

# CD110 Series

## Aluminum Electrolytic Capacitors

Item Name	Rating	Case size
CD1102G101M	400V100uF	D13X38L

### 1. Operating Temp. Range

-40+105°C
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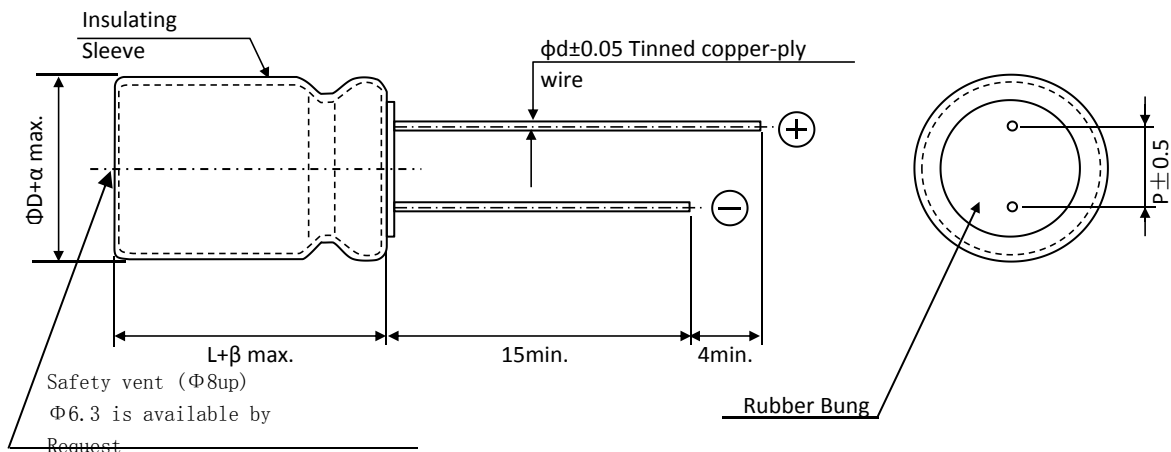
### 2. Electrical Characteristics

See Table 1.

【Table 1】

Rated Voltage VDC	Surge Voltage VDC	Nominal Static Capacitance (μF)	Tolerance on Capacitance (%) 20°C 120Hz	Dissipation Factor (tanδ) max 20°C 120Hz	Leakage Current 2min. 20°C (μA)	Permissible Ripple Current (mArms) 105°C 120Hz	Impedance (Ω) 100KHz 20°C
400	450	100	±20%	0.20	815	475	/

### 3. Dimensions



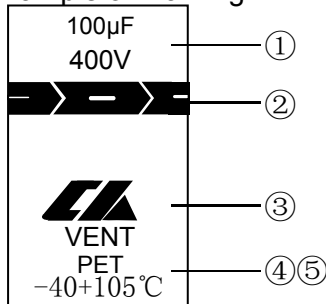
Unit(mm)

$\Phi D$	$\alpha$	L	$\beta$	$\Phi d$	P
13	0.5	38.0	2.0	0.6	5.0

### 4. Marking

Following items are printed with white colour on black colour sleeve

Example of Marking



- ① Rated Voltage & Nominal Capacitance
- ② Polarity (negative)
- ③ Trade Mark of CH
- ④ Product Series
- ⑤ Operating Temp. Range

