

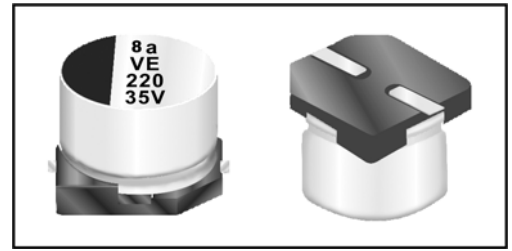


SMD Aluminum Electrolytic Capacitors

VE

Features

- 3 ~ 16 ϕ , 85°C, 2,000 hours assured
- Chip type large capacitance capacitors
- Designed for surface mounting on high density PC board.
- RoHS Compliance



SPECIFICATIONS

Items	Performance																																																				
Operating Temperature Range	-40°C ~ +85°C																																																				
Capacitance Tolerance	±20% (at 120Hz, 20°C)																																																				
Leakage Current (at 20°C)	<table border="1"> <thead> <tr> <th>Time</th> <th colspan="2">after 2 minutes</th> </tr> </thead> <tbody> <tr> <td>Case size</td> <td>4 ~ 10 ϕ</td> <td>12.5 ~ 16 ϕ</td> </tr> <tr> <td>Leakage Current</td> <td>I = 0.01CV or 3μA, whichever is greater</td> <td>I = 0.03CV or 4μA, whichever is greater</td> </tr> </tbody> </table>	Time	after 2 minutes		Case size	4 ~ 10 ϕ	12.5 ~ 16 ϕ	Leakage Current	I = 0.01CV or 3 μ A, whichever is greater	I = 0.03CV or 4 μ A, whichever is greater																																											
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Where, C = rated capacitance in μ F 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.																																																				
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* 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.																																																					
Shelf Life Test	Test time: 1,000 hrs; other items are the same as those for the load life test. The rated voltage shall be applied to the capacitors before the measurements for 160 ~ 450V(Refer to JIS C 5102).																																																				
Ripple Current & Frequency Multipliers	<table border="1"> <thead> <tr> <th rowspan="2">V. DC(V)</th> <th colspan="4">Freq.(Hz)</th> </tr> <tr> <th>50</th> <th>120</th> <th>1K</th> <th>10K up</th> </tr> </thead> <tbody> <tr> <td>Under 16</td> <td>0.8</td> <td>1.0</td> <td>1.15</td> <td>1.25</td> </tr> </tbody> </table>	V. DC(V)	Freq.(Hz)				50	120	1K	10K up	Under 16	0.8	1.0	1.15	1.25																																						
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DIAGRAM OF DIMENSIONS

Fig. 1

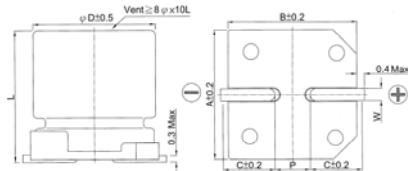
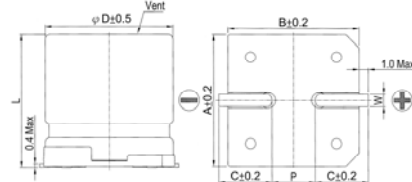
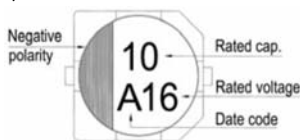


