



LSR Series

Features

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



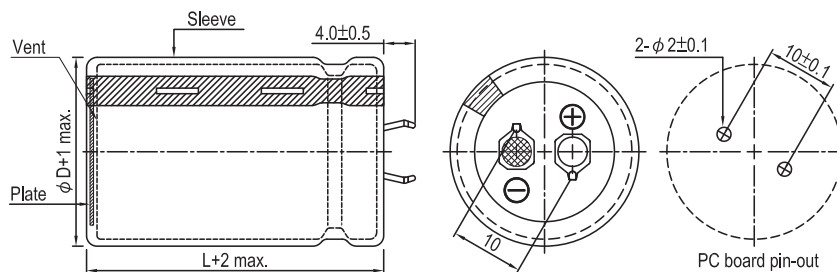
Sleeve & Marking Color: Black & White

Specifications

Items	Performance																													
Category Temperature Range	400 ~ 450V																													
	-25℃ ~ +105℃																													
Capacitance Tolerance	± 20% (at 120Hz, 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 120Hz, 20℃)	<table><tr><td colspan="2">Rated Voltage</td><td>400</td><td colspan="3">450</td></tr><tr><td colspan="2">Tanδ(max)</td><td>0.15</td><td colspan="3">0.15</td></tr></table>						Rated Voltage		400	450			Tanδ(max)		0.15	0.15														
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Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below. <table><tr><td colspan="2">Rated Voltage</td><td>400</td><td colspan="3">450</td></tr><tr><td>Impedance Ratio</td><td>Z(-25℃)/ Z(+20℃)</td><td>8</td><td colspan="3">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																									
Multiplier	0.8	1.0	1.1	1.3	1.4																									
Failure percentage	≤ 3 % (During useful life)																													
Failure rate	≤ 70 fit (70×10 ⁻⁹ /h)																													

Diagram of Dimensions

Unit: mm



Snap-in



Dimension and Permissible Ripple Current

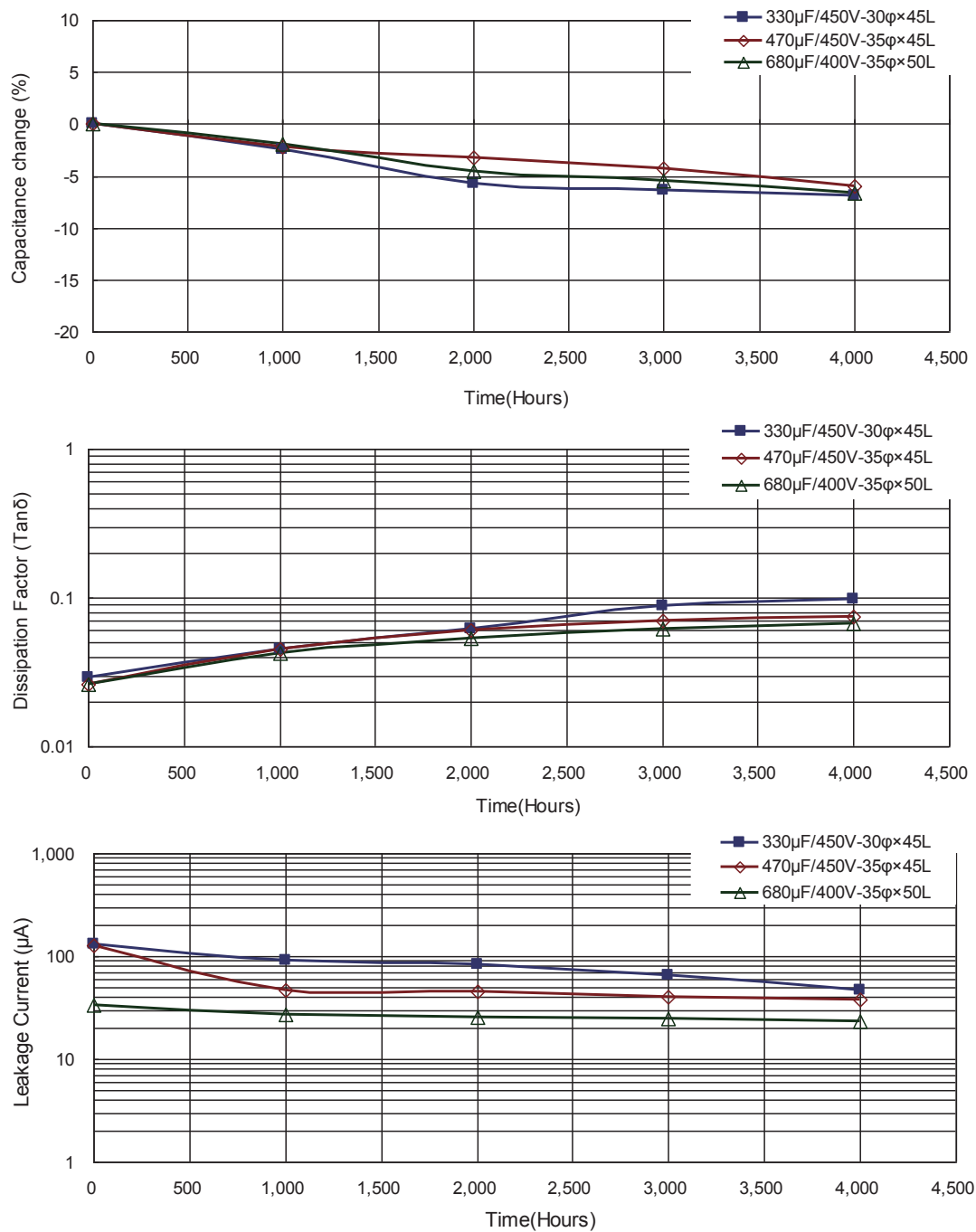
Rated Voltage V _{DC}	Capacitance 120Hz, 20°C μF	φ D×L mm	Ripple Current 120 Hz, 105°C A/rms	Tan δ at 120Hz, 20°C	ESR 120Hz, 20°C Ω	LC 5 minutes mA	Part Number
400	100	22 × 25	1.02	0.15	1.194	0.60	LSR101M2G--A2225
	120	22 × 30	1.22	0.15	0.995	0.66	LSR121M2G--A2230
	120	25 × 25	1.22	0.15	0.995	0.66	LSR121M2G--A2525
	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	Pb-free Terminal + PET Sleeve
<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	Terminal and Sleeve Type
Example:		M = ±20% K = ±10%	Example:	Example:	"-": 6.3±1.0 mm	Example:	
Cap.	Symbol		WV	Type		ϕ D×L	Code
56	560		400	2 pins	--	22×30	2230
220	221		450	5 pins	L5	25×25	2525
470	471					30×40	3040

Note: For more details, please refer to "Part Numbering System (Snap-in Type)" on page 21.

Typical Endurance Curves



Mouser Electronics

Authorized Distributor

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[Lelon:](#)

[LSR121M2GBK-2230](#) [LSR331M2PBK-3045](#) [LSR221M2GBK-2535](#) [LSR102M2GBK-3570](#) [LSR331M2GBK-3040](#)
[LSR121M2WBK-2230](#) [LSR331M2WBK-3045](#) [LSR471M2GBK-3530](#) [LSR101M2GBK-2225](#) [LSR221M2WBK-3035](#)
[LSR471M2GBK-3540](#) [LSR121M2WBK-2530](#) [LSR561M2GBK-3545](#)