

LSR Series

Features

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



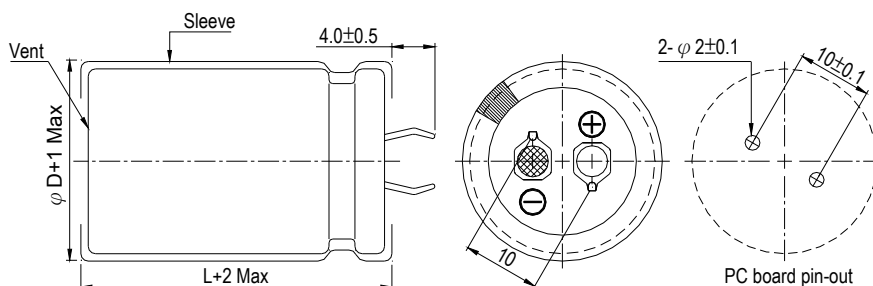
Sleeve & Marking Color: Black & White

Specifications

Items	Performance												
Category Temperature Range	400 ~ 450V -25°C ~ +105°C												
Capacitance Tolerance	± 20% (at 120Hz, 20°C)												
Leakage Current (at 20°C)	$I = 3\sqrt{CV}$ or 1.5 mA whichever is smaller (after 5 minutes) Where, C = rated capacitance in μF V = rated DC working voltage in V												
Tan δ (at 120Hz, 20°C)	<table border="1"> <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	Tan δ (max)	0.15	0.15						
Rated Voltage	400	450											
Tan δ (max)	0.15	0.15											
Low Temperature Characteristics (at 120Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <tr> <td colspan="2">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										
Impedance Ratio	Z(-25°C)/ Z(+20°C)	8	8										
Endurance	<table border="1"> <tr> <td>Test Time</td> <td>3,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within $\pm 20\%$ 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> <p>* 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.</p>	Test Time	3,000 Hrs	Capacitance Change	Within $\pm 20\%$ of initial value	Tan δ	Less than 200% of specified value	Leakage Current	Within specified value				
Test Time	3,000 Hrs												
Capacitance Change	Within $\pm 20\%$ of initial value												
Tan δ	Less than 200% of specified value												
Leakage Current	Within specified value												
Shelf Life Test	<table border="1"> <tr> <td>Test Time</td> <td>1,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within $\pm 15\%$ 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> <p>* 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).</p>	Test Time	1,000 Hrs	Capacitance Change	Within $\pm 15\%$ of initial value	Tan δ	Less than 150% of specified value	Leakage Current	Within specified value				
Test Time	1,000 Hrs												
Capacitance Change	Within $\pm 15\%$ of initial value												
Tan δ	Less than 150% of specified value												
Leakage Current	Within specified value												
Ripple Current & Frequency Multipliers	<table border="1"> <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	$\leq 3\%$ (During useful life)												
Failure rate	≤ 70 fit ($70 \cdot 10^{-9}/h$)												

