

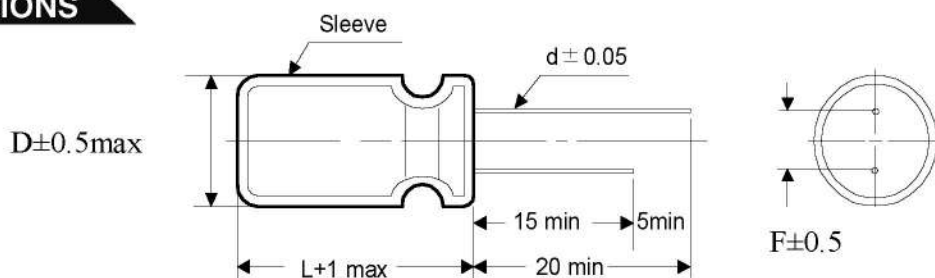
ALUMINUM ELECTROLYTIC CAPACITOR

E/C TYPE

FEATURES

- Safety vent construction design.
- RoHS Compliant.
- Used in communication equipments, switching power supplies, etc.
- For general purpose coupling, decoupling, bypassing and filtering circuit in entertainment electronics.

DIMENSIONS



Unit : mm

D	5	6	8	10	13	16	18	22	25
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	12.5
d	0.5	0.5	0.5	0.6	0.6	0.8	0.8	0.8	1.0

SPECIFICATIONS

ITEM	CHARACTERISTICS								
CAPACITANCE TOLERANCE	±20% AT 120Hz, 20°C								
RATED WORKING VOLTAGE	6.3~100VDC					160~450VDC			
OPERATION TEMPERATURE RANGE	-40 ~ +105°C					-25 ~ +105°C			
RATED CAPACITANCE RANGE	0.47~6800uF					0.47~470uF			
LEAKAGE CURRENT (25°C)	$I \leq 0.03CV$ or 4 (uA)					$I \leq 0.03CV + 40$ (uA)			
	I : Leakage Current (uA) ; C : Rated Capacitance (uF) ; V : Working Voltage (V) (After 5minutes application)								
DISSIPATION FACTOR (120HZ 25°C) (TAN δ)	W.V	6.3	10	16	25	35	50	63	100
	tan δ	0.22	0.20	0.17	0.15	0.12	0.10	0.10	0.08
	W.V	160	200	250	350	400	450		
	tan δ	0.20	0.20	0.20	0.20	0.20	0.24	0.24	
	Add 0.02 per 1000uF for more than 1000uF								
LOW TEMPERATURE STABILITY	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	-25°C/+20°C	8	6	5	3	3	3	3	3
	-40°C/+20°C	10	8	6	4	3	3	3	3
	Rated Voltage (V)	160	200	250	350	400	450		
	-25°C/+20°C	6	8	10	5	6	6		
	Impedance Ratio at 120Hz								
LOAD LIFE	After 1000 hours application of W.V. at 105°C (the capacitor shall meet the following limits)								
	Capacitance Change ≤ ±25% of initial value for 6.3~16W.V. ≤ ±20% of initial value for 25~250W.V.								
	Dissipation Factor ≤ 200% of initial specified value								
	Leakage Current ≤ initial specified value								
SHELF LIFE	After 1000 hours of placing at 105°C with no voltage applied, the capacitor shall meet the following limits.								
	Capacitance Change ≤ ±25% of initial value for 6.3~16W.V. ≤ ±20% of initial value for 25~250W.V.								
	Dissipation Factor ≤ 200% of initial specified value								
	Leakage Current ≤ 200% of initial specified value								

SIZE LIST

Unit : uF

W.V \ D	5MM	6MM	8MM	10MM	13MM	16MM	18MM	22MM	25MM
6.3V	47-150	220-470	330-1000	680-3300	—	—	—	—	—
10V	22-150	150-470	330-1000	680-3300	4700	—	—	—	—
16V	10-100	100-220	150-1000	470-2200	2200-3300	4700	—	—	—
25V	4.7-47	100	150-680	220-1000	2200	2200-6800	4700	—	—
35V	4.7-33	47-100	100-330	220-680	1000-2200	2200	4700	—	—
50V	0.47-22	33-68	47-100	221-471	470	1000-2200	3300	4700	—
63V	0.47-15	22-33	47-100	68-330	470-680	470-1000	1000-2200	3300	4700
100V	0.47-4.7	10	22-33	47-100	220	330-470	—	1000	—
160V	1.0	1-3.3	4.7-10	22-47	100	100-220	330	470	—
200V	—	1-2.2	3.3-4.7	10-33	47	100	220-330	330-470	470
250V	—	1-2.2	3.3-4.7	10-22	33-47	100	—	220	330-470
350V	—	—	1-3.3	4.7-10	22-33	33-47	100	—	220
400V	—	—	1-4.7	3.3-10	22-33	47-68	68-100	—	220
450V	—	—	1	2.2-6.8	10-22	33-47	68	100	—

ESTIMATION OF LIFETIME

$$L_r = L_o \times 2^{\frac{T_{o\max} - T_{r\max}}{10}} = L_o \times 2^{\frac{T_o + \Delta T_o - T_r - \Delta T_r}{10}}$$

L_r = ESTIMATED LIFETIME (HOUR)

L_o = BASE LIFETIME SPECIFIED AT MAXIMUM OPERATING TEMPERATURE WITH DC VOLTAGE APPLIED

T_o = RATED MAXIMUM OPERATING TEMPERATURE (°C)

T_r = ACTUAL AMBIENT TEMPERATURE (°C)

ΔT_o = AN INCREASE IN CORE TEMPERATURE WHICH IS PRODUCED BY INTERNAL HEATING DUE TO THE RATED RIPPLE CURRENT (°C)

ΔT_r = AN INCREASE IN CORE TEMPERATURE WHICH IS PRODUCED BY INTERNAL HEATING DUE TO ACTUAL OPERATING RIPPLE CURRENT (°C)

** WHEN AMBIENT TEMPERATURE $\leq 40^\circ\text{C}$ CALCULATE WITH 40°C .

EXPECTED LIFE ESTIMATION FOR YOUR REFERENCE

TEMPERATURE	105°C	95°C	85°C	75°C	65°C	55°C	45°C
TIME	1,000HRS	2,000HRS	4,000HRS	8,000HRS	16,000HRS	32,000HRS	64,000HRS
INCREASES THE MULTIPLE OF	—	2	4	8	16	32	64