

# SMD ALUMINUM ELECTROLYTIC CAPACITORS

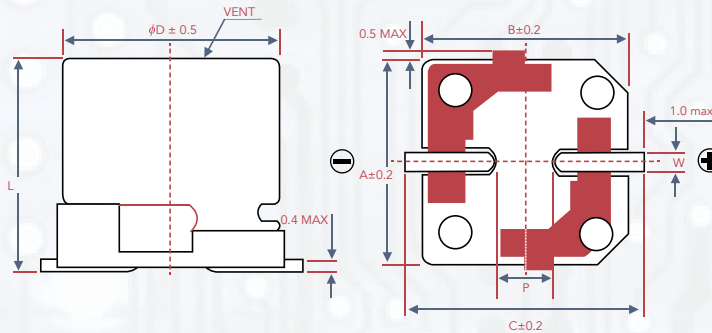
## - CVW SERIES -

### FEATURES

- 12.5 ~ 16  $\phi$ , 105°C, 5,000 hours assured
- Suitable for automotive application
- Peak acceleration: 50G
- RoHS Compliance



### CONSTRUCTION AND DIMENSIONS



### LEAD SPACING AND DIAMETER

UNIT : MM

$\phi D$	L	A	B	C	W	P $\pm 0.2$
12.5	13.5 $\pm 0.5$	13.0	13.4	15.4	1.1-1.4	4.4
12.5	16 $\pm 0.5$	13.0	13.4	15.4	1.1-1.4	4.4
16	16.5 $\pm 0.5$	16.5	16.9	18.9	1.1-1.4	6.4

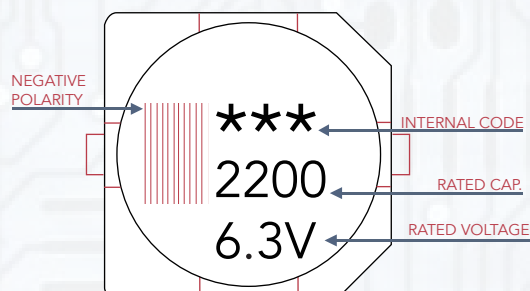
### PART NUMBER

CW	1C	102	M	K14	R
SERIES NAME	RATED VOLTAGE	CAPACITANCE	TOLERANCE	CASE SIZE	PACKAGE TYPE
Series is represented by a three/four digit code	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 2W - 450V	330 - 331 $\mu F$ 102 - 1000 $\mu F$	M: -20% ~ +20% K: -10% ~ +10% J: -5% ~ +5%	B55 - 3x5.3 D55 - 4x5.3 D60 - 4x5.7 E55 - 5x5.3 E60 - 5x5.7 F55 - 6.3x5.3 F60 - 6.3x5.7 F62 - 6.3x6.0 F72 - 6.3x7.0 F80 - 6.3x7.7 G68 - 8x6.5 G72 - 8x7.0 G10 - 8x10.0 G12 - 8x12.0 H82 - 10x8.0 H10 - 10x10.0 H13 - 10x13.0 K14 - 12.5x13.5 K16 - 12.5x16.0 L17 - 16x16.5	R - Taping polarity with reel package in 380mm

## SPECIFICATIONS

ITEMS	PERFORMANCE																																
Category Temperature Range	-55°C ~ +105°C																																
Capacitance Tolerance	±20% (at 120Hz, 20°C)																																
Leakage Current (at 20°C)	$I=0.01CV$ or $3(\mu A)$ whichever is greater (after 2 minutes) Where, $C$ = rated capacitance in $\mu F$ , $V$ = rated DC working voltage in $V$																																
Tan $\delta$ at 120Hz, 20°C	<table border="1"> <thead> <tr> <th>RATED VOLTAGE</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>TAN <math>\delta</math> (MAX)</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.16</td> <td>0.13</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> <td>0.07</td> </tr> </tbody> </table> <p>*When the capacitance exceeds 1,000 <math>\mu F</math>, 0.002 shall be added every 1,000 <math>\mu F</math> increase.</p>	RATED VOLTAGE	6.3	10	16	25	35	50	63	80	100	TAN $\delta$ (MAX)	0.30	0.26	0.22	0.16	0.13	0.10	0.08	0.08	0.07												
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Low Temperature Characteristics (at 120Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th colspan="2">RATED VOLTAGE</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">IMPEDANCE RATIO</td> <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> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-55°C) / Z(+20°C)</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	RATED VOLTAGE		6.3	10	16	25	35	50	63	80	100	IMPEDANCE RATIO	Z(-25°C) / Z(+20°C)	4	3	2	2	2	2	2	2	2	Z(-55°C) / Z(+20°C)	8	5	4	3	3	3	3	3	3
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Vibration	<p>Peak acceleration: 50G            Peak to peak amplitude: 1.5mm            Frequency: 5 to 2,000 Hz reciprocation for 20 min.            Direction and duration of vibration: 3 orthogonal directions mutually each for 4 Hrs.</p>																																

## MARKING



## DIMENSION & PERMISSIBLE RIPPLE CURRENT

VDC CONTENTS μF	6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)			50V (1V)		
	φDxL	IMP.	mA.	φDxL	IMP.	mA.	φDxL	IMP.	mA.	φDxL	IMP.	mA.	φDxL	IMP.	mA.	φDxL	IMP.	mA.
330	331												12.5x13.5	0.066	850	12.5x13.5	0.11	700
470	471												12.5x16	0.058	950	16x16.5	0.070	1,100
680	681									12.5x13.5	0.066	850	12.5x16	0.058	950	16x16.5	0.070	1,100
1,000	102						12.5x13.5	0.066	850	12.5x16	0.058	950	16x16.5	0.052	1,300			
1,500	152			12.5x13.5	0.066	850	12.5x16	0.058	950	16x16.5	0.052	1,300						
2,200	222	12.5x13.5	0.066	850	12.5x16	0.058	950	16x16.5	0.052	1,300	16x16.5	0.052	1,300					
3,300	332	12.5x16	0.058	950	16x16.5	0.052	1,300	16x16.5	0.052	1,300								
4,700	472	16x16.5	0.052	1,300	16x16.5	0.052	1,300											

VDC CONTENTS μF	63V (1J)			80C (1K)			100V (2A)			
	φDxL	IMP.	mA.	φDxL	IMP.	mA.	φDxL	IMP.	mA.	
100	101						12.5x13.5	0.32	450	
150	151	12.5x13.5	0.140	700	12.5x13.5	0.32	450	12.5x16	0.26	550
220	221	12.5x13.5	0.140	700	12.5x16	0.26	550	16x16.5	0.17	650
330	331	16x16.5	0.080	900	16x16.5	0.17	650			
470	471	16x16.5	0.080	900						