Aluminum Electrolytic Capacitors
LSG Series: Snap-in Terminal Type, 105°C

FEATURES

- Has a snap-in terminal which can solder to a PCB directly and need not fixture to save processing time.
- Suitable for electronic equipment with medium-high voltage circuits.
- Printed circuit board terminal snap-in type and lug terminal type available.

SPECIFICATIONS

Items	Performance	
Category Temperature Range	16 ~ 100V	160 ~ 500V
	-40℃ ~ +105℃	-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℃)

Rated Voltage	16	25	35	50	63	80	100	160	200	250	350	400	420	450	500
Tanδ (max)	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

Low Temperature Characteristics (at 120 Hz)

Impedance ratio shall not exceed the values given in the table below.

Rated Voltage		16	25	35	50	63	80	100	160	200	250	350	400	420	450	500
Impedance Ratio	Z(-25℃)/Z(+20℃)	4	3	3	2	2	2	4	4	4	4	8	8	8	8	8
	Z(-40℃)/Z(+20℃)	15	10	8	6	5	5	4	-	-	-	-	-	-	-	-

Endurance

Test Time	2,000 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 2,000 hours at 105℃.

Shelf Life Test

Test Time	1,000 Hrs
Capacitance Change	Within ±20% 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 and Frequency Multipliers

Case size	Freq.(Hz) / Rated Volt. (V)	50 / 60	100 / 120	500	1k	10k up
Length ≦ 55L	≦ 100	0.92	1.00	1.13	1.19	1.20
	160 ~ 250	0.81	1.00	1.32	1.45	1.50
	350 ≦	0.77	1.00	1.30	1.41	1.43
Length ≧ 60L	160 ~ 450	0.88	1.00	1.20	1.25	1.40

Failure percentage Failure rate

When the failure percentage / failure rate is required, please contact with us for further discussion.

Diagram of Dimensions

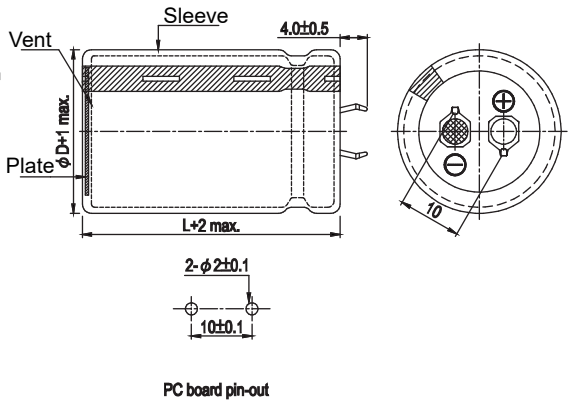
Unit: mm

PART NUMBER EXAMPLE

LSG 101 M 2G 220 300

- Blank or A = 4mm Terminal
B = 6.3mm Terminal
- Case Size (Diameter X Length)mm
- Rate Voltage (400V)
- Capacitance tolerance (±20%)
- Capacitance (100µF)
- Series name

SNAP-IN TERMINAL TYPE



PC board pin-out

DIMENSION AND PERMISSIBLE RIPPLE CURRENT

μF	V.D.C.	16V (1C)																25V (1E)																35V (1V)															
	CODE	20				22				25				30				35				22				25				30				35				22				25				30				35			
3300	332																																	22	x	25	1.3														
3900	392																																	22	x	30	1.5														
4700	472																																	22	x	25	1.63	25	x	25	1.70										
5600	562																																	22	x	25	1.63	25	x	25	1.77	30	x	25	1.99				
6800	682																																	22	x	30	1.86	25	x	30	2.04	30	x	30	2.24				
8200	822																					22	x	25	1.73									22	x	35	2.10	25	x	35	2.60	30	x	25	2.49	35	x	25	2.69
10000	103	20	x	25	1.61	22	x	25	1.78													22	x	30	2.05	25	x	25	2.05									22	x	40	2.42	25	x	40	2.83	30	x	30	2.75				
12000	123					22	x	25	1.92													22	x	35	2.23	25	x	25	2.09	30	x	25	2.45	35	x	25	2.74	22	x	45	2.79	25	x	45	3.00	30	x	35	2.96	35	x	25	2.75
15000	153					22	x	30	2.00	25	x	25	2.25									22	x	40	3	25	x	35	2.80	30	x	25	2.72	35	x	25	3.00					25	x	45	3.24	30	x	45	3.24	35	x	25	3.12
18000	183					22	x	35	2.49	25	x	30	2.52	30	x	25	2.61					22	x	45	2.9	25	x	35	2.83	30	x	30	3.07	35	x	25	3.02					25	x	50	3.71	30	x	45	4.07	35	x	35	4.02
																																																35	x	40	4.37
22000	223					22	x	40	2.9	25	x	30	2.77	30	x	25	2.88					22	x	50	3.3	25	x	40	3.22	30	x	30	3.18	35	x	25	3.07									30	x	45	4.34	35	x	40	4.69
27000	273									25	x	35	3.02	30	x	30	3.15													30	x	35	3.35	35	x	30	3.46														
33000	333													30	x	30	3.48	35	x	25	3.57																														
39000	393													30	x	35	4.03	35	x	30	4.16																														
47000	473																	35	x	35	4.85																														

