

## *Data Sheet*

Customer : \_\_\_\_\_

Product : Aluminum Electrolytic Capacitors – EST Series \_\_\_\_\_

Size : 5x11mm ~ 18x41mm \_\_\_\_\_

Issued Date : 01-May-2026 \_\_\_\_\_

Edition : Ver. 1 \_\_\_\_\_

### Record of change

Date	Ver.	Description	Page
01-May-2026	1		

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## **Subject : Storage of Aluminium Electrolytic Capacitors**

We recommend the following conditions for storage :

1. It is recommended to keep capacitors between the ambient temperatures of 5°C to 35°C and a relative humidity of 75% or below.
2. Confirm that the environment does not have any of the following conditions :
  - (1) Damp conditions such as water, saltwater spray, or oil spray or fumes. High humidity or humidity condensation situations.
  - (2) In an atmosphere filled with toxic gasses (such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, etc.)
  - (3) Being exposed to direct sunlight, ozone, ultraviolet ray, or radiation.
  - (4) Being exposed to acidic or alkaline solutions.
3. Keep capacitors in the original package.

### 4. Storage life & Re-aging :

When Aluminium Electrolytic Capacitors are stored without applied voltage, their L.C.

(Leakage Current) characteristic increases over time. For long-term stored products, the following treatments must be performed before use :

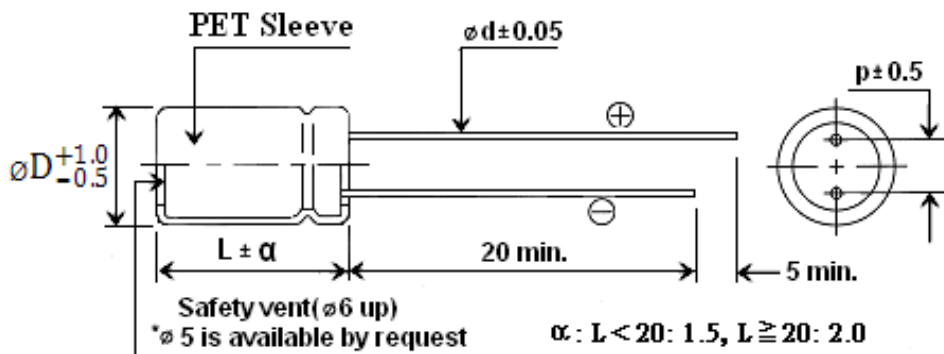
- (1) For Low Voltage Aluminium Electrolytic Capacitors (i.e., Working Voltage W.V.  $\leq$  120V) :

After one year of storage, a test must be performed before use. If the L.C. value exceeds the specified value, it is recommended not to use them, as lifespan and quality cannot be 100% guaranteed.
- (2) For Medium/High Voltage Aluminium Electrolytic Capacitors (i.e., Working Voltage W.V.  $\geq$  160V) :
  - (A) If stored for more than 6 months, a test must be performed before use to ensure lifespan and quality.
  - (B) If stored for 6-24 months and the L.C. value is between 25% and 40% of the specified value, it is recommended to recharge (re-agent) before use. If the L.C. value exceeds 40% of the specified value, do not use.
- (3) Re-aging condition : It is recommended to apply D.C. working voltage to the capacitor for 2 hours through 1K $\Omega$  of protective series resistor.

- EST series capacitors are extremely low impedance for high frequency.
- Load life 125°C, 3000 hours assured. (2000 hours for  $D \leq 8\text{mm}$  as specified below)

