

# ALUMINUM ELECTROLYTIC CAPACITORS



## EV Series

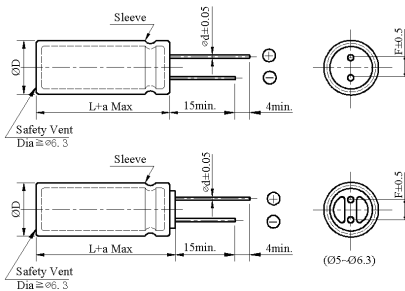
- Low impedance and High ripple current.
- Load life 3,000~6,000 hours at 105°C.



### ◆ SPECIFICATIONS

Item	Performance Characteristics																		
Category Temperature Range	-55~+105°C																		
Working Voltage Range	6.3 ~ 35Vdc																		
Capacitance Range	10 ~8,200µF																		
Capacitance Tolerance	±20% (at 25°C and 120Hz)																		
Dissipation Factor (tanδ) (at 25°C, 120Hz)	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> </tr> <tr> <td>tanδ(Max)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> </tr> </table>	Rated Voltage (V)	6.3	10	16	25	35	tanδ(Max)	0.22	0.19	0.16	0.14	0.12						
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tanδ(Max)	0.22	0.19	0.16	0.14	0.12														
The above values should be increased by 0.02 for every additional 1000µF																			
Leakage Current	I=0.01CV or 3µA whichever is greater I : Leakage current (µA) C : Rated capacitance (µF) V : Rated voltage (V) Impress the rated voltage for 2 minutes.																		
Endurance	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 3,000 to 6,000 hours at 105°C.																		
	<table border="1"> <thead> <tr> <th></th> <th>Size</th> <th>Life time (hours)</th> </tr> </thead> <tbody> <tr> <td>Capacitance change</td> <td>≒ ±25% of the initial value</td> <td>≒ 6.3Φ</td> <td>3,000</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 200% of the specified value</td> <td>= 8 Φ</td> <td>4,000</td> </tr> <tr> <td>Leakage current</td> <td>≒ specified value</td> <td>= 10Φ</td> <td>5,000</td> </tr> <tr> <td></td> <td></td> <td>≒ 12.5Φ</td> <td>6,000</td> </tr> </tbody> </table>		Size	Life time (hours)	Capacitance change	≒ ±25% of the initial value	≒ 6.3Φ	3,000	Dissipation factor(tanδ)	≒ 200% of the specified value	= 8 Φ	4,000	Leakage current	≒ specified value	= 10Φ	5,000			≒ 12.5Φ
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Leakage current	≒ specified value	= 10Φ	5,000																
		≒ 12.5Φ	6,000																
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 1,000 hours at 105°C without voltage applied.																		
	<table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>≒ ±25% of the initial value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 200% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≒ 200% of the specified value</td> </tr> </tbody> </table>	Capacitance change	≒ ±25% of the initial value	Dissipation factor(tanδ)	≒ 200% of the specified value	Leakage current	≒ 200% of the specified value												
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Others	Conforms to JIS-C-5101-4 (1998), characteristic W.																		

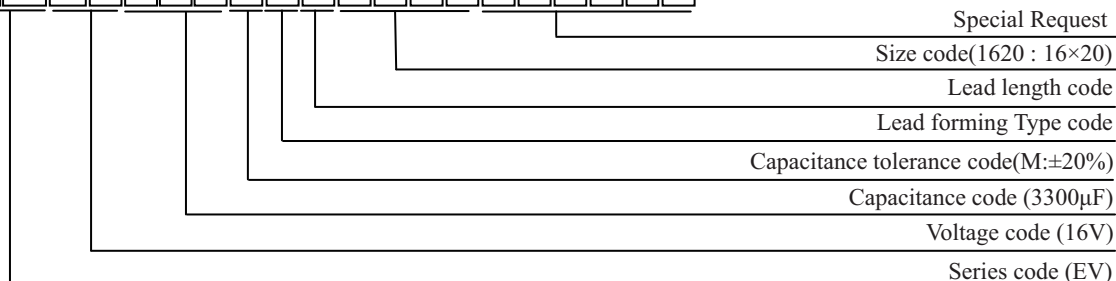
### ◆ DIMENSIONS (mm)



ΦD	5	6.3	8	10	12.5 L<35	12.5 L≥35	16	18
ΦD	ΦD + 0.5 Max							ΦD + 1.0 Max
Φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0		7.5	7.5
a	L + 1.5 Max				≒ 35 L+1.5Max ≒ 40 L+2.0 Max		L + 1.5 Max	

### ◆ PART NUMBERING SYSTEM( Example : 16V 3300µF)

E V 1 C 3 3 2 M N N 1 6 2 0



# ALUMINUM ELECTROLYTIC CAPACITORS



## EV Series

◆ Case size & Permissible rated ripple current:

