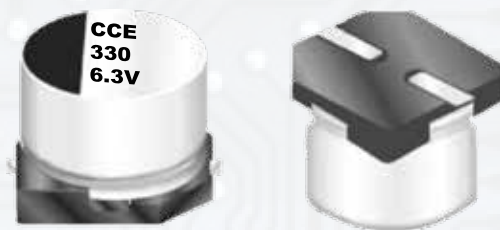


SMD ALUMINUM ELECTROLYTIC CAPACITORS

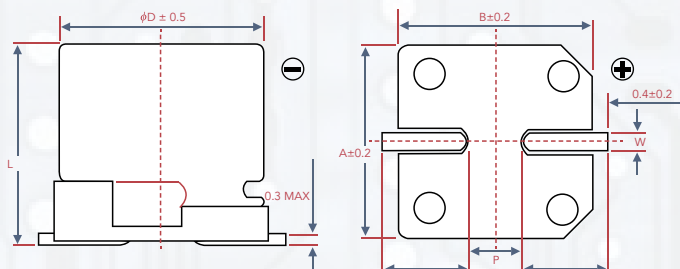
- CVL SERIES -

FEATURES

- 4φ~10φ, 105°C, 3,000 hours assured
- Long life assured
- Designed for surface mounting on high density PC board
- RoHS Compliance



CONSTRUCTION AND DIMENSIONS



LEAD SPACING AND DIAMETER

UNIT : MM

φD	L	A	B	C	W	P±0.2
4	5.7±0.3	4.3	4.3	2.0	0.5 to 0.8	1.0
5	5.7±0.3	5.3	5.3	2.3	0.5 to 0.8	1.5
6.3	5.7±0.3	6.6	6.6	2.7	0.5 to 0.8	2.0
6.3	5.7±0.3	6.6	6.6	2.7	0.5 to 0.8	2.0
8	10±0.5	8.4	8.4	3.0	0.1 to 0.7	3.1
10	10±0.5	10.4	10.4	3.3	0.1 to 0.7	4.7

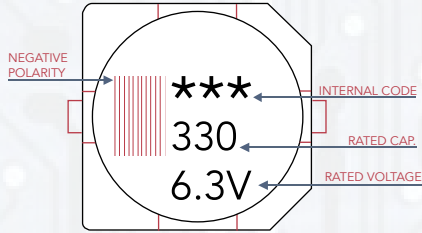
SPECIFICATIONS

ITEMS	PERFORMANCE																					
Operating Temperature Range	-40°C ~ +105°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 μF, 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>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>TAN δ (MAX)</td> <td>0.30</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.13</td> <td>0.12</td> </tr> </tbody> </table>	RATED VOLTAGE	6.3	10	16	25	35	50	TAN δ (MAX)	0.30	0.24	0.20	0.16	0.13	0.12							
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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>RATED VOLTAGE</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>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> </tr> <tr> <td></td> <td>Z(-40°C) / Z(+20°C)</td> <td>10</td> <td>7</td> <td>5</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	RATED VOLTAGE	6.3	10	16	25	35	50	IMPEDANCE RATIO	Z(-25°C) / Z(+20°C)	4	3	2	2	2		Z(-40°C) / Z(+20°C)	10	7	5	3	3
RATED VOLTAGE	6.3	10	16	25	35	50																
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	Z(-40°C) / Z(+20°C)	10	7	5	3	3																
Load Life Test	<table border="1"> <tbody> <tr> <td>TEST TIME</td> <td>3,000 Hrs</td> </tr> <tr> <td>CAPACITANCE CHANGE</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>DISSIPATION FACTOR</td> <td>Less than 300% of specified value</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 3,000 hrs at 105°C.</p>	TEST TIME	3,000 Hrs	CAPACITANCE CHANGE	Within ±30% of initial value	DISSIPATION FACTOR	Less than 300% of specified value	LEAKAGE CURRENT	Within specified value													
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Shelf Life Test	Test time; 1,000 hrs; other items are the same as those for the load life test																					
Ripple Current & Frequency Multipliers	<table border="1"> <thead> <tr> <th>FREQUENCY (Hz)</th> <th>50</th> <th>120</th> <th>1K</th> <th>10K up</th> </tr> </thead> <tbody> <tr> <td>V.DC(V)</td> <td>0.70</td> <td>1.00</td> <td>1.36</td> <td>1.50</td> </tr> </tbody> </table> <p>6.3-50</p>	FREQUENCY (Hz)	50	120	1K	10K up	V.DC(V)	0.70	1.00	1.36	1.50											
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Other Standards	JIS C 5101-1, -18																					

PART NUMBERS

CVL	1C	100	M	D60	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	4R7 - 4.7 μ F 100 - 10 μ F 471 - 470 μ F 102 - 1000 μ 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	

MARKING



DIMENSION & PERMISSIBLE RIPPLE CURRENT

VDC	CONTENTS	6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
		ϕ DxL	mA	ϕ DxL	mA	ϕ DxL	mA	ϕ DxL	mA	ϕ DxL	mA	ϕ DxL	mA
0.1	0R1											4x5.7	1
0.22	R22											4x5.7	2.6
0.33	R33											4x5.7	3.2
.47	R47											4x5.7	5
1	1R0											4x5.7	8
2.2	2R2											4x5.7	12
3.3	3R3											4x5.7	17
4.7	4R7									4x5.7	16	5x5.7	22
10	100					4x5.7	18	5x5.7	27	5x5.7	27	6.3x5.7	32
22	220	4x5.7	22	4x5.7	30	5x5.7	30	6.3x5.7	44	6.3x5.7	44	6.3x7.7	58
33	330	5x5.7	35	5x5.7	35	6.3x5.7	48	6.3x5.7	50	6.3x7.7	57	8x10	130
47	470	5x5.7	38	6.3x5.7	50	6.3x5.7	50	6.3x7.7	63	8x10	141	8x10	141
100	101	6.3x5.7	69	6.3x7.7	81	6.3x7.7	81	8x10	141	10x10	290	10x10	310
220	221	6.3x7.7	120	8x10	141	8x10	141	10x10	290	10x10	320		
330	331	8x10	290	10x10	290	10x10	290	10x10	320				
470	471	10x10	320	10x10	320	10x10	320						
1,000	102	10x10	410										