μF	V.D.C.	50V (1H)																63V (1J)																80V															
	CODE	20				22				25				30				35				22				25				30				35				22				25				30				35			
1000	102																																	22	x	25	1.05														
1200	122																					22	x	25	1.19									22	x	30	1.24														
1500	152																					22	x	25	1.30	25	x	25	1.38									22	x	35	1.48	25	x	25	1.38				
1800	182					22	x	25	1.33													22	x	25	1.36	25	x	25	1.52									22	x	40	1.72	25	x	30	1.63								
2200	222					22	x	25	1.48													22	x	30	1.55	25	x	25	1.60									22	x	45	1.82	25	x	30	1.65								
2700	272					22	x	25	1.53	25	x	25	1.57									22	x	35	1.89	25	x	30	1.90	30	x	25	1.97									25	x	45	2.17	30	x	30	2.03				
3300	322					22	x	30	1.76	25	x	25	1.70									22	x	40	1.99	25	x	35	2.06	30	x	25	2.00	35	x	25	2.22					25	x	50	2.51					35	x	25	2.30
3900	392					22	x	35	1.97	25	x	25	1.82	30	x	25	1.95					22	x	45	2.34	25	x	35	2.20	30	x	25	2.18	35	x	25	2.40									30	x	45	2.89	35	x	30	2.68
4700	472					22	x	35	2.01	25	x	30	2.18	30	x	25	2.04	35	x	25	2.48	22	x	50	2.58	25	x	40	2.51	30	x	30	2.48	35	x	25	2.54									30	x	50	2.97	35	x	30	2.64
5600	562					22	x	40	2.32	25	x	35	2.47	30	x	25	2.33									25	x	45	2.92	30	x	35	2.91	35	x	30	3.00									30	x	45	3.10	35	x	45	3.39
6800	682																																																30	x	40	3.56
						22	x	45	2.70	25	x	40	2.92	30	x	30	2.84	35	x	25	2.91									30	x	50	3.65	35	x	30	3.30													35	x	50	3.90
8200	822									25	x	45	3.13	30	x	35	3.13	35	x	30	3.23									30	x	45	3.57	35	x	35	3.52														
10000	103									25	x	50	3.39	30	x	40	3.55	35	x	30	3.47													35	x	40	3.90														
12000	103													30	x	45	4.04	35	x	35	3.98													35	x	45	4.50														
15000	153													30	x	50	4.60	35	x	45	4.80																														

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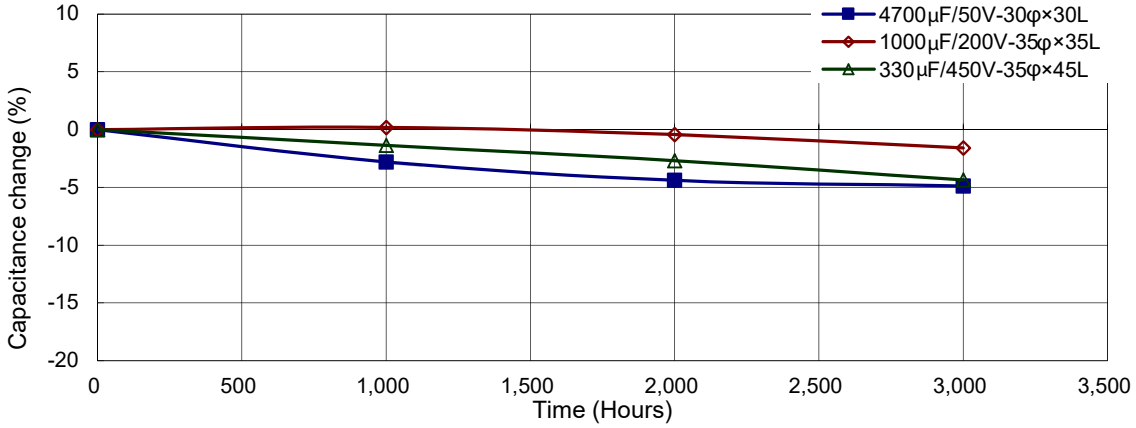
LSG Series: Snap-in Terminal Type, 105°C