### 5. MULTIPLIER FOR RIPPLE CURRENT

#### ①. Frequency Coefficient

Freq.(Hz)	50Hz	120Hz	300Hz	1KHz	10KHz
Cap(μF)	0.8	1	1.25	1.34	1.5

#### ②. Temperature Coefficient

Ambient Temperature(°C)	40	60	70	85	105
Coefficient	2.4	2.1	1.78	1.65	1

## 6. Characteristics

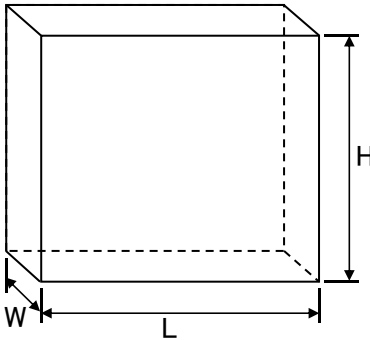
No.	Item	Performance	Test Method																							
1	Leakage Current	$I \leq 815\mu A$	Protection Resistor: $1000 \pm 10\Omega$ Applied Volt: Rated Voltage Measuring time: 2 minutes																							
2	Static Capacitance	$\pm 20\%$	Measured Frequency: $120\text{Hz} \pm 20\%$ Measured Voltage: $\leq 0.5\text{Vrms}, 1.5 \sim 2.0\text{VDC}$																							
3	Dissipation Factor (tan $\delta$ )	0.20 and Under	Same as condition of Capacitors																							
4	Load Life	<table border="1"> <tr> <td>Leakage Current</td> <td><math>\leq</math> the value specified in Table 1</td> </tr> <tr> <td>Cap. Change</td> <td><math>\leq \pm 20\%</math> of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td><math>\leq 200\%</math> of value specified in Table 1</td> </tr> <tr> <td>Appearance</td> <td>No remarkable abnormality</td> </tr> </table>	Leakage Current	$\leq$ the value specified in Table 1	Cap. Change	$\leq \pm 20\%$ of initial value	Dissipation Factor	$\leq 200\%$ of value specified in Table 1	Appearance	No remarkable abnormality	Test condition: $105 \pm 2^\circ\text{C}$ 120Hz Applied voltage: Rated voltage Applied Ripple Current: $475\text{mArms}$ Test Time: 2000 +72, -0 hours															
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7	Impedance Ratio	<table border="1"> <tr> <td>Z(-25<math>^\circ\text{C}</math>) / Z(+20<math>^\circ\text{C}</math>)</td> <td>6</td> </tr> <tr> <td>Z(-40<math>^\circ\text{C}</math>) / Z(+20<math>^\circ\text{C}</math>)</td> <td>0</td> </tr> </table>	Z(-25 $^\circ\text{C}$ ) / Z(+20 $^\circ\text{C}$ )	6	Z(-40 $^\circ\text{C}$ ) / Z(+20 $^\circ\text{C}$ )	0																				
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10	Vibration Resistance	<table border="1"> <tr> <td>Capacitance</td> <td>Stability required</td> </tr> <tr> <td>Cap. Change</td> <td><math>\leq \pm 5\%</math> of the initial specified value</td> </tr> <tr> <td>Appearance</td> <td>No remarkable abnormality</td> </tr> </table>	Capacitance	Stability required	Cap. Change	$\leq \pm 5\%$ of the initial specified value	Appearance	No remarkable abnormality	Frequency: 10 ~ 55Hz Width of vibration: 1.5mm Direction and duration: X,Y and Z directions, each for 2 hours																	
Capacitance	Stability required																									
Cap. Change	$\leq \pm 5\%$ of the initial specified value																									
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11	Solderbility	3/4 area of surrounding directions of surface should be covered with new solder.	Solder: Sn-Ag, Sn-Cu Type Soldering Temp: $240 \pm 5^\circ\text{C}$ Dipping degree: 2 ~ 2.5mm Flux: Ethanol solution (JIS K8101) or Isopropylalchol (JIS K8839) solution of Rosin (JIS K5902)																							
12	Resistance to Soldering	<table border="1"> <tr> <td>Leakage Current</td> <td><math>\leq</math> the initial specified value</td> </tr> <tr> <td>Cap. Change</td> <td><math>\leq \pm 15\%</math> against value before test</td> </tr> <tr> <td>Dissipation Factor</td> <td><math>\leq</math> the initial specified value</td> </tr> <tr> <td>Appearance</td> <td>No remarkable abnormality</td> </tr> </table>	Leakage Current	$\leq$ the initial specified value	Cap. Change	$\leq \pm 15\%$ against value before test	Dissipation Factor	$\leq$ the initial specified value	Appearance	No remarkable abnormality	Soldering Temp. $280 \pm 5^\circ\text{C}$ Soldering Time . $10 \pm 1$ sec.															
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Cap. Change	$\leq \pm 15\%$ against value before test																									
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## 6-2. Characteristics

No.	Item	Performance	Test Method
13	Resistance to Humidity	Leakage Current	≤ Initial specified value
		Cap. Change	≤ ±15% of initial value
		Dissipation Factor	≤ Initial specified value
		Appearance	No remarkable abnormality
			Test Temp. : 40±2°C Humidity 90~95% Test Time : 500 ± 8 hours After the above condition, restored to normal temp, and then measured.
14	Pressure valve moment characteristics	Pressure valve open safely. There must be nothing ignition or scattering from product.	DC method: Apply an reverse current of 1A to impress the reverse voltage until pressure valve open.

## 7. Packing method

Packaging shape, size, quantity



Component size	<b>D13X38L</b>
Quantity per case	<b>PCS</b>
Symbol of box	Y-2
L	480
H	320
W	320

## 8 Related Standards: JIS C 5141

### 9 Marking on packing box

- ① Item name
- ② Series name
- ③ Rated Voltage
- ④ Nominal Static Capacitance
- ⑤ Case size
- ⑥ Lot No.
- ⑦ Quantity

## 10 Soldering

10-1 Soldering by soldering iron

Temperature of iron top : 270~350°C

Operating time : within 3 sec.

10-2 Flow soldering.

Preheat : PCB surface temperature 120°C±5°C

Solder temp.: 260°C±5°C

Solder dipping time: 2~4sec.

## 11 Cleaning of PC board after soldering

Some solvents is acceptable but make sure following condition:

Solvent:

IPA or Alcoholic agent like Pinealpha ST-100S, Cleantrough 750H, 750L, 710M, 750K, or Technocare FRW-14~17

- ① Cleaning should be made by ultrasonic within 5min, at the temperature less then 60°C.
- ② Control of pollution is necessary.
- ③ Keep away from cleaning agent. Please do not store in air-tight container.  
Dry it by hot air, keep the temperature of air less than maximum operating temp.

单击下面可查看定价，库存，交付和生命周期等信息

[>>KINGTOP\(勤拓\)](#)