

## ALUMINUM ELECTROLYTIC CAPACITORS



### CED Series

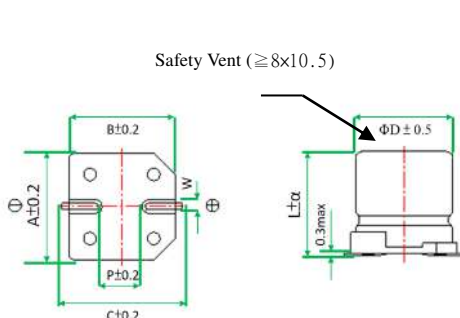
- Extra Low Impedance
- Load life 2,000 to 3,000 hours at 105°C



#### ◆ SPECIFICATIONS

Item	Performance Characteristics																																	
Category Temperature Range	-55 ~ +105°C																																	
Working Voltage Range	6.3 ~ 50Vdc																																	
Capacitance Range	10 ~ 3,300 $\mu$ F																																	
Capacitance Tolerance	$\pm 20\%$ (at 25°C and 120Hz)																																	
Dissipation Factor (tan $\delta$ ) (at 25°C, 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td><math>\phi 6.3\sim\phi 10</math></td> <td>0.22</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> </tr> <tr> <td><math>\phi 12.5</math></td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> </tr> </tbody> </table>	Rated Voltage (V)	6.3	10	16	25	35	50	$\phi 6.3\sim\phi 10$	0.22	0.20	0.16	0.14	0.12	0.12	$\phi 12.5$	0.26	0.22	0.18	0.16	0.14	0.12												
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The above values should be increased by 0.02 for every additional 1000 $\mu$ F																																		
Leakage Current	<p>(<math>\phi 6.3\sim\phi 10</math>) I=0.01CV or 3<math>\mu</math>A whichever is greater impress the rated voltage for 2 minutes.            (<math>\phi 12.5</math>) I=0.03CV or 4<math>\mu</math>A whichever is greater impress the rated voltage for 1 minute.            I : Leakage current (<math>\mu</math>A) C : Rated capacitance (<math>\mu</math>F) V : Rated voltage (V)</p>																																	
Low Temperature Characteristics Impedance Ratio(MAX)	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td rowspan="2"><math>\phi 6.3\sim\phi 10</math></td> <td>Z(-25°C)/Z(+20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-55°C)/Z(+20°C)</td> <td>5</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> <tr> <td rowspan="2"><math>\phi 12.5</math></td> <td>Z(-25°C)/Z(+20°C)</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-55°C)/Z(+20°C)</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> </tr> </tbody> </table>	Rated voltage (V)	6.3	10	16	25	35	50	$\phi 6.3\sim\phi 10$	Z(-25°C)/Z(+20°C)	2	2	2	2	2	Z(-55°C)/Z(+20°C)	5	4	4	3	3	$\phi 12.5$	Z(-25°C)/Z(+20°C)	3	3	2	2	2	Z(-55°C)/Z(+20°C)	10	8	6	4	3
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(at 120Hz)																																		
Endurance	<p>The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated voltage is applied for 3,000 hours (<math>\phi 6.3\times 5.8</math> for 2,000 hours) at 105°C</p> <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td><math>\cong \pm 30\%</math> of the initial value</td> </tr> <tr> <td>Dissipation factor(tan<math>\delta</math>)</td> <td><math>\cong 300\%</math> of the specified value</td> </tr> <tr> <td>Leakage current</td> <td><math>\cong</math> specified value</td> </tr> </tbody> </table>	Capacitance change	$\cong \pm 30\%$ of the initial value	Dissipation factor(tan $\delta$ )	$\cong 300\%$ of the specified value	Leakage current	$\cong$ specified value																											
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Shelf Life	<p>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.</p> <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td><math>\cong \pm 30\%</math> of the initial value</td> </tr> <tr> <td>Dissipation factor(tan<math>\delta</math>)</td> <td><math>\cong 300\%</math> of the specified value</td> </tr> <tr> <td>Leakage current</td> <td><math>\cong 200\%</math> of the specified value</td> </tr> </tbody> </table>	Capacitance change	$\cong \pm 30\%$ of the initial value	Dissipation factor(tan $\delta$ )	$\cong 300\%$ of the specified value	Leakage current	$\cong 200\%$ of the specified value																											
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Others	Conforms to JIS-C-5101-4 (1998), characteristic W																																	