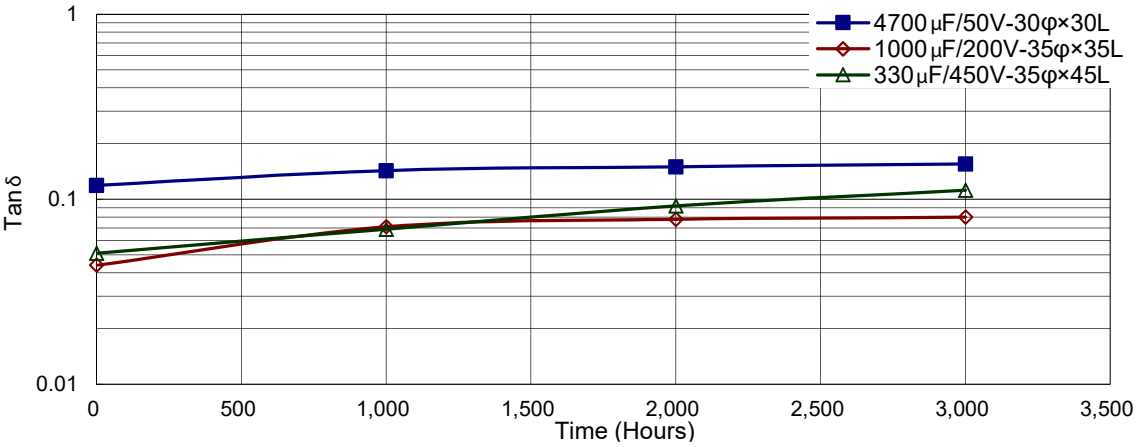
µF	V.D.C.	100V										160V								200V									
	CODE	20		22		25		30		35		22		25		30		35		22		25		30		35		40	
270	271											22 x 25	0.86							22 x 25	0.95								
330	331											22 x 25	1.10							22 x 30	1.13	25 x 25	1.13						
390	391											22 x 30	1.22	25 x 25	1.15					22 x 35	1.25	25 x 30	1.21	30 x 25	1.20				
470	471											22 x 35	1.36	25 x 25	1.33					22 x 35	1.23	25 x 30	1.32	30 x 25	1.50				
560	561											22 x 40	1.50	25 x 30	1.45	30 x 25	1.40			22 x 40	1.43	25 x 35	1.50	30 x 30	1.52	35 x 25	1.49		
680	681											22 x 45	1.65	25 x 35	1.65	30 x 25	1.65			22 x 50	1.74	25 x 40	1.70	30 x 30	1.58	35 x 25	1.72		
820	821			22 x 30	1.14							22 x 50	1.93	25 x 40	1.85	30 x 30	1.76	35 x 25	1.91			25 x 45	1.85	30 x 35	1.85	35 x 30	1.90		
1000	102			22 x 30	1.26									25 x 45	2.20	30 x 35	2.02	35 x 30	2.44			25 x 55	2.13	30 x 40	2.06	35 x 30	2.01		
1200	122			22 x 35	1.55	25 x 30	1.56	30 x 25	1.68					25 x 50	2.45	30 x 40	2.35	35 x 35	2.50					30 x 45	2.37	35 x 35	2.34		
1500	152			22 x 40	1.78	25 x 35	1.80	30 x 25	1.76	35 x 25	1.98					30 x 45	2.82	35 x 40	2.70					30 x 50	2.77	35 x 40	2.76		
1800	182			22 x 45	1.99	25 x 35	1.95	30 x 30	2.29	35 x 25	2.34					30 x 50	3.31	35 x 45	2.85							35 x 45	3.17		
2200	222			22 x 50	2.21	25 x 40	2.15	30 x 30	2.12	35 x 25	2.27															35 x 55	3.82		
2700	272					25 x 50	2.59	30 x 35	2.37	35 x 30	2.62																	40 x 50	4.39
3300	332							30 x 40	2.77	35 x 35	2.99																		
3900	392							30 x 45	3.02	35 x 40	3.35																		
4700	472									35 x 40	3.30																		
5600	562									35 x 45	3.51																		

