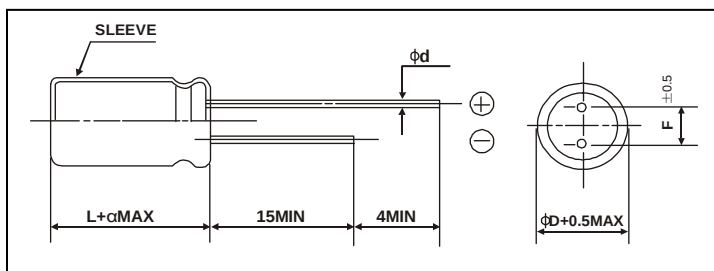


LL series**+105°C, Low Leakage(低漏电流品)****◆ FEATURES**

- Extremely low and stable leakage current characteristics.
- Close capacitance tolerance $\pm 20\%$ ($\pm 10\%$)

◆ SPECIFICATIONS

Items	Characteristics																																			
Category Temperature Rance	-40℃~+105℃																																			
Rated Voltage Range	6.3~100V.DC																																			
Nominal Capacitance Rance	0.1~6800μ F																																			
Capacitance Tolerance	± 20%(120Hz,+20℃)																																			
Leakage Current(MAX)	I=0.002CV or 0.3(μA) after 2 minutes whichever is greater measured with rated working voltage at 20℃																																			
Dissipation Factor(MAX) Tanδ (20℃,120Hz)	<table><tr><td>Rated Voltage(V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td>Tanδ</td><td>0.28</td><td>0.24</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td></tr></table>									Rated Voltage(V)	6.3	10	16	25	35	50	63	100	Tanδ	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08									
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100																											
	Tanδ	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08																											
When nominal capacitance is over 1000μ F,tanδ shall be added 0.02 to the listed value with Increase of every 1000μ F																																				
Load Life	After applying rated voltage with max ripple current for 1000hrs at 105℃,the capacitors shall meet the following requirements																																			
	Capacitance Change		Within ±20% of the initial value																																	
	Dissipation Factor		Not more than 200% of the specified value																																	
	Leakage Current		Not more than the specified value																																	
Shelf Life	After Leaving capacitors under no load at 85℃ for 1000hrs,they meet the characteristic requirements listed at right				Capacitance change		Within ±20% of the initial value																													
					Tanδ		≤200% of initial specified value																													
					Leakage current		≤200% of initial specified value																													
Low Temperature Stability Impedance Rate(MAX)	<table><tr><td>Rated Voltage(V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td>Z-25℃/Z+20℃</td><td>5</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>Z-40℃/Z+20℃</td><td>10</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td></tr></table>									Rated Voltage(V)	6.3	10	16	25	35	50	63	100	Z-25℃/Z+20℃	5	4	3	2	2	2	2	2	Z-40℃/Z+20℃	10	8	6	4	3	3	3	3
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100																											
	Z-25℃/Z+20℃	5	4	3	2	2	2	2	2																											
Z-40℃/Z+20℃	10	8	6	4	3	3	3	3																												
Other	JISC-5141 EIAJ RC-2372																																			

◆ CASE SIZE TABLE

ΦD	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5			0.6		0.8	
α	L≤16:α =1.5				L≥20:α =2.0		

◆ RIPPLE CURRENT MULTIPLIER

Cap(μ F)	Frequency(Hz)				
	50	120	300	1K	10K~
≤47	0.75	1.0	1.35	1.57	2.0
56~4700	0.8	1.0	1.23	1.34	1.5
≥5600	0.85	1.0	1.10	1.13	1.15

◆ STANDARD RATINGS

size:ΦD×L(mm)

Voltage Cap(μF)	Code	6.3V		10V		16V		25V	
		OJ		1A		1C		1E	
4.7	475							5×11	45
10	106					5×11	55	5×11	70
22	226					5×11	85	5×11	100
33	336					5×11	100	5×11	105
47	476			5×11	110	5×11	115	5×11	120
100	107			5×11	130	6.3×11	150	6.3×11	165
220	227			6.3×11	207	8×12	270	8×12	288
330	337			8×12	297	8×12	324	8×14	345
470	477	8×12	324	8×12	351	8×14	386	10×13	425
680	687	8×12	389	8×14	395	10×16	486	10×20	576
1000	108	10×13	513	10×16	567	10×20	710	13×21	855
2200	228	10×20	765	10×20	790	13×21	920	13×25	985
3300	338	13×21	1025	13×21	1165	13×25	1270	16×30	1460
4700	478	13×21	1140	13×25	1280	16×30	1570		
6800	688	13×25	1420	16×25	1450				

Maximum Allowable Ripple Current(mA rms) at 105°C 120Hz

◆ STANDARD RATINGS

Voltage Cap(μF)	Code	35V		50V		63V		100V	
		1V		1H		1J		2A	
0.1	104			5×11	1.1				
0.22	224			5×11	2.3				
0.33	334			5×11	3.5				
0.47	474			5×11	5.0				
0.68	684			5×11	7.3				
1.0	105			5×11	10.7			5×11	19
2.2	225			5×11	23			5×11	28
3.3	335			5×11	40			5×11	45
4.7	475	5×11	45	5×11	45			5×11	50
10	106	5×11	70	5×11	70	5×11	83	6.3×11	67
22	226	5×11	105	5×11	105	6.3×11	115	8×12	117
33	336	5×11	110	6.3×11	113	6.3×11	140	8×14	130
47	476	6.3×11	126	6.3×11	135	8×12	171	10×13	185
100	107	8×12	207	8×12	225	10×13	236	10×20	370
220	227	8×14	356	10×16	396	10×20	420	13×25	510
330	337	10×13	410	10×20	597	10×20	615	16×25	670
470	477	10×20	576	13×21	684	13×21	792	16×30	780
680	687	13×21	684	13×21	765	13×25	865		
1000	108	13×21	945	16×25	1210	16×25	1025		
2200	228	16×30	1360						

Maximum Allowable Ripple Current(mA rms) at 105°C 120Hz