



SMD Aluminum Electrolytic Capacitors

VUA

Features

- 6.3 ~ 18 ϕ , 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



Marking color: Black

SPECIFICATIONS

Items	Performance																										
Category Temperature Range	-40℃ ~ +125℃																										
Capacitance Tolerance	±20% (at 120Hz, 20℃)																										
Leakage Current (at 20℃)	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																										
Dissipation Factor (Tan δ at 120Hz, 20℃)	<table><tr><td>Rated Voltage</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><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></table>						Rated Voltage	10	16	25	35	50	Tan δ (max)	0.32	0.24	0.21	0.18	0.15									
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Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below. <table><tr><td colspan="2">Rated Voltage</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td>Impedance</td><td>Z(-25℃)/Z(+20℃)</td><td>6</td><td>5</td><td>4</td><td>3</td><td>3</td></tr><tr><td>Ratio</td><td>Z(-40℃)/Z(+20℃)</td><td>12</td><td>8</td><td>6</td><td>4</td><td>4</td></tr></table>						Rated Voltage		10	16	25	35	50	Impedance	Z(-25℃)/Z(+20℃)	6	5	4	3	3	Ratio	Z(-40℃)/Z(+20℃)	12	8	6	4	4
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Endurance	<table><tr><td>Test Time</td><td>1,000 Hrs for ϕ D ≤ 8 × 6.5mm 2,000 Hrs for ϕ D ≥ 8 × 10mm</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></table> * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 1,000 / 2,000 hours at 125℃.						Test Time	1,000 Hrs for ϕ D ≤ 8 × 6.5mm 2,000 Hrs for ϕ D ≥ 8 × 10mm	Capacitance Change	Within ±30% of initial value	Dissipation Factor	Less than 300% of specified value	Leakage Current	Within specified value													
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Ripple Current & Frequency Multipliers	<table><tr><td>Freq.(Hz) Cap.(μ F)</td><td>50</td><td>120</td><td>1k</td><td>10k up</td></tr><tr><td>Under 330</td><td>0.80</td><td>1.0</td><td>1.25</td><td>1.40</td></tr><tr><td>300 < C ≤ 1,000</td><td>0.85</td><td>1.0</td><td>1.20</td><td>1.30</td></tr></table>						Freq.(Hz) Cap.(μ F)	50	120	1k	10k up	Under 330	0.80	1.0	1.25	1.40	300 < C ≤ 1,000	0.85	1.0	1.20	1.30						
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DIAGRAM OF DIMENSIONS

Fig. 1

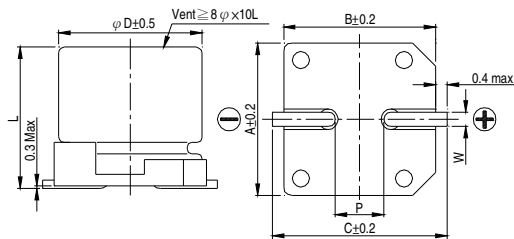
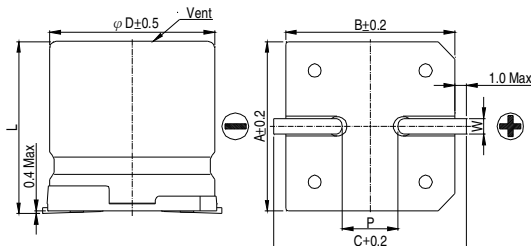


Fig. 2



LEAD SPACING AND DIAMETER

Unit: mm

φD	L	A	B	C	W	P ± 0.2	Fig. No.
6.3	5.7±0.3	6.6	6.6	7.4	0.5 ~ 0.8	2.0	1
6.3	7.7±0.3	6.6	6.6	7.4	0.5 ~ 0.8	2.0	1
8	6.5±0.3	8.4	8.4	9.2	0.5 ~ 0.8	2.3	1
8	10±0.5	8.4	8.4	9.2	0.7 ~ 1.1	3.1	1
10	10±0.5	10.4	10.4	11.2	0.7 ~ 1.1	4.7	1
12.5	13.5±0.5	13.0	13.0	15.0	1.1 ~ 1.4	4.4	2
12.5	16±0.5	13.0	13.0	15.0	1.1 ~ 1.4	4.4	2
16	16.5±0.5	17.0	17.0	19.0	1.1 ~ 1.4	6.4	2
18	16.5±0.5	19.0	19.0	21.0	1.1 ~ 1.4	6.4	2

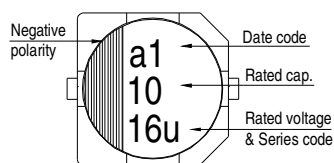


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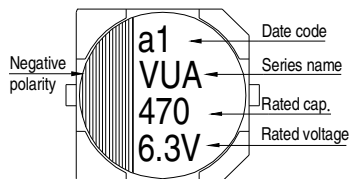
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MARKING

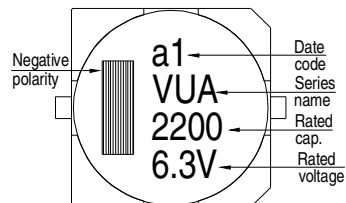
$\phi D = 6.3 \text{ mm}$



$\phi D = 8 \sim 10 \text{ mm}$



$\phi D \geq 12.5 \text{ mm}$



DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension: $\phi D \times L(\text{mm})$

Ripple Current: mA/rms at 120 Hz, 125°C

μF	V. DC Contents	10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
		$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA
22	220							6.3×5.7	50	8×6.5	75
33	330			6.3×5.7	50	6.3×5.7	50	6.3×7.7	70	8×10	130
47	470			6.3×7.7	70	6.3×7.7	70	8×6.5	75	8×10	130
68	680	6.3×5.7	50	8×6.5	75	8×6.5	75	8×10	130	10×10	180
100	101	8×6.5	75	8×6.5	75	8×10	130	10×10	180	12.5×13.5	357
220	221	8×10	130	10×10	180	10×10	180	12.5×13.5	357	12.5×16	400
330	331	8×10	130	12.5×13.5	480	12.5×13.5	480	16×16.5	650	16×16.5	650
470	471	12.5×13.5	480	12.5×13.5	480	12.5×13.5	480	16×16.5	650	16×16.5	650
680	681	12.5×13.5	480	12.5×13.5	480	12.5×16	585	16×16.5	650	18×16.5	855
1,000	102	12.5×16	585	12.5×16	585	16×16.5	650	18×16.5	855		
1,500	152	12.5×16	585	16×16.5	650	18×16.5	855				
2,200	222	16×16.5	650	18×16.5	855						
3,300	332	18×16.5	855								
4,700	472	18×16.5	855								