**Characteristics**

<b>Voltage Range</b>	6.3 ~ 100V								
<b>Capacitance Range</b>	1.0 ~ 10000uF								
<b>Temperature Range</b>	-55 ~ + 125°C								
<b>Leakage Current</b>	I=0.01CV or 3uA, whichever is greater (After 2 minutes)								
<b>Capacitance Tolerance</b>	±20% at 120Hz, 20°C( 10% Tol. is available upon request)								
<b>Dissipation Factor</b>	WV	6.3	10	16	25	35	50	63	100
	tan δ	0.20	0.18	0.16	0.14	0.12	0.10	0.09	0.08
For capacitance > 1000uF, add 0.02 for every 1000uF.(at 20°C, 120Hz)									
<b>Stability at Low Temperature (120Hz)</b>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	Z-40°C/Z 20°C	6	4	3	3	2	2	2	2
	Z-55°C/Z 20°C	8	6	5	5	4	4	4	3
<b>Load Life</b> After the rated voltage has been applied for 2000~3000 hours at 125°C	2000hrs for $D \leq 8\text{mm}$ , 3000hrs for $D \geq 10\text{mm}$			Capacitance change			Within ±30% of initial value		
				D.F. (tanδ)			300% or less of initial specified value		
				Leakage current			Less than initial specified value		
<b>Shelf life (at 125°C)</b>	After storage for 1000 hours at 125°C with no voltage applied, the capacitor shall meet the specified limit in load life. Pre-treatment for measurement shall be conducted after application of DC working voltage for 30 minutes.								



**Drawing**

Dφ	5	6.3	8	10	13	16	18
p	2.0	2.5	3.5	5.0	5.0	7.5	7.5
dφ	0.5	0.5	0.5	0.6	0.6	0.8	0.8

**Ripple Current Coefficients**

Cap(uF)\Freq. (Hz)	60	120	400	1K	10K	>10K
Cap. ≤ 10	0.47	0.59	0.76	0.85	0.97	1
10 < Cap. ≤ 100	0.52	0.62	0.80	0.89	0.97	1
100 < Cap. ≤ 1000	0.58	0.72	0.84	0.90	0.98	1
1000 < Cap.	0.63	0.78	0.87	0.91	0.98	1

**Part Numbering System**

<b>EUV</b>	<b>101</b>	<b>M</b>	<b>25</b>	<b>A</b>	<b>-</b>	<b>T1</b>
<b>SERIES</b>	<b>CAPACITANCE</b>	<b>TOL.</b>	<b>W.V.</b>	<b>PACKAGE</b>	<b>SIZE</b>	<b>LEAD SPACE</b>
	IN 3DIGITS	M= ± 20%	0J= 6.3V	B= Bulk	Omit if only	Omit if Bulk
	100= 10uF		10= 10V	C? 'Co o q' Rcem	one size	T1= L/S 2.5mm Taped
	101= 100uF		38= 38V	H7? 'Ngcf 'hqtto gf "	A= Smaller Size	TA= Lead forming space
	102= 1000uF		4C= 322V	( 'ew'7o o "		5mm Taped