#### ◆ DIMENSIONS (mm)



Code	Size	ΦD	L	$\alpha$	A	B	C	W	P
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	$\pm 0.3$	6.6	6.6	7.3	0.5~0.8	2.1
0862	8×6.2	8	6.2	+0.4 -0.1	8.3	8.3	8.8	0.5~0.8	2.2
08A5	8×10.5	8	10.5	0.5	8.3	8.3	9.1	0.8~1.2	3.1
10A5	10×10.5	10	10.5	0.5	10.3	10.3	11.0	0.8~1.2	4.6
10C5	10×12.5	10	12.5	0.5	10.3	10.3	11.0	0.8~1.2	4.6
12D5	12.5×13.5	12.5	13.5	1.0	12.8	12.8	13.8	0.8~1.2	4.6
12I6	12.5×16	12.5	16	1.0	12.8	12.8	13.8	0.8~1.2	4.6

#### ◆ Marking

$\cong 6.3\Phi$



$\cong 8\Phi$



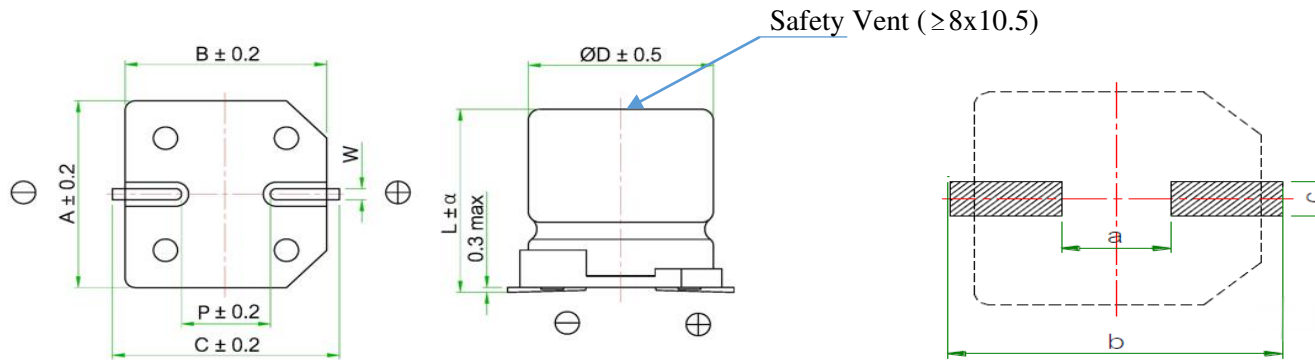
## Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	CED	NO.:	PUBLISH DATE	2022-03-28
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1、Tape & Reel (TR)\ Cut Tape (CT)\ Digi-Reel.

2、Diagram of Dimensions (unit : mm.), and Recommended soldering pad dimensions.

Size Code	ΦD	L	A	B	C	W	P	α	a	b	c
0558	5.0	5.8	5.3	5.3	5.9	0.5~0.8	1.5	0.4/-0.1	1.4	7.4	1.6
6358	6.3	5.8	6.6	6.6	7.3	0.5~0.8	2.1	0.4/-0.1	2.1	9.1	1.6
6377	6.3	7.7	6.6	6.6	7.3	0.5~0.8	2.1	0.3	2.1	9.1	1.6
08A5	8.0	10.5	8.3	8.3	9.1	0.8~1.2	3.1	0.5	3.0	11.0	2.5
10A5	10.0	10.5	10.3	10.3	11.0	0.8~1.2	4.6	0.5	4.0	12.0	2.5



No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp. Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @ 105°C 100kHz	Impedance @20°C (Ω max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
														D Φ	L	a	d	P	
1	CED0J221MCB6358		220	±20%	6.3		-55° C ~ 105° C	0.22	13.86		230mA @ 100 kHz	0.44 Ω	2000 Hrs @ 105° C	6.3mm	5.8mm			2.1mm	