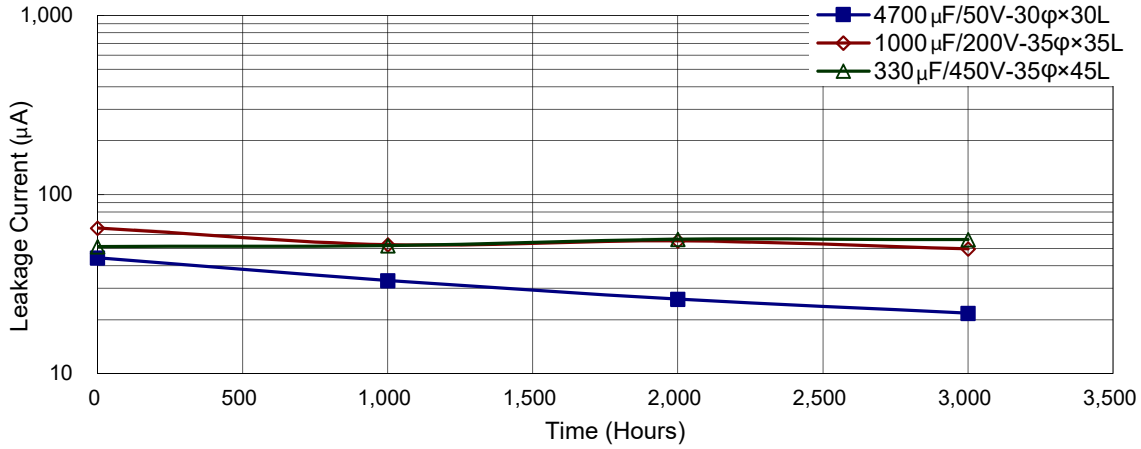
µF	V.D.C.	250V										350V										400V											
	CODE	22		25		30		35		40		22		25		30		35		40		22		25		30		35		40		45	
100	101											22 x 25	0.58									22 x 25	0.52										
120	121											22 x 30	0.69	25 x 25	0.69							22 x 30	0.62	25 x 25	0.61								
150	151											22 x 35	0.80									22 x 35	0.70	25 x 30	0.73								
180	181	22 x 35	0.78											25 x 30	0.82	30 x 25	0.85					22 x 40	0.81	25 x 35	0.85	30 x 25	0.83						
220	221	22 x 30	0.85	25 x 25	0.90							22 x 40	0.95	25 x 40	1.04	30 x 30	1.02	35 x 25	1.04			22 x 45	0.94	25 x 40	1.00	30 x 30	0.99						
270	271	22 x 30	0.91	25 x 25	0.91	30 x 25	1.01							25 x 45	1.17	30 x 35	1.17	35 x 25	1.12			22 x 55	1.14	25 x 45	1.17	30 x 35	1.16	35 x 25	1.08				
330	331	22 x 35	1.03	25 x 30	1.13	30 x 25	1.05							25 x 50	1.20	30 x 35	1.12	35 x 30	1.21					25 x 50	1.30	30 x 40	1.36						
390	391	22 x 40	1.13	25 x 35	1.27	30 x 25	1.11									30 x 40	1.29									30 x 45	1.56	35 x 30	1.44				
470	471	22 x 45	1.31	25 x 40	1.49	30 x 30	1.37	35 x 25	1.17							30 x 45	1.48	35 x 40	1.63							30 x 50	1.72	35 x 40	1.78				
560	561			25 x 45	1.79	30 x 35	1.58	35 x 25	1.61									35 x 40	1.69	40 x 30	1.63					30 x 55	1.95	35 x 40	1.86	40 x 35	1.91		
680	681			25 x 50	1.77	30 x 40	2.00	35 x 30	1.95									35 x 35	1.52	40 x 35	1.58							35 x 50	2.25	40 x 40	2.22		
820	821					30 x 45	2.30	35 x 30	2.27									35 x 50	1.86	40 x 50	2.01							35 x 55	2.58	40 x 50	2.67		
1000	102					30 x 50	2.37	35 x 40	2.65									35 x 60	2.22	40 x 50	2.21							35 x 65	2.90	40 x 55	2.92		
1200	122					30 x 55	2.71	35 x 45	3.05											40 x 55	2.52							35 x 75	3	40 x 60	3		
1500	152							35 x 50	3.18											40 x 65	3.03											45 x 70	4.23
1800	182							35 x 60	3.76																							45 x 80	4.92
2200	222							35 x 70	4.45																								

