

CV Series Chip type

Features

- ◆ Chip type ,Low impedance
- ◆ Chip type with load life of 7000 hours at +105°C
- ◆ Designed for surface mounting on high density PC board
- ◆ Applicable to automatic mounting machine using carrier tape
- ◆ Complied to the RoHS directive

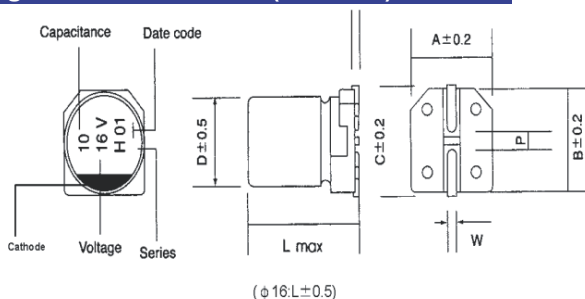
Specifications

Item	Performance Characteristics																					
Operating Temperature Range	-25 to +105°C																					
Rate voltage Range	6.3~50 VDC																					
Capacitance Range	22 to 1500µF																					
Capacitance Tolerance	±20%(120Hz,+20°C)																					
Leakage Current(+20°C,max.)	I ≤ 0.03 CV or 4 (µA)After 2 minutes whichever is greater measured with rated working voltage applied.																					
Dissipation Factor(tanδ) (+20°C, at 120Hz)	<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">Working Voltage(VDC)</td> <td style="text-align: center;">6.3</td> <td style="text-align: center;">10</td> <td style="text-align: center;">16</td> <td style="text-align: center;">25</td> <td style="text-align: center;">35</td> <td style="text-align: center;">50</td> </tr> <tr> <td style="text-align: center;">D.F.(%)max.</td> <td style="text-align: center;">32</td> <td style="text-align: center;">28</td> <td style="text-align: center;">26</td> <td style="text-align: center;">16</td> <td style="text-align: center;">14</td> <td style="text-align: center;">14</td> </tr> </table>	Working Voltage(VDC)	6.3	10	16	25	35	50	D.F.(%)max.	32	28	26	16	14	14							
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Low Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1" style="margin: auto;"> <tr> <td colspan="7" style="text-align: center;">Impedance ratio max.(at:120Hz)</td> </tr> <tr> <td style="text-align: center;">Working Voltage(VDC)</td> <td style="text-align: center;">6.3</td> <td style="text-align: center;">10</td> <td style="text-align: center;">16</td> <td style="text-align: center;">25</td> <td style="text-align: center;">35</td> <td style="text-align: center;">50</td> </tr> <tr> <td style="text-align: center;">Z-25°C/+20°C</td> <td style="text-align: center;">4</td> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2</td> </tr> </table>	Impedance ratio max.(at:120Hz)							Working Voltage(VDC)	6.3	10	16	25	35	50	Z-25°C/+20°C	4	3	2	2	2	2
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Load Life	Test condition Duration time :7000hours Ambient temperature :+105°C Applied voltage :Rated DC working voltage After test requirement at +20°C Capacitance change : Within ±30% of initial value Dissipation factor :Less than 300% of specified value Leakage current :Less than specified value																					
Shelf Life	Test condition Duration time :1000Hrs Ambient temperature :+105°C Applied voltage :None After test requirement at +20°C:Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																					
Resistance to soldering heat	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 30 seconds. <table border="1" style="margin: auto; width: 80%;"> <tr> <td style="width: 50%;">Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>tanδ</td> <td>Less than specified value</td> </tr> </table>	Leakage current	Less than specified value	Capacitance change	Within ±10% of initial value	tanδ	Less than specified value															
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Multiplier for Ripple Current vs. Frequency

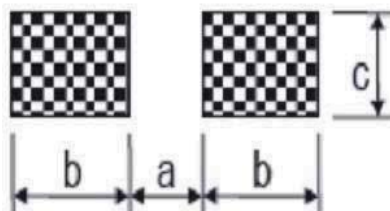
CAP (µF) \ Hz	60(50)	120	500	1K	10K~100K
0.1 ≤Cap ≤100 µF	0.53	0.67	0.8	0.87	1
100 ≤Cap ≤1500 µF	0.67	0.83	0.92	0.96	1

Diagram of Dimensions:(unit:mm)



ΦD	L	A	B	C	W	P
4	5.5	4.3	4.3	4.9	0.5~0.8	1.0
5	5.5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	5.5	6.6	6.6	7.2	0.5~0.8	2.2
6.3	6.1	6.6	6.6	7.2	0.5~0.8	2.2
6.3	7.7	6.6	6.6	7.2	0.5~0.8	2.2
8	6.5	8.3	8.3	9.0	0.5~0.8	2.3
8	10.5	8.3	8.3	9.0	0.7~1.1	3.1
10	10.5	10.3	10.3	11.0	0.7~1.1	4.5
12.5	14	13.5	13.5	15.0	1.0~1.4	4.5
16	17	17.1	17.1	18.0	1.0~1.4	7.0

Recommended land pattern:(unit:mm)



ΦDxL	a	b	c
4 x all	1	2.6	1.6
5 x all	1.4	3	1.6
6.3 x all	2.1	3.5	1.6
8 x 6.5(height ≤6.5)	2.1	4.5	1.6
8 x 6.5(height >6.5)	2.8	4.2	1.9
10 x all	4.3	4.4	1.9
12.5 x all	4.3	5.8	2.5
16 x all	6	6.5	3.5

Case Size

WV (Vdc)	Cap (µF)	Size mm	Rated Ripple current (Arms/105°C /100KHz)	Max ESR(Ω) at 20°C /100KHz
6.3	100	6.3×7.7	140	1.10
6.3	150	6.3×7.7	180	0.90
6.3	220	6.3×7.7	230	0.75
6.3	330	8×10.5	400	0.50
6.3	470	8×10.5	600	0.22
6.3	680	10×10.5	700	0.20
6.3	1000	12.5×14	1100	0.10
6.3	1500	16×17	1500	0.08
10	100	6.3×7.7	140	1.10
10	150	6.3×7.7	180	0.90
10	220	6.3×7.7	230	0.75
10	330	8×10.5	400	0.50
10	470	8×10.5	600	0.22
10	680	10×10.5	700	0.20
10	1000	12.5×14	1100	0.10
10	1500	16×17	1500	0.08
16	100	6.3×7.7	140	1.10
16	150	8×10.5	250	0.60
16	220	8×10.5	280	0.40
16	330	8×10.5	600	0.22
16	470	8×10.5	600	0.22
16	470	10×10.5	850	0.16
16	680	12.5×14	1100	0.10
16	1000	16×17	1500	0.08
25	22	6.3×7.7	95	1.50
25	33	6.3×7.7	120	1.30
25	47	6.3×7.7	140	1.10
25	100	8×10.5	280	0.70
25	150	8×10.5	380	0.60
25	220	8×10.5	600	0.22
25	330	8×10.5	650	0.20
25	390	10×10.5	750	0.19
25	470	10×10.5	850	0.16
25	680	12.5×14	1100	0.10
25	1000	16×17	1500	0.08
35	47	6.3×7.7	230	1.00
35	100	8×10.5	600	0.22
35	220	10×10.5	850	0.16
35	330	12.5×14	1100	0.10
35	470	16×17	1500	0.08
50	47	8×10.5	350	0.53
50	100	8×10.5	350	0.53
50	100	10×10.5	400	0.51
50	150	10×10.5	450	0.48
50	220	12.5×14	850	0.40
50	330	16×17	1100	0.30