180	25 × 30	1.43	0.15	0.664	0.80	LSR181M2G--A2530
	180	30 × 25	1.68	0.15	0.664	0.80	LSR181M2G--A3025
	220	22 × 45	1.55	0.15	0.543	0.89	LSR221M2G--A2245
	220	25 × 35	1.65	0.15	0.543	0.89	LSR221M2G--A2535
	220	30 × 30	1.79	0.15	0.543	0.89	LSR221M2G--A3030
	270	22 × 50	1.68	0.15	0.442	0.99	LSR271M2G--A2250
	270	25 × 40	1.83	0.15	0.442	0.99	LSR271M2G--A2540
	270	30 × 35	2.12	0.15	0.442	0.99	LSR271M2G--A3035
	270	35 × 25	2.12	0.15	0.442	0.99	LSR271M2G--A3525
	330	25 × 50	2.12	0.15	0.362	1.09	LSR331M2G--A2550
	330	30 × 40	2.33	0.15	0.362	1.09	LSR331M2G--A3040
	330	35 × 30	2.33	0.15	0.362	1.09	LSR331M2G--A3530
	390	30 × 45	2.52	0.15	0.306	1.18	LSR391M2G--A3045
	390	35 × 35	2.52	0.15	0.306	1.18	LSR391M2G--A3535
	470	30 × 50	2.85	0.15	0.254	1.30	LSR471M2G--A3050
	470	35 × 40	2.85	0.15	0.254	1.30	LSR471M2G--A3540
450	560	35 × 45	3.18	0.15	0.213	1.42	LSR561M2G--A3545
	680	35 × 50	3.21	0.15	0.176	1.50	LSR681M2G--A3550
	82	22 × 25	0.96	0.15	1.456	0.58	LSR820M2W--A2225
	100	22 × 30	1.04	0.15	1.194	0.64	LSR101M2W--A2230
	100	25 × 25	1.04	0.15	1.194	0.64	LSR101M2W--A2525
	120	22 × 35	1.15	0.15	0.995	0.70	LSR121M2W--A2235
	120	25 × 30	1.22	0.15	0.995	0.70	LSR121M2W--A2530
	150	22 × 40	1.22	0.15	0.796	0.78	LSR151M2W--A2240
	150	25 × 35	1.31	0.15	0.796	0.78	LSR151M2W--A2535
	150	30 × 25	1.31	0.15	0.796	0.78	LSR151M2W--A3025
	180	22 × 45	1.35	0.15	0.664	0.85	LSR181M2W--A2245
	180	25 × 40	1.35	0.15	0.664	0.85	LSR181M2W--A2540
	180	30 × 30	1.60	0.15	0.664	0.85	LSR181M2W--A3030
	180	35 × 25	1.60	0.15	0.664	0.85	LSR181M2W--A3525
	220	25 × 45	1.55	0.15	0.543	0.94	LSR221M2W--A2545
	220	30 × 35	1.71	0.15	0.543	0.94	LSR221M2W--A3035
	270	25 × 50	1.74	0.15	0.442	1.05	LSR271M2W--A2550
	270	30 × 40	1.90	0.15	0.442	1.05	LSR271M2W--A3040
	270	35 × 30	1.90	0.15	0.442	1.05	LSR271M2W--A3530
	330	30 × 45	2.20	0.15	0.362	1.16	LSR331M2W--A3045
	330	35 × 35	2.20	0.15	0.362	1.16	LSR331M2W--A3535
	390	30 × 50	2.40	0.15	0.306	1.26	LSR391M2W--A3050
	390	35 × 40	2.42	0.15	0.306	1.26	LSR391M2W--A3540
	470	35 × 45	2.67	0.15	0.254	1.38	LSR471M2W--A3545
	560	35 × 50	2.85	0.15	0.213	1.50	LSR561M2W--A3550

Part Numbering System

LSR Series	220μF	± 20%	400V		4.0±0.5mm	30 ϕ ×30L	General Purpose
<u>LSR</u>	<u>221</u>	<u>M</u>	<u>2G</u>	- -	<u>A</u>	<u>3030</u>	
Series Name	Capacitance	Capacitance tolerance	Rated voltage	Terminal type	Terminal length	Case size	Application
Example:			Example:	Example:		Example:	
Cap.	Symbol	M = ± 20% K = ± 10%	Voltage	Symbol	"-": 6.3 ± 1.0 mm	ϕ D×L	Code
56	560		400	2G		22×30	2230
220	221		450	2W		25×25	2525
470	471					30×40	3040

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

Typical Endurance Curves

