

CVU Series

Features

- 6.3 ϕ ~ 18 ϕ , 125°C, 1,000 ~ 2,000 hours assured
- Chip type high temperature range, for +125°C use
- For automobile modules and other high temperature applications
- RoHS Compliance



Marking color: Black

Specifications

Items	Performance																				
Category Temperature Range	-40°C ~ +125°C																				
Capacitance Tolerance	±20% (at 120Hz, 20°C)																				
Leakage Current (at 20°C)	I = 0.03CV or 4 (µA) whichever is greater (after 1 minutes) Where, C = rated capacitance in µF V = rated DC working voltage in V																				
Tanδ (at 120Hz, 20°C)	<table border="1"> <tr> <td>Rated Voltage</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Tanδ (max)</td> <td>0.32</td> <td>0.24</td> <td>0.21</td> <td>0.18</td> <td>0.15</td> </tr> </table> <p>When the capacitance exceeds 1,000µF, 0.02 shall be added every 1,000µF increase.</p>	Rated Voltage	10	16	25	35	50	Tanδ (max)	0.32	0.24	0.21	0.18	0.15								
Rated Voltage	10	16	25	35	50																
Tanδ (max)	0.32	0.24	0.21	0.18	0.15																
Low Temperature Characteristics (at 120Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <tr> <td>Rated Voltage</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Impedance</td> <td>Z(-25°C)/Z(+20°C)</td> <td>6</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> </tr> <tr> <td>Ratio</td> <td>Z(-40°C)/Z(+20°C)</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> </tr> </table>	Rated Voltage	10	16	25	35	50	Impedance	Z(-25°C)/Z(+20°C)	6	5	4	3	3	Ratio	Z(-40°C)/Z(+20°C)	12	8	6	4	4
Rated Voltage	10	16	25	35	50																
Impedance	Z(-25°C)/Z(+20°C)	6	5	4	3	3															
Ratio	Z(-40°C)/Z(+20°C)	12	8	6	4	4															
Endurance	<table border="1"> <tr> <td>Test Time</td> <td>1,000 Hrs for $\phi D \leq 8 \times 6.5\text{mm}$ 2,000 Hrs for $\phi D \geq 8 \times 10\text{mm}$</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 300% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table> <p>* The above Specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 1,000 / 2,000 hours at 125°C.</p>	Test Time	1,000 Hrs for $\phi D \leq 8 \times 6.5\text{mm}$ 2,000 Hrs for $\phi D \geq 8 \times 10\text{mm}$	Capacitance Change	Within ±30% of initial value	Tanδ	Less than 300% of specified value	Leakage Current	Within specified value												
Test Time	1,000 Hrs for $\phi D \leq 8 \times 6.5\text{mm}$ 2,000 Hrs for $\phi D \geq 8 \times 10\text{mm}$																				
Capacitance Change	Within ±30% of initial value																				
Tanδ	Less than 300% of specified value																				
Leakage Current	Within specified value																				
Shelf Life Test	<table border="1"> <tr> <td>Test Time</td> <td>1,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 300% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table> <p>* The above Specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 125°C without voltage applied.</p>	Test Time	1,000 Hrs	Capacitance Change	Within ±30% of initial value	Tanδ	Less than 300% of specified value	Leakage Current	Within specified value												
Test Time	1,000 Hrs																				
Capacitance Change	Within ±30% of initial value																				
Tanδ	Less than 300% of specified value																				
Leakage Current	Within specified value																				
Ripple Current & Frequency Multipliers	<table border="1"> <tr> <td></td> <td>Freq.(Hz)</td> <td>50</td> <td>120</td> <td>1k</td> <td>10k up</td> </tr> <tr> <td rowspan="2">Cap.(µF)</td> <td>Under 330</td> <td>0.80</td> <td>1.0</td> <td>1.25</td> <td>1.40</td> </tr> <tr> <td>330 < C ≤ 4,700</td> <td>0.85</td> <td>1.0</td> <td>1.20</td> <td>1.30</td> </tr> </table>		Freq.(Hz)	50	120	1k	10k up	Cap.(µF)	Under 330	0.80	1.0	1.25	1.40	330 < C ≤ 4,700	0.85	1.0	1.20	1.30			
	Freq.(Hz)	50	120	1k	10k up																
Cap.(µF)	Under 330	0.80	1.0	1.25	1.40																
	330 < C ≤ 4,700	0.85	1.0	1.20	1.30																

