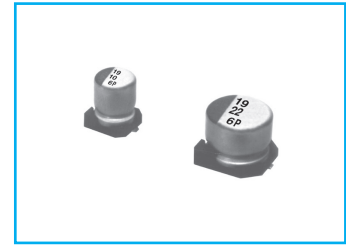


# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

**JL** Chip type, Long Life Series

**LL** Long Life  
**S** Solvent Proof



- Chip type, long life capacitance in large case sizes
- For ECU
- Application to automatic insertion machine using carrier tape
- Complied to the RoHS directive

**CA** → **JL**  
Long life

Item	Characteristics					
Operating temperature range	-40 ~ +105°C					
Leakage current	I = 0.03CV or 4μA whichever is greater (after 2 minutes)					
Capacitance tolerance	±20% (20°C, 120Hz)					
Dissipation factor max. (at 120Hz, 20°C)	Rated Voltage(V)	10	16	25	35	50
	tanδ	0.32	0.24	0.21	0.18	0.18
Low temperature characteristics (Impedance ratio at 120Hz)	WV	10	16	25	35	50
	Z-25°C/Z+20°C	6	4	3	2	2
	Z-40°C/Z+20°C	12	10	8	6	6
Load life (after application of the rated voltage for 10000 hours at 105°C)	Leakage current	Less than specified value				
	Capacitance change	Within ±30% of the initial value				
	tanδ	Less than 300% of the specified value				
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4					
Resistance to soldering heat	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 10 seconds.					
	Leakage current	Less than specified value				
	Capacitance change	Within ±30% of the initial value				
	tanδ	Less than 300% of the specified value				

● DRAWING (See page 69)

Unit : mm

-Series code of JL is "P"

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

μF \ WV	10		16		25		35		50	
33									8×10	75
47							8×10	90	8×10	90
100			8×10	270	8×10	163	10×10	132	10×10	167
220	8×10	270	8×10	270	10×10	200	10×10	249		
330	8×10	270	10×10	315	10×10	304				
470	10×10	315	10×10	315						

↑ ↑  
Ripple current (mA rms) at 105°C, 120Hz  
Case size ØD×L(mm)

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz ≤
Coefficient	0.70	1.00	1.17	1.36	1.50