

# ALUMINUM ELECTROLYTIC CAPACITORS



## EC Series

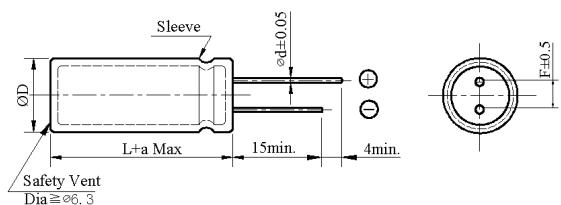
- Miniaturized, low ESR and low impedance
- Suitable for use in high ripple current capability
- Load life 5,000 hours at 105°C



### ◆ SPECIFICATIONS

Item	Performance Characteristics					
Category Temperature Range	-40~ +105°C					
Working Voltage Range	10~100Vdc					
Capacitance Range	68~1800 μF					
Capacitance Tolerance	±20% (at 25°C and 120Hz)					
Dissipation Factor (tanδ) (at 25°C, 120Hz)	Rated Voltage (V)	10	16	25	35	100
	tanδ(Max)	0.19	0.16	0.14	0.12	0.08
	When nominal capacitance exceeds 1,000uF, add 0.02 to the value above for each 1,000uF increase.					
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					
Low Temperature Characteristics Impedance Ratio(MAX)	Rated voltage (V)	10	16	25	35	100
	Z(-40°C)/Z(+20°C)	6	6	5	4	3
	(at 120Hz)					
Endurance	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 5,000 hours at 105°C.					
	Capacitance change	≤ ±25% of the initial value				
	Dissipation factor(tanδ)	≤ 200% of the specified value				
	Leakage current	≤ 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	≤ ±25% of the initial value				
	Dissipation factor(tanδ)	≤ 200% of the specified value				
	Leakage current	≤ 200% of the specified value				
Others	Conforms to JIS-C-5101-4 (1998)					

### ◆ DIMENSIONS (mm)



ΦD	12.5×12
ΦD	ΦD + 0.5 Max
Φd	0.6
F	5.0
a	L + 1.0 Max

### ◆ PART NUMBER SYSTEM (Example : 35V 470μF )

E C 1 V 4 7 1 M N N 1 2 1 2 [ ] [ ] [ ] [ ]

Special Request

Size code(1212 : 12.5×12)

Lead length code

Lead forming Type code

Capacitance tolerance code(M:±20%)

Capacitance code (470μF)

Voltage code(35V)

Series code(EC)

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### ◆ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA rms/ 105°C, 100kHz)	Part Number
10 (1A)	1500	12.5×12	1260	EC1A152MNN1212
	1800	12.5×12	1300	EC1A182MNN1212
16 (1C)	1000	12.5×12	1300	EC1C102MNN1212
	1200	12.5×12	1400	EC1C122MNN1212
25 (1E)	560	12.5×12	1150	EC1E561MNN1212
	680	12.5×12	1200	EC1E681MNN1212

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA rms/ 105°C, 100kHz)	Part Number
35 (1V)	390	12.5×12	1050	EC1V391MNN1212
	470	12.5×12	1100	EC1V471MNN1212
100 (2A)	68	12.5×12	350	EC2A680MNN1212
	82	12.5×12	420	EC2A820MNN1212

### ◆ RIPPLE CURRENT MULTIPLIERS

#### Frequency Multipliers

Vdc	Cap(uF)	Frequency (Hz)			
		120	1K	10K	100K
10~100	≥68	0.30	0.65	0.85	1.00
	82~220	0.50	0.70	0.90	1.00
	330~820	0.60	0.75	0.95	1.00
	1000~1800	0.70	0.80	0.98	1.00