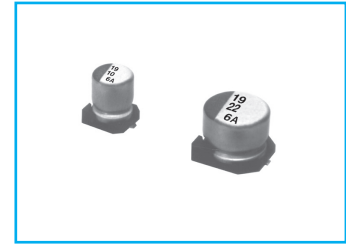


# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

**CA** Chip type, Long Life Series

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



- Chip type, long life capacitance in large case sizes
- Chip type with load life of 5000 hours at 105°C
- Designed for surface mounting on high density PC board
- Applicable to automatic insertion machine using carrier tape
- Complied to the RoHS directive

**JC** → **CA**  
Long life

Item	Characteristics	
Operating temperature range	$\varnothing D \leq 6.3$ -40 ~ +105°C	$\varnothing D \geq 8$ -55 ~ +105°C
	I = 0.01CV or 3 $\mu$ A whichever is greater (after 2 minutes)	
Leakage current max.	I = 0.01CV or 3 $\mu$ A whichever is greater (after 2 minutes)	
Capacitance tolerance	±20% at 120Hz, 20°C	
Dissipation factor max. (at 120Hz, 20°C)	WV	6.3    10    16    25    35    50
	tan $\delta$	0.28    0.24    0.2    0.16    0.13    0.12
Low temperature characteristics (Impedance ratio at 120Hz)	WV	6.3    10    16    25    35    50
	Z-25°C/Z+20°C	2    2    2    3    3    3
	Z-55°C/Z+20°C	14    12    8    6    4    4
	Z-40°C/Z+20°C	14    12    8    6    4    4
Load life (after application of the rated voltage for 5000 hours at 105°C)	Leakage current	Less than specified value
	Capacitance change	Within ±30% of initial value
	tan $\delta$	Less than 300% of specified value
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and tan $\delta$ 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 ±10% of initial value
	tan $\delta$	Less than specified value

● DRAWING (See page 69)

Unit : mm

-Series code of CA is "A"

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

$\mu$ F \ WV	6.3	10	16	25	35	50
10						6.3×5.8    30
22				6.3×5.8    38	6.3×5.8    42	6.3×7.7    120
33			6.3×5.8    40	6.3×5.8    48	6.3×7.7    57	8×10    140
47		6.3×5.8    46	6.3×5.8    50	6.3×7.7    63	8×10    92	8×10    170
100	6.3×5.8    60	6.3×7.7    81	6.3×7.7    81	8×10    116	10×10    151	10×10    310
220	6.3×7.7    101	8×10    141	10×10    216	10×10    216	10×10    216	
330	8×10    160	10×10    238	10×10    238	10×10    238		
470	10×10    254	10×10    254	10×10    254			
1000	10×10    313					

← Ripple current (mA rms) at 105°C, 120Hz  
 ↑ Case size  $\varnothing D \times L$  (mm)

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz $\leq$
Coefficient	0.70	1.00	1.17	1.36	1.50