

# SMD ALUMINUM ELECTROLYTIC CAPACITORS

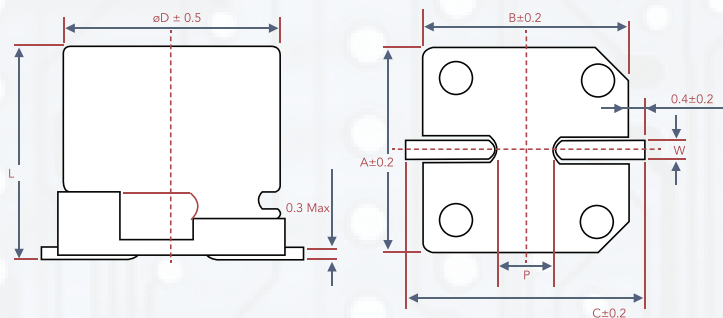
## - CV2 SERIES -

### FEATURES

- 3Ø~10Ø, 85°C, 2,000 hours assured
- Chip type large capacitance capacitors
- Designed for surface mounting on high density PC board
- RoHS Compliance



### CONSTRUCTION AND DIMENSIONS



øD	L	A	B	C	W	P ± 0.2
3	5.3±0.2	3.3	3.3	1.5	0.45~0.75	0.8
4	5.3±0.2	4.3	4.3	2.0	0.5 to 0.8	1.0
5	5.3±0.2	5.3	5.3	2.3	0.5 to 0.8	1.5
6.3	5.3±0.7	6.6	6.6	2.7	0.5 to 0.8	2.0
6.3	7.7±0.2	6.6	6.6	2.7	0.5 to 0.8	2.0
8	6.5±0.2	8.4	8.4	3.4	0.5 to 0.8	2.3
8	10±0.5	8.4	8.4	3.0	0.7 to 1.1	3.1
10	10±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7
10	13±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7

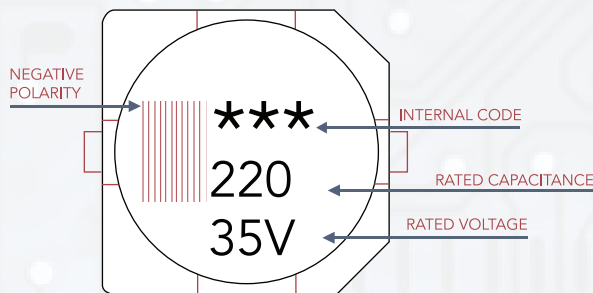
### LEAD SPACING AND DIAMETER

CV2	1C	100	M	D55	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 2A - 100V	0R1 - 0.1µF 4R7 - 4.7µF 100 - 10µF 471 - 470µF 102 - 1000µF	M: -20% ~ +20%	B55-3x5.3 G68-8x6.5 D55-4x5.3 G10-8x10.0 E55-5x5.3 H10-10x10.0 F55-6.3x5.3H13-10x13.0 F80-6.3x7.7K14-12.5x13.5	R - Taping polarity with reel package in 380mm