Diagram of Dimensions

Unit: mm





Dimension & Permissible Ripple Current

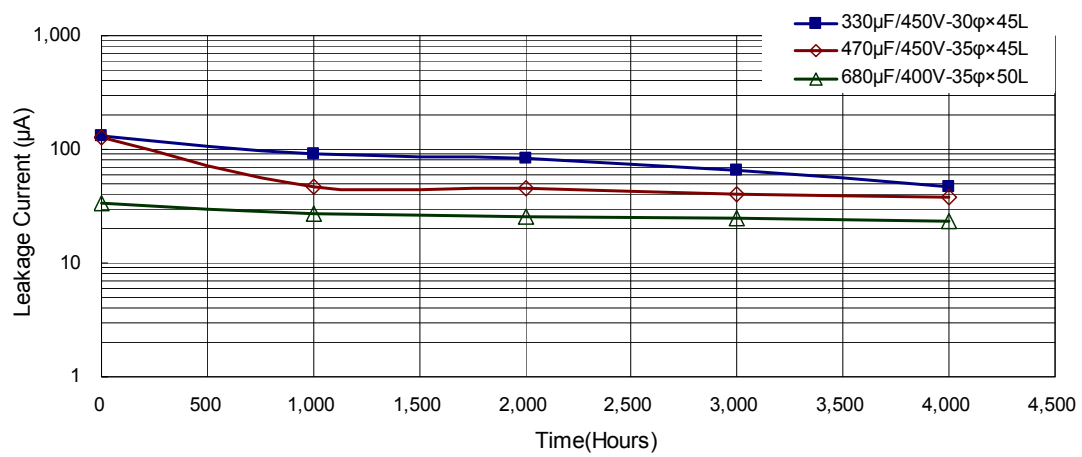
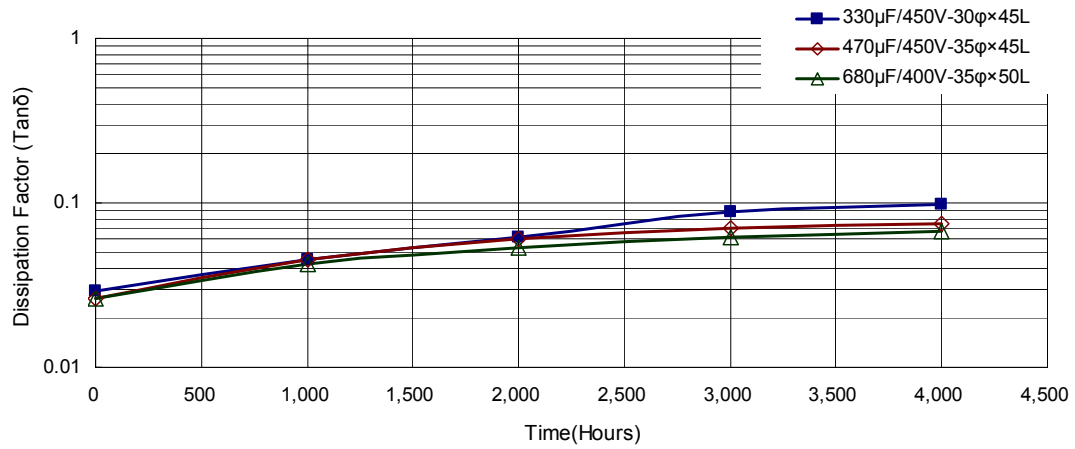
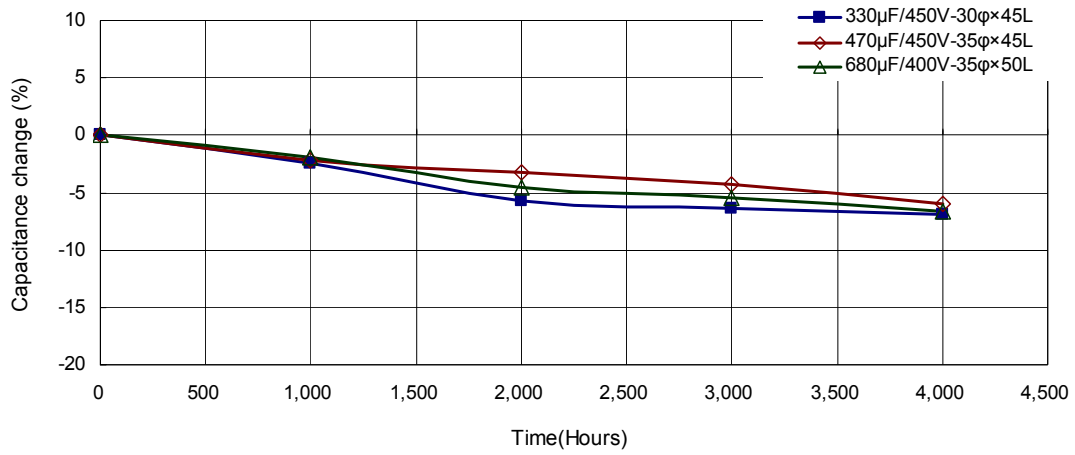
Working Voltage V. DC	Capacitance 120Hz, 20°C μF	φ D×L mm	Ripple Current 120 Hz, 105°C A/rms	Tan δ at 120Hz, 20°C	ESR 120Hz, 20°C Ω	LC 5 minutes mA	Part Number
400	100	22 × 25	1.02	0.15	1.194	0.60	LSR101M2G--A2225
	120	22 × 30	1.22	0.15	0.995	0.66	LSR121M2G--A2230
	120	25 × 25	1.22	0.15	0.995	0.66	LSR121M2G--A2525
	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	
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	30 φ × 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:	Example:	M = ±20% K = ±10%	Example:	Example:	Example:	Example:																												
<table border="1"> <tr><th>Cap.</th><th>Symbol</th></tr> <tr><td>56</td><td>560</td></tr> <tr><td>220</td><td>221</td></tr> <tr><td>470</td><td>471</td></tr> </table>	Cap.	Symbol	56	560	220	221	470	471	<table border="1"> <tr><th>WV</th><th>Symbol</th></tr> <tr><td>400</td><td>2G</td></tr> <tr><td>450</td><td>2W</td></tr> </table>	WV	Symbol	400	2G	450	2W		<table border="1"> <tr><th>Type</th><th>Symbol</th></tr> <tr><td>2 pins</td><td>--</td></tr> <tr><td>5 pins</td><td>L5</td></tr> </table>	Type	Symbol	2 pins	--	5 pins	L5	"A": 6.3±1.0 mm	<table border="1"> <tr><th>φ D×L</th><th>Code</th></tr> <tr><td>22×30</td><td>2230</td></tr> <tr><td>25×25</td><td>2525</td></tr> <tr><td>30×40</td><td>3040</td></tr> </table>	φ D×L	Code	22×30	2230	25×25	2525	30×40	3040	
Cap.	Symbol																																	
56	560																																	
220	221																																	
470	471																																	
WV	Symbol																																	
400	2G																																	
450	2W																																	
Type	Symbol																																	
2 pins	--																																	
5 pins	L5																																	
φ D×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