Fig. 2

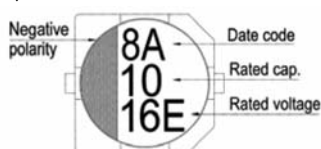


MARKING

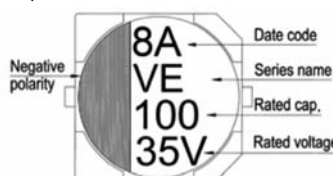
ϕ D = 3 mm



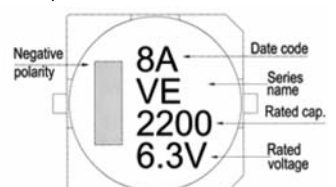
ϕ D = 4 ~ 6.3mm



ϕ D = 8 ~ 10 mm



ϕ D \geq 12.5mm



LEAD SPACING AND DIAMETER

Unit: mm

ϕ D	L	A	B	C	W	P \pm 0.2	Fig. No.
3	5.3 \pm 0.2	3.3	3.3	1.5	0.45 ~ 0.75	0.8	3
4	5.3 \pm 0.2	4.3	4.3	2.0	0.5 ~ 0.8	1.0	1
5	5.3 \pm 0.2	5.3	5.3	2.3	0.5 ~ 0.8	1.5	1
6.3	5.3 \pm 0.2	6.6	6.6	2.7	0.5 ~ 0.8	2.0	1
6.3	7.7 \pm 0.3	6.6	6.6	2.7	0.5 ~ 0.8	2.0	1
8	10 \pm 0.5	8.4	8.4	3.0	0.7 ~ 1.1	3.1	1
8	10.3 \pm 0.5	8.4	8.4	3.0	0.7 ~ 1.1	3.1	1
10	10 \pm 0.5	10.4	10.4	3.3	0.7 ~ 1.1	4.7	1
10	10.3 \pm 0.5	10.4	10.4	3.3	0.7 ~ 1.1	4.7	1
12.5	13.5 \pm 0.5	13.0	13.0	4.8	1.1 ~ 1.4	4.4	2
12.5	16 \pm 0.5	13.0	13.0	4.8	1.1 ~ 1.4	4.4	2
16	16.5 \pm 0.5	17.0	17.0	5.8	1.1 ~ 1.4	6.4	2



SMD Aluminum Electrolytic Capacitors

VE

Dimension: $\phi D \times L$ (mm)

Ripple Current: mA/rms at 120 Hz, 85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

μF	V. DC Contents	4V (0G)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63 (1J)	
		$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA
0.1	0R1													4×5.3	3	4×5.3	2
0.22	R22													4×5.3	5	4×5.3	3
0.33	R33													4×5.3	6	4×5.3	4
0.47	R47													4×5.3	7	4×5.3	5
1	010													4×5.3	10	4×5.3	8
2.2	2R2													4×5.3	14	4×5.3	12
3.3	3R3									3×5.3	14	3×5.3	14	4×5.3	19	5×5.3	27
4.7	4R7					3×5.3	14	3×5.3	14	4×5.3	26	4×5.3	26	4×5.3	26	5×5.3	30
10	100			3×5.3	14	4×5.3	26	4×5.3	26	5×5.3	44	5×5.3	44	5×5.3	44		
22	220	3×5.3	14	4×5.3	26	5×5.3	44	5×5.3	44	5×5.3	44	6.3×5.3	59	6.3×5.3	59	8×10	139
33	330	4×5.3	31	4×5.3	31	5×5.3	50	5×5.3	55	6.3×5.3	67	6.3×5.3	67	6.3×7.7	75	8×10	139
47	470	4×5.3	31	5×5.3	50	6.3×5.3	67	6.3×5.3	67	6.3×5.3	67	6.3×7.7	109	6.3×7.7	75	10×10	226
68	680	5×5.3	58	5×5.3	58	6.3×5.3	89	6.3×5.3	89	6.3×7.7	109	6.3×7.7	109	8×10	190	10×10	226
100	101	5×5.3	58	6.3×5.3	89	6.3×5.3	89	6.3×5.3	89	6.3×7.7	109	8×10	252	8×10	190	10×10	226
220	221	6.3×5.3	110	6.3×5.3	110	6.3×7.7	124	6.3×7.7	124	8×10	252	8×10.3	252	10×10	320	12.5×13.5	500
		6.3×7.7	124	6.3×7.7	124	8×10	252	8×10	252			10×10	400				
330	331	6.3×7.7	124	6.3×7.7	124	8×10	252	8×10	252	10×10	400	10×10.3	400	12.5×13.5	600	12.5×16	600
470	471	8×10	252	8×10	252	10×10	400	10×10	400	10×10	400	12.5×13.5	750	12.5×16	740	16×16.5	850
1,000	102			10×10	430	10×10	430	12.5×13.5	750	12.5×13.5	750	16×16.5	1,100				
2,200	222			12.5×13.5	890	12.5×13.5	890	16×16.5	1100	16×16.5	1100						
3,300	332			12.5×16	1,000	16×16.5	1,200	16×16.5	1200								
4,700	472			16×16.5	1,200	16×16.5	1,200										
6,800	682																

μF	V. DC Contents	100V (2A)	
		$\phi D \times L$	Ma
4.7	4R7		
10	100	8×10	94
22	220	8×10	94
33	330	10×10	120
47	470	10×10	120
68	680	12.5×13.5	380
100	101	12.5×13.5	380
220	221	16×16.5	600