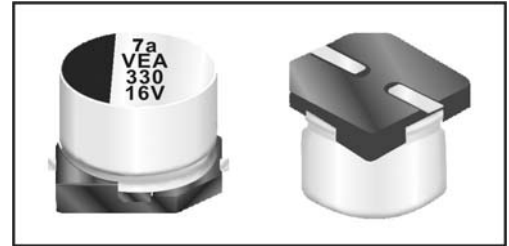


Features

- 4 ~ 16 ϕ , 85°C, 2,000 hours assured
- 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"> <tr> <td rowspan="2">6.3 ~ 100V</td> <td>4 ~ 10 ϕ</td> <td colspan="2">I = 0.01CV or 3μA, whichever is greater, after 2 minutes at 20°C</td> </tr> <tr> <td>12.5 ~ 16 ϕ</td> <td colspan="2">I = 0.03CV or 4μA, whichever is greater, after 2 minutes at 20°C</td> </tr> <tr> <td>160 ~ 450V</td> <td>12.5 ~ 16 ϕ</td> <td colspan="2">I = 0.04CV + 100μA after 5 minutes at +20°C</td> </tr> </table> <p>Where I = leakage current C = rated capacitance in μF. V = rated DC working voltage in V.</p>	6.3 ~ 100V	4 ~ 10 ϕ	I = 0.01CV or 3 μ A, whichever is greater, after 2 minutes at 20°C		12.5 ~ 16 ϕ	I = 0.03CV or 4 μ A, whichever is greater, after 2 minutes at 20°C		160 ~ 450V	12.5 ~ 16 ϕ	I = 0.04CV + 100 μ A after 5 minutes at +20°C																																															
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Dissipation Factor (Tan δ at 120Hz, 20°C)	<table border="1"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td>160 ~ 250</td> <td>400 ~ 450</td> </tr> <tr> <td>4 ~ 10 ϕ</td> <td>0.35</td> <td>0.30</td> <td>0.26</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>-</td> <td>-</td> </tr> <tr> <td>12.5 ~ 16 ϕ</td> <td>0.38</td> <td>0.34</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.14</td> <td>0.10</td> <td>0.20</td> <td>0.25</td> </tr> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.</p>	Rated Voltage	6.3	10	16	25	35	50	63	100	160 ~ 250	400 ~ 450	4 ~ 10 ϕ	0.35	0.30	0.26	0.16	0.14	0.12	0.12	0.12	-	-	12.5 ~ 16 ϕ	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.20	0.25																								
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4 ~ 10 ϕ	0.35	0.30	0.26	0.16	0.14	0.12	0.12	0.12	-	-																																																
12.5 ~ 16 ϕ	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.20	0.25																																																
Low Temperature Characteristics (at 120Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <tr> <td colspan="2">Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td>160 ~ 250</td> <td>400 ~ 450</td> </tr> <tr> <td rowspan="4">Impedance Ratio</td> <td>Z(-25°C) / Z(+20°C)</td> <td>4 ~ 10 ϕ</td> <td>4</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>-</td> </tr> <tr> <td>Z(-25°C) / Z(+20°C)</td> <td>12.5 ~ 16 ϕ</td> <td>-</td> <td>5</td> <td>4</td> <td>2</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> </tr> <tr> <td>Z(-40°C) / Z(+20°C)</td> <td>4 ~ 10 ϕ</td> <td>17</td> <td>10</td> <td>8</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>4</td> <td>-</td> </tr> <tr> <td>Z(-40°C) / Z(+20°C)</td> <td>12.5 ~ 16 ϕ</td> <td>-</td> <td>12</td> <td>10</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>6</td> </tr> </table>	Rated Voltage		6.3	10	16	25	35	50	63	100	160 ~ 250	400 ~ 450	Impedance Ratio	Z(-25°C) / Z(+20°C)	4 ~ 10 ϕ	4	4	3	2	2	2	2	3	-	Z(-25°C) / Z(+20°C)	12.5 ~ 16 ϕ	-	5	4	2	3	2	2	2	3	Z(-40°C) / Z(+20°C)	4 ~ 10 ϕ	17	10	8	4	3	3	3	4	-	Z(-40°C) / Z(+20°C)	12.5 ~ 16 ϕ	-	12	10	5	4	3	3	3	6
Rated Voltage		6.3	10	16	25	35	50	63	100	160 ~ 250	400 ~ 450																																															
Impedance Ratio	Z(-25°C) / Z(+20°C)	4 ~ 10 ϕ	4	4	3	2	2	2	2	3	-																																															
	Z(-25°C) / Z(+20°C)	12.5 ~ 16 ϕ	-	5	4	2	3	2	2	2	3																																															
	Z(-40°C) / Z(+20°C)	4 ~ 10 ϕ	17	10	8	4	3	3	3	4	-																																															
	Z(-40°C) / Z(+20°C)	12.5 ~ 16 ϕ	-	12	10	5	4	3	3	3	6																																															
Load Life Test	<table border="1"> <tr> <td>Test Time</td> <td>2,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </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	Dissipation Factor	Less than 200% 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.																																																									
Other Standards	JIS C 5101-1, -18																																																									

