

LL Series

Features
 Lifetime: 85, 1000hrs
 Low leakage current

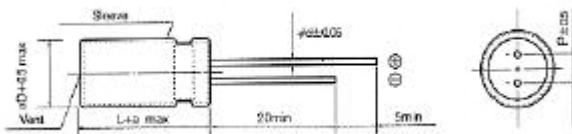
Recommended Applications
 AV(TV, Video, Audio)
 OA/HA/Communication
 Hi- Fi Pre-Amp
 Timer/Oscillation circuit



Specifications

Items	Characteristics									
Capacitance Tolerance	± 20% (M) (120Hz, 20 °C)									
Rated Voltage Range (WV)	6.3~100 VDC									
Operating Temperature Range	-40 ~ +85									
Surge Voltage (V) (20 °C)	WV	6.3	10	16	25	35	50	63	80	100
	SV	8	13	20	32	44	63	79	100	125
Leakage Current (Max) (20 °C)	I ≤ 0.002CV or 0.4 μA whichever is greater (After rated voltage applied for 2 minutes)									
	I = Leakage Current (μA) C = Nominal Capacitance (μF) V = Rated Voltage (V)									
Dissipation Factor (Max) (tan δ) (120Hz, 20 °C)	WV	6.3	10	16	25	35	50	63	80	100
	tan δ	0.24	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.07
	When rated capacitance is over 1000 μF, tan δ shall be added 0.02 to the listed value with increase of every 1000 μF.									
Low Temperature Stability Impedance Ratio (Max)	WV	6.3	10	16	25	35	50	63	80	100
	Z (120Hz) / Z(-25 °C) / Z(20 °C)	4	3	2	2	2	2	2	1.5	1.5
Load Life	After applying rated voltage for 1000 hours at 85 °C, the capacitor shall meet the following requirement.									
	Capacitance Change	Within ± 20% of the initial value								
	Dissipation Factor	Not more than 200% of the specified value								
Shelf Life	After placed at 85 °C without voltage applied for 500 hours, the capacitor shall meet the same requirement as load life.									
	Applicable standards	Refer to JIS C 5101								

Dimensions (mm)



D	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6 (0.8)	0.8	0.8
a	1.0	1.0	1.0	1.0	2.0	2.0	2.0

Multiplier for Ripple Current

() : L 30

Frequency coefficient

Freq. (Hz)	50	120	1K	10K
WV (VDC)				
6.3~10	0.80	1.00	1.10	1.20
16~25	0.80	1.00	1.20	1.30
35~50	0.80	1.00	1.50	1.70
63~100	0.80	1.00	1.60	1.90

Temperature coefficient

Ambient Temperature (°C)	50	70	85
Coefficient	1.36	1.25	1.00

Case Size / Max Ripple Current

CASE SIZE (DxL(mm)) / MAX PERMISSIBLE RIPPLE CURRENT (RC(mArms) / 120Hz,85)

WV SPEC μF	6.3		10		16		25		35		50		63	
	DxL	RC	DxL	RC	DxL	RC	DxL	RC	DxL	RC	DxL	RC	DxL	RC
0.1											5x11	1		
0.22											5x11	2		
0.33											5x11	3		
0.47											5x11	5		
1											5x11	10		
2.2											5x11	20		
3.3											5x11	30		
4.7							5x11	35	5x11	40	5x11	40	5x11	40
10					5x11	45	5x11	50	5x11	55	5x11	60	5x11	55
22			5x11	60	5x11	65	5x11	70	5x11	75	5x11	85	6.3x11	100
33	5x11	65	5x11	70	5x11	80	5x11	85	5x11	90	6.3x11	110	6.3x11	120
47	5x11	80	5x11	85	5x11	95	5x11	100	6.3x11	120	6.3x11	135	8x11	160
100	5x11	110	5x11	120	6.3x11	160	6.3x11	170	8x11	210	8x11	225	10x12.5	270
220	6.3x11	190	6.3x11	210	8x11	270	8x11	290	10x12.5	360	10x17	460	10x20	500
330	6.3x11	230	8x11	290	8x11	330	10x12.5	410	10x17	520	10x20	610	13x20	710
470	8x11	320	8x11	350	10x12.5	460	10x17	570	10x20	660	13x20	850	13x25	930
1000	10x12.5	550	10x17	700	10x17	780	13x20	1040	13x25	1230	16x26	1560	16x32	1710
2200	13x20	1090	13x20	1180	13x25	1420	16x26	1810	16x32	1980	18x36	2400		
3300	13x20	1290	13x25	1520	16x26	1890	16x32	2170	18x36	2590				
4700	16x26	1870	16x26	2000	16x32	2370	18x36	2780	18x40	3060				
6800	16x26	2120	16x32	2470	18x36	2970	18x40	3230						
10000	16x32	2600	18x36	3090	18x40	3430								
15000	18x36	3230												

WV SPEC μF	80		100	
	DxL	RC	DxL	RC
0.47			5x11	5
1			5x11	10
2.2			5x11	20
3.3			5x11	30
4.7			5x11	45
10	6.3x11	70	6.3x11	75
22	8x11	120	8x11	130
33	8x11	150	10x12.5	180
47	10x12.5	210	10x17	260
100	10x17	350	13x20	460
220	13x20	650	16x26	880
330	13x25	880	16x26	1080
470	16x26	1200	16x32	1400
1000	18x36	2140		