**Case size & Maximum Ripple Current (mA rms 125°C, 100KHz) & Imp. ( $\Omega$  20°C, 100KHz)**

Cap. WV	6.3			10			16			25			
	uF	Size	Imp	RC	Size	Imp	RC	Size	Imp	RC	Size	Imp	RC
10								5x11	4.00	33	5x11	2.10	50
22								5x11	2.00	63	5x11	1.80	108
33								5x11	1.26	117	5x11	1.20	135
47					5x11	1.20	108	5x11	0.52	171	5x11	0.50	198
68					5x11	0.89	130	5x11	0.45	189	6.3x11	0.39	243
100	5x11	0.95	167		5x11	0.48	184	6.3x11	0.31	234	6.3x11	0.28	270
150	6.3x11	0.75	189		6.3x11	0.37	243	6.3x11	0.26	270	8x12	0.19	391
220	6.3x11	0.55	270		6.3x11	0.28	297	8x12	0.21	409	8x12	0.125	495
330	8x12	0.30	351		8x12	0.16	387	8x12	0.12	495	10x13	0.082	684
470	8x12	0.22	387		8x12	0.12	499	10x13	0.095	649	10x16	0.065	936
680	8x12	0.18	459		10x13	0.10	594	10x16	0.074	828	10x20	0.052	1152
1000	10x13	0.10	594		10x16	0.07	909	10x20 10x25	0.054 0.050	990 1062	13x20 13x25	0.039 0.038	1377 1422
1500	10x16 10x20	0.074 0.054	945 990		10x20	0.054	1143	10x25 13x20	0.050 0.041	1223 1260	13x25	0.032	1818
2200	10x25 13x20	0.057 0.050	1170 1260		13x20 13x25	0.050 0.040	1260 1521	13x20 13x25	0.035 0.033	1665 1755	16x25	0.027	2164
3300	13x20 13x25	0.050 0.048	1260 1350		13x25	0.029	1782	16x25	0.028	2106	16x31.5 18x25	0.022 0.020	2664 2745
4700	13x25 16x25	0.032 0.030	1620 1890		16x25	0.029	1890	16x31.5	0.022	2385	18x36	0.021	3168
6800	16x25	0.022	2007		16x31.5	0.025	2340	18x31.5 18x36	0.022 0.020	2430 2700	18x41	0.017	3240
10000	16x31.5 16x36	0.021 0.019	2340 2466		18x31.5 18x36	0.022 0.017	2493 2700	18x41	0.015	2970			

**Case size & Maximum Ripple Current (mA rms 125°C 100KHz) & Imp. ( $\Omega$  20°C 100KHz)**

Cap. / WV	35			50			63			100			
	uF	Size	Imp	RC	Size	Imp	RC	Size	Imp	RC	Size	Imp	RC
<b>1</b>					5x11	3.95	22	5x11	2.80	24	5x11	3.50	36
<b>2.2</b>					5x11	2.60	29	5x11	2.40	34	5x11	2.50	46
<b>3.3</b>					5x11	2.00	40	5x11	2.00	43	5x11	2.50	57
<b>4.7</b>					5x11	1.89	52	5x11	1.89	55	5x11	2.50	68
<b>10</b>	5x11	1.90	63	5x11	1.70	90	5x11	1.65	94	6.3x11	1.0	115	
<b>22</b>	5x11	1.36	117	6.3x11	1.00	121	6.3x11	0.80	153	8x12	0.64	201	
<b>33</b>	5x11	0.95	157	6.3x11	0.74	207	8x12	0.61	220	10x13	0.40	287	
<b>47</b>	6.3x11	0.44	225	8x12	0.50	256	8x12	0.56	261	10x16	0.30	375	
<b>68</b>	6.3x11	0.35	270	8x12	0.30	306	8x16	0.30	432	10x20	0.25	423	
<b>100</b>	8x12	0.19	342	8x12 10x13	0.24 0.18	306 427	10x16	0.24	531	13x20	0.15	513	
<b>150</b>	8x16	0.15	522	10x13 10x16	0.17 0.13	441 607	10x20	0.11	711	13x25	0.12	685	
<b>220</b>	10x13	0.098	648	10x16 10x20	0.12 0.085	607 810	10x25 13x20	0.082 0.080	918 948	16x25	0.070	943	
<b>330</b>	10x16	0.065	895	10x20 10x25	0.085 0.068	729 945	13x25	0.067	1044	16x31.5	0.050	1263	
<b>470</b>	10x20	0.050	1035	13x21	0.048	1341	16x25	0.044	1575	18x41	0.030	1782	
<b>680</b>	13x20	0.044	1296	13x25	0.041	1656	16x31.5	0.040	1863				
<b>1000</b>	16x25	0.036	1755	16x25 16x31.5	0.043 0.030	1440 1917	16x36	0.031	2205				
<b>1500</b>	16x25 16x31.5	0.030 0.027	1890 2268	16x31.5 16x36	0.038 0.026	1800 2430	18x35.5	0.025	2430				
<b>2200</b>	16x31.5 18x25	0.025 0.026	2340 2313	18x36	0.024	2610	18x41	0.023	2691				
<b>3300</b>	18x36	0.020	2700										
<b>4700</b>	18x41	0.019	2970										