### SPECIFICATIONS

ITEM	SPECIFICATION																																
Operating Temperature Range	-40°C ~ +85°C																																
Capacitance Tolerance	±20% (at 120Hz, 20°C)																																
Leakage Current (at 20°C)	I = 0.01CV or 3 (µA) whichever is greater (after 2 minutes) Where, C= rated capacitance in uF. V= rated DC working voltage in V																																
Dissipation Factor Tan δ at 120Hz, 20°C	<table border="1"> <thead> <tr> <th>RATED VOLTAGE</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>TAN δ (MAX)</td> <td>0.42</td> <td>0.28</td> <td>0.24</td> <td>0.20</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.10</td> </tr> </tbody> </table>	RATED VOLTAGE	4	6.3	10	16	25	35	50	63	100	TAN δ (MAX)	0.42	0.28	0.24	0.20	0.14	0.12	0.10	0.10	0.10												
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Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below. <table border="1"> <thead> <tr> <th colspan="2">RATED VOLTAGE</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">IMPEDANCE RATIO</td> <td>Z(-25°C)/Z(+20°C)</td> <td>7</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> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>15</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> </tr> </tbody> </table>	RATED VOLTAGE		4	6.3	10	16	25	35	50	63	100	IMPEDANCE RATIO	Z(-25°C)/Z(+20°C)	7	4	3	2	2	2	2	2	2	Z(-40°C)/Z(+20°C)	15	8	5	4	3	3	3	3	3
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Load Life Test	<table border="1"> <thead> <tr> <th>TEST TIME</th> <td>2,000 Hrs</td> </tr> </thead> <tbody> <tr> <td>CAPACITANCE CHANGE</td> <td>Within ±20% of initial value (4WV: ±30%)</td> </tr> <tr> <td>DISSIPATION FACTOR</td> <td>Less than 200% of specified value (4WV: ±300%)</td> </tr> <tr> <td>LEAKAGE CURRENT</td> <td>Within specified value</td> </tr> </tbody> </table> <p>*The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 2,000 hrs at 85°C.</p>	TEST TIME	2,000 Hrs	CAPACITANCE CHANGE	Within ±20% of initial value (4WV: ±30%)	DISSIPATION FACTOR	Less than 200% of specified value (4WV: ±300%)	LEAKAGE CURRENT	Within specified value																								
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Shelf Life Test	Test time: 1,000hrs; other items are the same as those for the load life test																																
Ripple Current & Frequency Multipliers	<table border="1"> <thead> <tr> <th>V.D.C. (V)</th> <th>FREQ (Hz)</th> <th>50</th> <th>120</th> <th>1K</th> <th>10K up</th> </tr> </thead> <tbody> <tr> <td>Under 16</td> <td></td> <td>0.8</td> <td>1.0</td> <td>1.15</td> <td>1.25</td> </tr> <tr> <td>25 - 35</td> <td></td> <td>0.8</td> <td>1.0</td> <td>1.25</td> <td>1.40</td> </tr> <tr> <td>50 - 63</td> <td></td> <td>0.8</td> <td>1.0</td> <td>1.35</td> <td>1.50</td> </tr> <tr> <td>100</td> <td></td> <td>0.7</td> <td>1.0</td> <td>1.35</td> <td>1.50</td> </tr> </tbody> </table>	V.D.C. (V)	FREQ (Hz)	50	120	1K	10K up	Under 16		0.8	1.0	1.15	1.25	25 - 35		0.8	1.0	1.25	1.40	50 - 63		0.8	1.0	1.35	1.50	100		0.7	1.0	1.35	1.50		
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50 - 63		0.8	1.0	1.35	1.50																												
100		0.7	1.0	1.35	1.50																												
Other Standards	JIS C 5101-1, -18																																

## MARKING



## DIMENSION & PERMISSIBLE RIPPLE CURRENT

VDC	4V (OG)		6.3V (OJ)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)		100V (2A)		
	CONTENTS	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
0.1	OR1													4x5.3	3				
0.22	R22													4x5.3	5				
0.33	R33													4x5.3	6				
0.47	R47													4x5.3	7				
1	0.10												3x5.3	4x5.3	14	8			
2.2	2R2												4x5.3		11				
3.3	3R3										3x5.3	8	4x5.3		19				
4.7	47								4x5.3	19	4x5.3	14	4x5.3	20					
10	100					4x5.3	23	4(3)x5.3	26 (14)	4x5.3	14	4x5.3	18	5x5.3	34	8x6.5	75	6.3x7.7	35
														5x5.3	44				
22	220	3x5.3	14	4x5.3	23	4x5.3	28	4x5.3	30	5x5.3	25	5x5.3	47	6.3x5.3	42	8x10	139	10x10	189
														6.3x5.3	29	*8x6.5	155 (65)		
33	330	4x5.3	31	4x5.3	31	4x5.3	33	6.3x5.3	63	5x5.3	54	6.3x5.3	67	6.3x7.7	82	8x10	139	10x10	189
														6.3x5.3	48	*8x6.5	155 (82)		
47	470	4x5.3	34	4x5.3	37	5x5.3	39	5x5.3	52	6.3x5.3	48	6.3x7.3	55	6.3x7.7	98	10x10	140		
														5x5.3	50	*8x10	252		
68	680	5x5.3	54	6.3x5.3	89	5x5.3	63	6.3x5.3	98	6.3x5.3	103	6.3x7.7	109	8x10	252	10x10	226		
														6.3x5.3	98	*8x6.5	155 (109)		
100	101	5x5.3	58	5x5.3	63	5x5.3	65	6.3x5.3	110	6.3x7.7	91	6.3x7.7	98	8x10	145	10x10	226		
		6.3x5.3	89	6.3x5.3	98	6.3x5.3	110	*8x6.5	155 (108)	*8x6.5	155 (124)	6.3x7.7	80	10x10	458				
220	221	6.3x5.3	110	6.3x5.3	110	6.3x7.7	124	*8x6.5	155 (130)	*8x10	252 (124)	8x10	175	10x10	458	10x10	220		
														*8x6.5	155 (139)	8x10	252	8x10	252
330	331			*8x6.5	155 (139)	8x10	252	8x10	252	10x10	458	10x10	300	10x13	295				
														10x13	300	12.5x13.5	420		
470	471			8x10	252	10x10	458	8x10	270				10x10.5	310	8x10	252	12.5x13.5	470	
													10x13	375	10x10	458			
680	681											12.5x13.5	470						
1,000	102			10x10	458	10x10	458	10x10	315										
1,500	152			10x10.3	458														