µF	V.D.C.	420V										450V												500V									
	CODE	22		25		30		35		40		22		25		30		35		40		45		22		25		30		35		40	
82	820	22 x 25	0.45									22 x 25	0.45											22 x 30	0.75	25 x 30	0.81						
100	101	22 x 30	0.53									22 x 30	0.53	25 x 25	0.51									22 x 40	0.94	25 x 40	1.00						
120	121	22 x 35	0.62	25 x 25	0.58							22 x 35	0.62											22 x 50	1.14	25 x 50	1.22						
150	151	22 x 40	0.74									22 x 40	0.74	25 x 30	0.70			35 x 25	0.83					22 x 50	1.27	25 x 55	1.42						
180	181	22 x 45	0.85	25 x 30	0.77							22 x 45	0.88	25 x 35	0.82	30 x 25	0.80											30 x 35	1.42						
220	221	22 x 50	1.00	25 x 40	0.96	30 x 30	0.95							25 x 40	0.96	30 x 30	0.95											30 x 35	1.57	35 x 40	1.74		
270	271	22 x 60	1.20	25 x 50	1.10	30 x 35	1.06	35 x 30	1.09					25 x 50	1.21	30 x 35	1.12													35 x 45	2.02		
330	331			25 x 55	1.36	30 x 40	1.24	35 x 30	1.21					25 x 55	1.35	30 x 40	1.31	35 x 30	1.27											35 x 50	2.45		
390	391					30 x 45	1.42	35 x 35	1.40	40 x 40	1.60					30 x 45	1.49	35 x 35	1.47	40 x 30	1.51												
470	471							35 x 40	1.62	40 x 35	1.66					30 x 55	1.79	35 x 40	1.71	40 x 35	1.75									35 x 60	2.62		
560	561							35 x 45	1.77	40 x 40	1.82							35 x 45	1.96	40 x 40	2.02												
680	681							35 x 50	2.12	40 x 45	2.11							35 x 55	2.35	40 x 45	2.33									35 x 70	3.38		
820	821							35 x 60	2.42	40 x 55	2.52									40 x 50	2.68									40 x 70	4.00		
1000	102							35 x 70	3.08	40 x 60	2.88									40 x 60	3.03									40 x 80	4.68		
1200	122							35 x 90	3.51	40 x 70	3.38							35 x 90	3.68	40 x 70	3.54												
1500	152																					45 x 80	4.49										

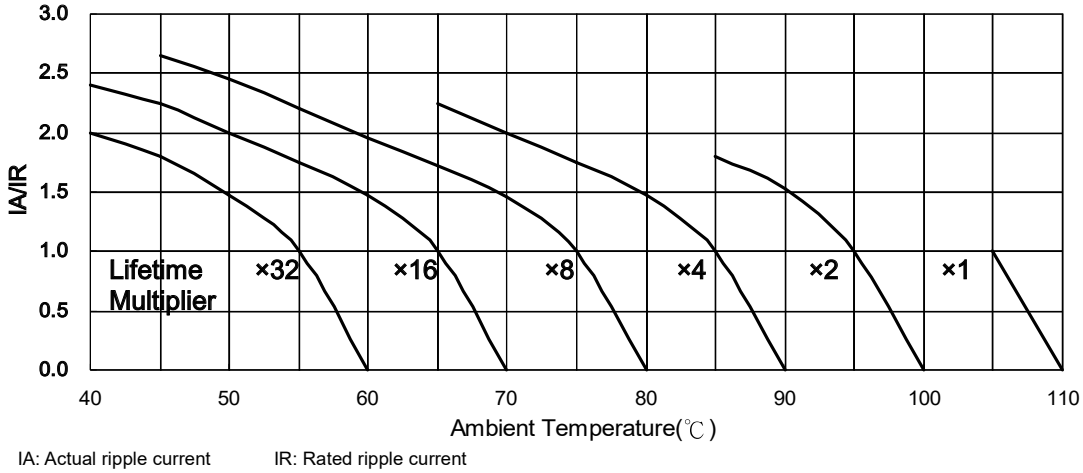
TYPICAL ENDURANCE CURVES







USEFUL LIFE CHART



IA: Actual ripple current IR: Rated ripple current