Diagram of Dimensions

Fig. 1

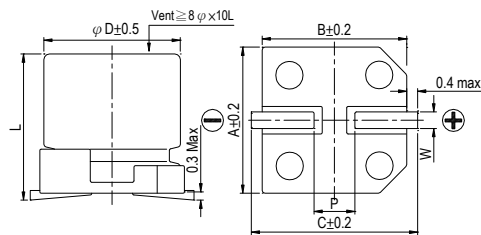
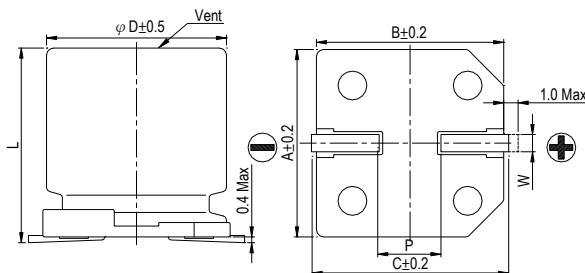


Fig. 2



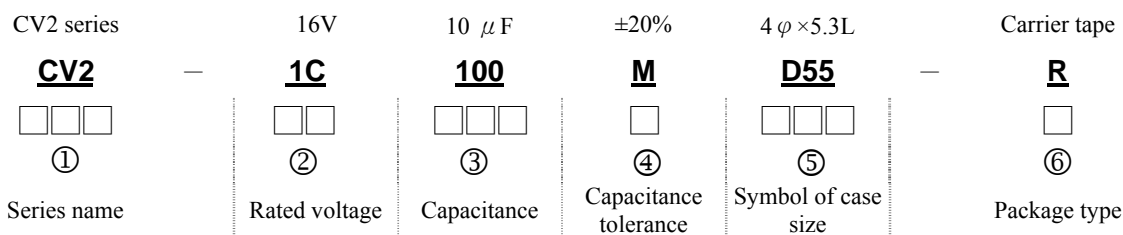
Lead Spacing and Diameter

Unit: mm

ϕD	L	A	B	C	W	P ± 0.2	Fig. No.
6.3	5.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0	1
6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0	1
8	6.5 ± 0.3	8.4	8.4	9.0	0.5 ~ 0.8	2.3	1
8	10 ± 0.5	8.4	8.4	9.0	0.7 ~ 1.1	3.1	1
10	10 ± 0.5	10.4	10.4	11.0	0.7 ~ 1.3	4.7	1
12.5	13.5 ± 0.5	13.0	13.0	13.7	1.1 ~ 1.4	4.4	2
12.5	16 ± 0.5	13.0	13.0	13.7	1.1 ~ 1.4	4.4	2
16	16.5 ± 0.5	17.0	17.0	18.0	1.1 ~ 1.4	6.4	2
18	16.5 ± 0.5	19.0	19.0	20.0	1.1 ~ 1.4	6.4	2

Part Numbering System for the SMD Type

When you place an order for Cal-chip electrolytic capacitors, please refer to our part number as shown below.



① Series:

Series is represented by a three digit code.

② Rated Voltage: Voltage on volts (V) is represented by two digit code showing the real working voltage: OG=4V, OJ=6.3V, 1A=10V, 1C=16V, 1E=25V, 1V=35V, 1H=50V, 1J=63V, 1K=80V, 2A=100V, 2C=160V, 2D=200V, 2E=250V, 2G=400V and 2W=450V

③ Capacitance:

Rated capacitance in μ F is represented by a three digit number. The first two digits are the significant figures of the nominal capacitance and the third digit indicates the number of zeros following these figures. The decimal point is represent by the capital letter R. Please refer to the following example:

μ F	0.1	0.47	1	4.7	10	47	100	470	1000
Part number	0R1	R47	010	4R7	100	470	101	471	102

④ Tolerance:

Symbol of W, T, Q, V, M, K and J show special capacitance tolerance which are listed as follows:

W = -10% ~ +100%	M = -20% ~ +20%
T = -10% ~ +50%	K = -10% ~ +10%
Q = -10% ~ +30%	J = -5% ~ +5%
V = -10% ~ +20%	

⑤ Case Size: Symbol of case size are listed as follows:

ϕ D×L (mm)	Symbol	ϕ D×L (mm)	Symbol	ϕ D×L (mm)	Symbol	ϕ D×L (mm)	Symbol
3×5.3	B55	6.3×5.3	F55	8×6.5	G68	10×10.0	H10
4×5.3	D55	6.3×5.7	F60	8×7.0	G72	10×13.0	H13
4×5.7	D60	6.3×6.0	F62	8×10.0	G10	12.5×13.5	K14
5×5.3	E55	6.3×7.0	F72	8×12.0	G12	12.5×16.0	K16
5×5.7	E60	6.3×7.7	F80	10×8.0	H82	16×16.5	L17

⑥ Package type:

R = Taping polarity symbol with reel package in 380 mm