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Aluminium Electrolytic Capacitors - Snap In](#) category:

Click to view products by [Lelon](#) manufacturer:

Other Similar products are found below :

[NRLF103M25V35X20F](#) [EET-XB2W221LA](#) [419-2066-400](#) [B41231C4229M](#) [B43508C5337M062](#) [MAL215969181E3](#)
[383LX332M250N082V](#) [LGZ2W101MELB30](#) [LGZ2W151MELB40](#) [LGZ2W271MELC45](#) [LGZ2W221MELC40](#) [LGZ2W331MELC50](#)
[LGZ2W121MELC25](#) [HFE102M35070FVA](#) [KN821M40035x50A](#) [EKMM451VSN471MA45S](#) [EKMW451VSN331MR30S](#)
[ELXS601VSN121MA30S](#) [ESMH101VNN682MA50U](#) [KN471M20022*36A](#) [ELH2GM221P30KT](#) [CK221MOH40B](#) [CK103MGI45B](#)
[CL221KPI30B](#) [CL271MPI40B](#) [CL471MVJ50B](#) [EKMR451VSN471MA35S](#) [EKMR451VSN151MP35S](#) [ELXS421VSN221MP45S](#)
[KN331M40030*35A](#) [ELG229M016AS3AA](#) [B43541A6397M000](#) [B43541B6227M000](#) [B43544A7227M000](#) [B43544C6227M000](#)
[B43630B5477M067](#) [B43630F2827M000](#) [B43640E9477M000](#) [B43644J6477M000](#) [MAL215757331E3](#) [MAL229956561E3](#)
[MAL229966182E3](#) [MAL229967471E3](#) [MAL229967821E3](#) [ALC70A821EF400](#) [ALC70A102EH400](#) [MAL205658102E3](#) [MAL205855103E3](#)
[MAL209436471E3](#) [MAL215848103E3](#)