Nominal Capacitance (uF)	6.3V				10V				16 V			
	Case Size DΦ×L (mm)	Max. impd @20°C 100kHz (Ω)	Max. impd @-10°C 100kHz (Ω)	Max. Rated ripple current @105°C 100kHz (mA rms)	Case Size DΦ×L (mm)	Max. impd @20°C 100kHz (Ω)	Max. impd @-10°C 100kHz (Ω)	Max. Rated ripple current @105°C 100kHz (mA rms)	Case Size DΦ×L (mm)	Max. impd @20°C 100kHz (Ω)	Max. impd @-10°C 100kHz (Ω)	Max. Rated ripple current @105°C 100kHz (mA rms)
100									5×11	0.230	0.760	360
150					5×11	0.230	0.760	360	6.3×11	0.100	0.330	450
220	5×11	0.230	0.760	360	6.3×11	0.100	0.330	450	6.3×11	0.100	0.330	550
330	6.3×11	0.100	0.330	460	6.3×11	0.100	0.330	550	8×11.5	0.059	0.181	830
470	6.3×11	0.100	0.330	550	8×11.5	0.059	0.181	820	8×11.5	0.059	0.181	990
680	8×11.5	0.059	0.181	860	8×11.5	0.059	0.181	990	8×15	0.046	0.143	1330
									10×12.5	0.043	0.133	1360
820	8×11.5	0.059	0.181	990	10×12.5	0.043	0.133	1250	10×16	0.030	0.095	1650
1000	10×12.5	0.043	0.133	1250	10×16	0.039	0.128	1450	8×20	0.031	0.105	1550
									10×16	0.030	0.095	1815
1200	10×12.5	0.043	0.133	1360	10×16	0.030	0.095	1650	10×20	0.019	0.057	1930
	8×15	0.046	0.143	1330								
1500	8×20	0.031	0.105	1550	10×16	0.030	0.095	1815	10×20	0.019	0.057	2160
					8×20	0.031	0.105	1550				
1800	10×16	0.030	0.095	1815	10×20	0.019	0.057	2160	10×25	0.017	0.051	2475
2200	10×20	0.019	0.057	2160	10×25	0.017	0.051	2475	12.5×20	0.016	0.041	2725
2700	10×25	0.017	0.051	2475	12.5×20	0.016	0.041	2450	12.5×35	0.014	0.036	3190
3300	12.5×20	0.016	0.041	2500	12.5×20	0.016	0.041	2725	12.5×30	0.012	0.031	3795
									16×20	0.014	0.036	3575
3900	12.5×20	0.016	0.041	2725	12.5×25	0.014	0.036	3190	12.5×35	0.011	0.029	3925
4700	12.5×25	0.014	0.036	3190	12.5×30	0.012	0.031	3795	16×25	0.012	0.033	3990
					16×20	0.014	0.036	3575				
5600	12.5×35	0.012	0.031	3795	12.5×35	0.011	0.029	3925				
6800	12.5×36	0.011	0.029	3925	16×25	0.012	0.033	3990				
	16×20	0.014	0.036	3575								
8200	16×25	0.012	0.033	3990								

# ALUMINUM ELECTROLYTIC CAPACITORS



## EV Series

### ◆ Case size & Permissible rated ripple current:

Nominal Capacitance (uF)	25 V				35 V			
	Case Size DΦ×L (mm)	Max. impd @20°C 100kHz (Ω)	Max. impd @-10°C 100kHz (Ω)	Max. Rated ripple current @105°C 100kHz (mA rms)	Case Size DΦ×L (mm)	Max. impd @20°C 100kHz (Ω)	Max. impd @-10°C 100kHz (Ω)	Max. Rated ripple current @105°C 100kHz (mA rms)
10	5×11	0.650	1.320	300	5×11	0.840	2.420	360
47					5×11	0.230	0.760	360
68	5×11	0.230	0.760	360	6.3×11	0.100	0.330	450
100	6.3×11	0.100	0.330	450	6.3×11	0.100	0.330	550
150	8×11.5	0.100	0.330	550	8×11.5	0.059	0.181	820
220	8×15	0.059	0.181	810	8×11.5	0.059	0.181	990
					8×15	0.048	0.150	1200
270	8×11.5	0.059	0.181	900	8×15	0.046	0.143	1330
330	8×11.5	0.059	0.181	990	10×12.5	0.043	0.133	1360
390	8×15	0.046	0.143	1330	8×20	0.031	0.105	1550
470	10×12.5	0.043	0.133	1360	10×16	0.030	0.095	1815
560	8×20	0.031	0.105	1550	10×20	0.019	0.057	2160
680	10×16	0.030	0.095	1815	10×25	0.017	0.051	2475
820	10×20	0.019	0.057	2160	12.5×20	0.016	0.041	2725
1000	10×25	0.017	0.051	2475	12.5×20	0.016	0.041	2920
1200	12.5×20	0.016	0.041	2570	12.5×25	0.014	0.041	3190
1500	12.5×20	0.016	0.041	2725	12.5×30	0.012	0.031	3795
					16×20	0.014	0.036	3575
1800	12.5×35	0.014	0.036	3190	12.5×35	0.011	0.029	3925
2200	12.5×30	0.012	0.031	3795	16×25	0.012	0.033	3990
	16×20	0.014	0.036	3575				
2700	12.5×35	0.011	0.029	3925				
3300	16×25	0.012	0.033	3990				

### ◆ RIPPLE CURRENT MULTIPLIERS

#### Frequency Multipliers

Vdc	Cap.(uF)	Frequency (Hz)			
		120	1K	10K	100K
6.3 ~ 35	10 ~ 68	0.30	0.55	0.80	1.00
	82 ~ 220	0.40	0.60	0.85	1.00
	330 ~ 820	0.50	0.65	0.90	1.00
	1000 ~ 8200	0.60	0.70	0.95	1.00