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2	CED0J102MCB08A5F2		1000	±20%	6.3		-55° C ~ 105° C	0.22	63		450mA @ 100 kHz	0.17 Ω	2000 Hrs @ 105° C	8.0mm	10.5mm			3.1mm
3	CED1A102MCB10A5		1000	±20%	10		-55° C ~ 105° C	0.2	100		670mA @ 100 kHz	0.09 Ω	3000 Hrs @ 105° C	10.0mm	10.5mm			4.6mm
4	CED1A151MCB6358		150	±20%	10		-55° C ~ 105° C	0.2	15		230mA @ 100 kHz	0.44 Ω	2000 Hrs @ 105° C	6.3mm	5.8mm			2.1mm
5	CED1A221MCB6377		220	±20%	10		-55° C ~ 105° C	0.2	22		280mA @ 100 kHz	0.34 Ω	3000 Hrs @ 105° C	6.3mm	7.7mm			2.1mm
6	CED1C101MCB6358		100	±20%	16		-55° C ~ 105° C	0.16	16		230mA @ 100 kHz	0.44 Ω	2000 Hrs @ 105° C	6.3mm	5.8mm			2.1mm
7	CED1C101MCB6377		100	±20%	16		-55° C ~ 105° C	0.16	16		280mA @ 100 kHz	0.34 Ω	3000 Hrs @ 105° C	6.3mm	7.7mm			2.1mm
8	CED1C221MCB6377		220	±20%	16		-55° C ~ 105° C	0.16	35.2		280mA @ 100 kHz	0.34 Ω	3000 Hrs @ 105° C	6.3mm	7.7mm			2.1mm
9	CED1C221MCB6377F2		220	±20%	16		-55° C ~ 105° C	0.16	35.2		280mA @ 100 kHz	0.34 Ω	2000 Hrs @ 105° C	6.3mm	7.7mm			2.1mm
10	CED1C470MCB0558		47	±20%	16		-55° C ~ 105° C	0.16	7.52		150mA @ 100 kHz	0.8 Ω	2000 Hrs @ 105° C	5.0mm	5.8mm			1.5mm
11	CED1C470MCB6358		47	±20%	16		-55° C ~ 105° C	0.16	7.52		230mA @ 100 kHz	0.44 Ω	2000 Hrs @ 105° C	6.3mm	5.8mm			2.1mm
12	CED1C471MCB08A5F2		470	±20%	16		-55° C ~ 105° C	0.16	75.2		450mA @ 100 kHz	0.17 Ω	2000 Hrs @ 105° C	8.0mm	10.5mm			3.1mm
13	CED1E470MCB6358		47	±20%	25		-55° C ~ 105° C	0.14	11.75		230mA @ 100 kHz	0.44 Ω	2000 Hrs @ 105° C	6.3mm	5.8mm			2.1mm
14	CED1E101MCB6358		100	±20%	25		-55° C ~ 105° C	0.14	25		230mA @ 100 kHz	0.44 Ω	2000 Hrs @ 105° C	6.3mm	5.8mm			2.1mm
15	CED1E101MCB6377F2		100	±20%	25		-55° C ~ 105° C	0.14	25		280mA @ 100 kHz	0.34 Ω	2000 Hrs @ 105° C	6.3mm	7.7mm			2.1mm
16	CED1E331MCB08A5F2		330	±20%	25		-55° C ~ 105° C	0.14	82.5		450mA @ 100 kHz	0.17 Ω	2000 Hrs @ 105° C	8.0mm	10.5mm			3.1mm
17	CED1V470MCB6358		47	±20%	35		-55° C ~ 105° C	0.12	16.45		230mA @ 100 kHz	0.44 Ω	2000 Hrs @ 105° C	6.3mm	5.8mm			2.1mm
18	CED1V101MCB6377F2		100	±20%	35		-55° C ~ 105° C	0.12	35		280mA @ 100 kHz	0.34 Ω	2000 Hrs @ 105° C	6.3mm	7.7mm			2.1mm
19	CED1V221MCB08A5		220	±20%	35		-55° C ~ 105° C	0.12	77		450mA @ 100 kHz	0.17 Ω	3000 Hrs @ 105° C	8.0mm	10.5mm			3.1mm
20	CED1H470MCB6377F2		47	±20%	50		-55° C ~ 105° C	0.12	23.5		185mA @ 100 kHz	0.68 Ω	2000 Hrs @ 105° C	6.3mm	7.7mm			2.1mm

※Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.

REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
	李科高	张铭仁	聂婷