

SMD ALUMINUM ELECTROLYTIC CAPACITORS

- CVU SERIES -

FEATURES

- 6.3Ø ~ 18Ø, 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



CONSTRUCTION AND DIMENSIONS

FIG. 1

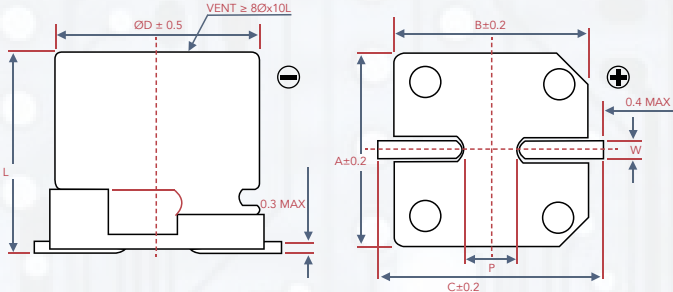
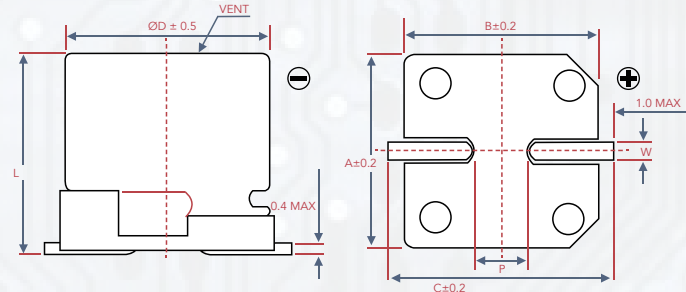


FIG. 2



LEAD SPACING AND DIAMETER

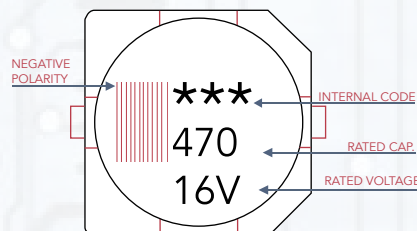
UNIT : MM

ØD	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 NUMBER

CVU	1C	471	M	K14	R
SERIES NAME	RATED VOLTAGE	CAPACITANCE	TOLERANCE	CASE SIZE	PACKAGE TYPE
Series is represented by a two or three digit code.	OG - 4V OJ - 6.3V 1A - 10V 1C - 16V 1E - 25V 1V - 35V 1H - 50V 1J - 63V 1K - 80V 2A - 100V	0R1 - 0.1µF R47 - 0.47µF 010 - 1µF 4R7 - 4.7µF 100 - 10µF 47 - 470µF 101 - 100µF 471 - 470µF 102 - 1000µF	W: -10% ~ +100% T: -10% ~ +50% Q: -10% ~ +30% V: -10% ~ +20% 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





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																				
Tan δ at 120Hz, 20°C	<table border="1"> <thead> <tr> <th>RATED VOLTAGE</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>0.32</td> <td>0.24</td> <td>0.21</td> <td>0.18</td> <td>0.15</td> </tr> </tbody> </table>	RATED VOLTAGE	10	16	25	35	50	TAN δ (max)	0.32	0.24	0.21	0.18	0.15								
RATED VOLTAGE	10	16	25	35	50																
TAN δ (max)	0.32	0.24	0.21	0.18	0.15																
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>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td rowspan="2">IMPEDANCE RATIO</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>Z(-40°C) / Z(+20°C)</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> </tr> </tbody> </table>	RATED VOLTAGE		10	16	25	35	50	IMPEDANCE RATIO	Z(-25°C) / Z(+20°C)	6	5	4	3	3	Z(-40°C) / Z(+20°C)	12	8	6	4	4
RATED VOLTAGE		10	16	25	35	50															
IMPEDANCE RATIO	Z(-25°C) / Z(+20°C)	6	5	4	3	3															
	Z(-40°C) / Z(+20°C)	12	8	6	4	4															
Endurance	<table border="1"> <tbody> <tr> <td>TEST TIME</td> <td>1,000 Hrs for Ø≥8x6.5mm 2,000 Hrs for Ø≥8x10mm</td> </tr> <tr> <td>CAPACITANCE CHANGE</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>TAN δ</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 1,000/2,000 hrs at 125°C.</p>	TEST TIME	1,000 Hrs for Ø≥8x6.5mm 2,000 Hrs for Ø≥8x10mm	CAPACITANCE CHANGE	Within ±30% of initial value	TAN δ	Less than 300% of specified value	LEAKAGE CURRENT	Within specified value												
TEST TIME	1,000 Hrs for Ø≥8x6.5mm 2,000 Hrs for Ø≥8x10mm																				
CAPACITANCE CHANGE	Within ±30% of initial value																				
TAN δ	Less than 300% of specified value																				
LEAKAGE CURRENT	Within specified value																				
Shelf Life Test	<table border="1"> <tbody> <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>TAN δ</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 1,000 hrs at 125°C.</p>	TEST TIME	1,000 Hrs	CAPACITANCE CHANGE	Within ±30% of initial value	TAN δ	Less than 300% of specified value	LEAKAGE CURRENT	Within specified value												
TEST TIME	1,000 Hrs																				
CAPACITANCE CHANGE	Within ±30% of initial value																				
TAN δ	Less than 300% of specified value																				
LEAKAGE CURRENT	Within specified value																				
Ripple Current & Frequency Multipliers	<table border="1"> <thead> <tr> <th rowspan="2">FREQUENCY (Hz) V.DC (V)</th> <th colspan="4">FREQUENCY (Hz)</th> </tr> <tr> <th>50</th> <th>120</th> <th>1K</th> <th>10K up</th> </tr> </thead> <tbody> <tr> <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> </tbody> </table>	FREQUENCY (Hz) V.DC (V)	FREQUENCY (Hz)				50	120	1K	10K up	UNDER 330	0.80	1.0	1.25	1.40	330 < C ≤ 4,700	0.85	1.0	1.20	1.30	
FREQUENCY (Hz) V.DC (V)	FREQUENCY (Hz)																				
	50	120	1K	10K up																	
UNDER 330	0.80	1.0	1.25	1.40																	
330 < C ≤ 4,700	0.85	1.0	1.20	1.30																	



DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC CONTENTS µF	10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
22 220							6.3x5.7	50	8x6.5	75
33 330			6.3x5.7	50	6.3x5.7	50	6.3x7.7	70	8x10	130
47 470			6.3x7.7	70	6.3x7.7	70	8x6.5	75	8x10	130
68 680	6.3x5.7	50	8x6.5	75	8x6.5	75	8x10	130	10x10	180
100 101	8x6.5	75	8x6.5	75	8x10	130	10x10	180	12.5x13.5	357
220 221	8x10	130	10x10	180	10x10	180	12.5x13.5	357	12.5x16	400
330 331	8x10	130	12.5x13.5	480	12.5x13.5	480	16x16.5	650	16x16.5	650
470 471	12.5x13.5	480	12.5x13.5	480	12.5x13.5	480	16x16.5	650	16x16.5	650
680 681	12.5x13.5	480	12.5x13.5	480	12.5x16	585	16x16.5	650	18x16.5	855
1,000 102	12.5x16	585	12.5x16	585	16x16.5	650	18x16.5	855		
1,500 152	12.5x16	585	16x16.5	650	18x16.5	855				
2,200 222	16x16.5	650	18x16.5	855						
3,000 332	18x16.5	855								
4,700 472	18x16.5	855								

