

# ALUMINUM ELECTROLYTIC CAPACITORS



## EB Series

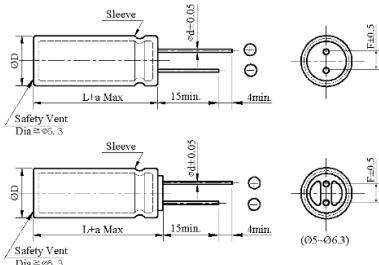
- Extremely low impedance, downsize and high ripple current
- Suitable for main board



### ◆ SPECIFICATIONS

Item	Performance Characteristics			
Category Temperature Range	-40 ~ +105°C			
Working Voltage Range	6.3 ~ 16Vdc			
Capacitance Range	82 ~ 3,300 μF			
Capacitance Tolerance	±20% (at 25°C and 120Hz)			
Dissipation Factor (tanδ) (at 25°C, 120Hz)	Rated Voltage (V)	6.3	10	16
	tanδ(Max)	0.15	0.14	0.12
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase.			
Leakage Current	I=0.03CV or 3μA whichever is greater I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V) Impress the rated voltage for 2 minutes			
Low Temperature Characteristics Impedance Ratio(MAX)	Rated voltage (V)	6.3	10	16
	Z(-40°C)/Z(+20°C)	8	6	6
	(at 120Hz)			
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 1,000~2,000 hours at 105°C.			
	Capacitance change	$\leq \pm 25\%$ of the initial value		
	Dissipation factor(tanδ)	$\leq 200\%$ of the specified value		
	Leakage current	$\leq$ specified value		
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 500 hours at 105°C without voltage applied.			
	Capacitance change	$\leq \pm 25\%$ of the initial value		
	Dissipation factor(tanδ)	$\leq 200\%$ of the specified value		
Others	Conforms to JIS-C-5101-4 (1998)			

### ◆ DIMENSIONS (mm)



ΦD	5	6.3	8	10	12.5
ΦD	$\Phi D + 0.5$ Max				
Φd	0.5	0.5	0.6	0.6	0.6
F	2.0	2.5	3.5	5.0	5.0
a	$L + 1.5$ Max				

### ◆ PART NUMBER SYSTEM (Example : 6.3V 3300μF )

E	B	0	J	3	3	2	M	N	N	1	0	2	5				
Special Request																	
Size code(1025 : 10×25)																	
Lead length code																	
Lead forming Type code																	
Capacitance tolerance code(M: ± 20%)																	
Capacitance code (3300μF)																	
Voltage code(6.3V)																	
Series code(EB)																	

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### ◆ STANDARD RATINGS

WV (Vdc)	Cap ( $\mu$ F)	Case Size (mm) $\Phi$ D×L	Impedance ( $\Omega$ max/20°C, 100kHz)	Rated Ripple current (mA rms/ 105°C, 100kHz)	Part Number
6.3 (0J)	82	5×11	1.85	165	EB0J820MNN0511
	100	5×11	1.65	180	EB0J101MNN0511
	150	6.3×11	1.32	215	EB0J151MNN6311
	220	6.3×11	0.68	295	EB0J221MNN6311
	330	6.3×11	0.32	425	EB0J331MNN6311
	470	8×11.5	0.078	605	EB0J471MNN08B5
	680	8×11.5	0.052	805	EB0J681MNN08B5
	820	8×15	0.036	1140	EB0J821MNN0815
	1000	8×15	0.032	1210	EB0J102MNN0815
	1200	8×15	0.028	1490	EB0J122MNN0815
	1500	8×20	0.016	1870	EB0J152MNN0820
	1500	10×12.5	0.026	1540	EB0J152MNN10C5
	1800	8×20	0.021	1870	EB0J182MNN0820
	1800	10×16	0.019	2000	EB0J182MNN1016
	2200	10×20	0.013	2550	EB0J222MNN1020
	3300	10×25	0.012	2800	EB0J332MNN1025
	82	5×11	1.35	200	EB1A820MNN0511
	100	5×11	1.18	260	EB1A101MNN0511
	150	6.3×11	0.96	340	EB1A151MNN6311
	220	6.3×11	0.48	425	EB1A221MNN6311
10 (1A)	330	8×11.5	0.25	525	EB1A331MNN08B5
	470	8×11.5	0.052	805	EB1A471MNN08B5
	680	8×11.5	0.036	1140	EB1A681MNN08B5
	820	8×15	0.033	1200	EB1A821MNN0815
	1000	8×15	0.028	1490	EB1A102MNN0815
	1000	10×12.5	0.026	1540	EB1A102MNN10C5
	1200	10×16	0.024	1605	EB1A122MNN1016
	1500	8×20	0.019	1870	EB1A152MNN0820
	1500	10×16	0.019	2000	EB1A152MNN1016
	1800	10×20	0.013	2550	EB1A182MNN1020
	2200	10×25	0.012	2800	EB1A222MNN1025
	3300	10×25	0.012	2950	EB1A332MNN1025
	82	6.3×11	1.2	250	EB1C820MNN6311
	100	6.3×11	0.98	300	EB1C101MNN6311
	150	6.3×11	0.88	350	EB1C151MNN6311
16 (1C)	220	8×11.5	0.42	430	EB1C221MNN08B5
	330	8×11.5	0.18	795	EB1C331MNN08B5
	470	8×11.5	0.036	1140	EB1C471MNN08B5
	680	8×15	0.028	1490	EB1C681MNN0815
	680	10×12.5	0.026	1540	EB1C681MNN10C5
	820	10×16	0.024	1605	EB1C821MNN1016
	1000	8×20	0.019	1870	EB1C102MNN0820
	1000	10×16	0.019	2000	EB1C102MNN1016
	1200	10×20	0.017	2110	EB1C122MNN1020
	1500	10×20	0.013	2550	EB1C152MNN1020
	1800	10×25	0.012	2800	EB1C182MNN1025
	2200	10×25	0.012	2950	EB1C222MNN1025
	3300	12.5×25	0.012	3050	EB1C332MNN1225

### ◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Vdc	Frequency (Hz)				
	50/60	120	1K	10K	100K
6.3 ~16	0.60	0.75	0.90	0.98	1.00