LSR Series

Features

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



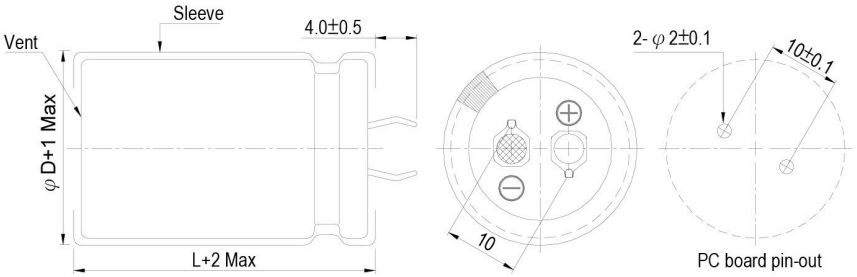
Sleeve & Marking Color: Black & White

Specifications

Items	Performance
Category Temperature Range	400 ~ 450V -25℃ ~ +105℃
Capacitance Tolerance	± 20% (at 120Hz, 20℃)
Leakage Current (at 20℃)	$I = 3\sqrt{CV}$ or 1.5 mA whichever is smaller (after 5 minutes) Where, C = rated capacitance in μF V = rated DC working voltage in V
Tanδ (at 120Hz, 20℃)	Rated Voltage: 400 / 450 Tanδ(max): 0.15 / 0.15
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below. Rated Voltage: 400 / 450 Impedance Ratio Z(-25℃)/ Z(+20℃): 8 / 8
Endurance	Test Time: 3,000 Hrs 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℃ after the rated voltage applied with rated ripple current for 3,000 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 & 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	≦ 3 % (During useful life) ≦ 70 fit (70 10^{-9}/h)

Diagram of Dimensions

Unit: mm



Dimension & Permissible Ripple Current

Working Voltage V. DC	Capacitance 120Hz, 20℃ μF	φD×L mm	Ripple Current 120 Hz, 105℃ A/rms	Tan δ at 120Hz, 20℃	ESR 120Hz, 20℃ 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
	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
450	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	30φ×30L	Pb-free Terminal + PET Sleeve
LSR	**221**	**M**	**2G**	**- -**	**A**	**3030**	
Series name	Capacitance	Capacitance tolerance	Rated voltage	Terminal type	Terminal length	Case size	Terminal and Sleeve Type

Example:

Cap.	Symbol
56	560
220	221
470	471

M = ±20%
K = ±10%

Example:

WV	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 21.

Typical Endurance Curves

