

ALUMINUM ELECTROLYTIC CAPACITORS



CSN Series

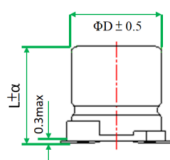
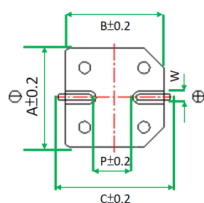
- Bi-polarized with temperature range at -40 to 105°C
- Load life 1,000 hours at 105°C



◆ SPECIFICATIONS

Item	Performance Characteristics																											
Category Temperature Range	-40 ~ +105°C																											
Working Voltage Range	6.3 ~ 50Vdc																											
Capacitance Range	0.1 ~ 100 μF																											
Capacitance Tolerance	±20% (at 25°C and 120Hz)																											
Dissipation Factor (tanδ) (at 25°C, 120Hz)	<table><tr><td>Rated Voltage (V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td>tanδ(Max)</td><td>0.24</td><td>0.20</td><td>0.17</td><td>0.17</td><td>0.15</td><td>0.15</td></tr></table>							Rated Voltage (V)	6.3	10	16	25	35	50	tanδ(Max)	0.24	0.20	0.17	0.17	0.15	0.15							
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Leakage Current	I=0.05CV or 10μA whichever is greater impress the rated voltage for 2 minutes I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V)																											
Low Temperature Characteristics Impedance Ratio(MAX)	<table><tr><td>Rated voltage (V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td>Z(-25°C)/Z(+20°C)</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>Z(-40°C)/Z(+20°C)</td><td>8</td><td>6</td><td>4</td><td>4</td><td>3</td><td>3</td></tr></table> (at 120Hz)							Rated voltage (V)	6.3	10	16	25	35	50	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	Z(-40°C)/Z(+20°C)	8	6	4	4	3	3
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Z(-40°C)/Z(+20°C)	8	6	4	4	3	3																						
Endurance	The following specifications shall be satisfied when the capacitor are restored to 25°C after subjected to DC voltage with the rated voltage is applied for 1,000 hours at 105°C (The polarity needs to exchange every 250 hours.). <table><tr><td>Capacitance change</td><td>≦ ±20% 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>≦ specified value</td></tr></table>							Capacitance change	≦ ±20% of the initial value	Dissipation factor(tanδ)	≦ 200% of the specified value	Leakage current	≦ specified value															
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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><tr><td>Capacitance change</td><td>≦ ±20% 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></table>							Capacitance change	≦ ±20% 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-5101-18-2 (1999)																											

◆ DIMENSIONS (mm)



Code	Size	ΦD	L	α	A	B	C	W	P
0458	4×5.8	4.0	5.8	$^{+0.4}_{-0.1}$	4.3	4.3	5.0	0.5~0.8	1.0
0558	5×5.8	5.0	5.8	$^{+0.4}_{-0.1}$	5.3	5.3	5.9	0.5~0.8	1.5
6358	6.3×5.8	6.3	5.8	$^{+0.4}_{-0.1}$	6.6	6.6	7.3	0.5~0.8	2.1
6377	6.3×7.7	6.3	7.7	± 0.3	6.6	6.6	7.3	0.5~0.8	2.1

◆ MARKING

$\leq 4 \Phi$



5~6.3 Φ



◆ **PART NUMBER SYSTEM (Example : 16V 47 μ F)**

◆ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA rms/ 105°C, 120Hz)	Part Number
25 (1E)	22	6.3×7.7	50	CSN1E220MCB6377
	33	6.3×7.7	61	CSN1E330MCB6377
35 (1V)	2.2	4×5.8	8.4	CSN1V2R2MCB0458
	3.3	5×5.8	16	CSN1V3R3MCB0558
	4.7	5×5.8	18	CSN1V4R7MCB0558
	10	6.3×5.8	29	CSN1V100MCB6358
	22	6.3×7.7	54	CSN1V220MCB6377
50 (1H)	0.1	4×5.8	1.0	CSN1H0R1MCB0458
	0.22	4×5.8	2.0	CSN1HR22MCB0458
	0.33	4×5.8	2.8	CSN1HR33MCB0458
	0.47	4×5.8	4.0	CSN1HR47MCB0458
	1	4×5.8	8.4	CSN1H010MCB0458
	2.2	5×5.8	13	CSN1H2R2MCB0558
	3.3	5×5.8	17	CSN1H3R3MCB0558
	4.7	6.3×5.8	20	CSN1H4R7MCB6358
	10	6.3×7.7	36	CSN1H100MCB6377

◆ RIPPLE CURRENT MULTIPLIERS

Vdc	Cap(μF)	Frequency (Hz)				
		50	120	300	1K	10K~
6.3~50	0.1~100	0.70	1.00	1.17	1.36	1.50