DIAGRAM OF DIMENSIONS

Fig. 1

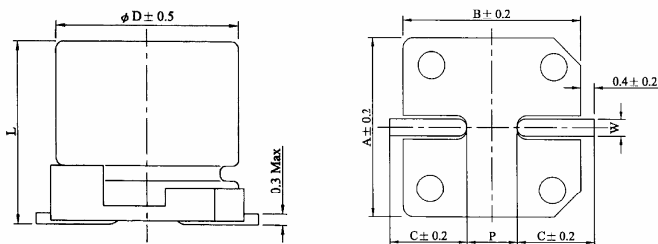
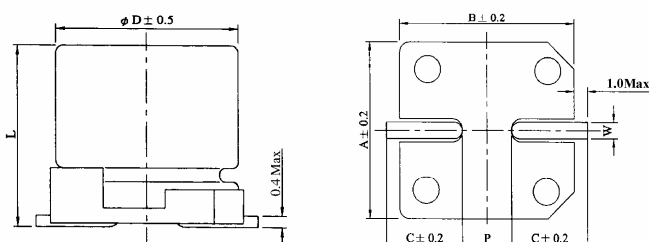


Fig. 2



LEAD SPACING AND DIAMETER

Unit: mm

ϕ D	L	A	B	C	W	P±0.2	Fig. No.
4	5.3±0.2	4.3	4.3	2.0	0.5 to 0.8	1.0	1
5	5.3±0.2	5.3	5.3	2.3	0.5 to 0.8	1.5	1
6.3	5.3±0.2	6.6	6.6	2.7	0.5 to 0.8	2.0	1
6.3	7.7±0.3	6.6	6.6	2.7	0.5 to 0.8	2.0	1
8	10±0.5	8.4	8.4	3.0	0.7 to 1.1	3.1	1
8	10.3±0.5	8.4	8.4	3.0	0.7 to 1.1	3.1	1
10	10±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	1
10	10.3±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	1
12.5	13.5±0.5	12.8	12.8	4.9	1.1 to 1.4	4.2	2
12.5	16±0.5	12.8	12.8	4.9	1.1 to 1.4	4.2	2
16	16.5±0.5	16.3	16.3	5.8	1.1 to 1.4	6.0	2



SMD Aluminum Electrolytic Capacitors

VEA

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

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

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC μF Contents		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (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
0.1	0R1											4×5.3	3	4×5.3	1.3
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	15	4×5.3	12
3.3	3R3											4×5.3	15	5×5.3	17
4.7	4R7							4×5.3	19	4×5.3	18	4×5.3	18	5×5.3	20
10	100			4×5.3	26	4×5.3	26	4×5.3	24	4×5.3	24	5×5.3	30	6.3×5.3	32
22	220	4×5.3	30	4×5.3	26	4×5.3	26	5×5.3	41	5×5.3	41	6.3×5.3	47	6.3×7.7	60
33	330	4×5.3	30	5×5.3	30	5×5.3	37	5×5.3	47	6.3×5.3	54	6.3×7.7	70	6.3×7.7	60
47	470	4×5.3	33	6.3×5.3	44	5×5.3	44	6.3×5.3	60	6.3×5.3	64	6.3×7.7	85	8×10	130
68	680	5×5.3	40	6.3×5.3	60	6.3×5.3	60	6.3×7.7	100	6.3×7.7	100	8×10	110	10×10	170
100	101	5×5.3	40	6.3×5.3	60	6.3×5.3	60	6.3×7.7	100	6.3×7.7	120	8×10	130	12.5×13.5	380
										8×10	280				
220	221	6.3×5.3	88	6.3×7.7	130	6.3×7.7	130	8×10	260	8×10.3	280	10×10	170	12.5×13.5	580
										10×10	360				
330	331	6.3×7.7	135	8×10	270	8×10	270	8×10.3	280	10×10.3	360	12.5×13.5	600	12.5×16	720
470	471	8×10	280	8×10	280	8×10	280	10×10	400	12.5×13.5	600	12.5×16	740	16×16.5	950
1,000	102	8×10.3	430	10×10	430	12.5×13.5	710	12.5×13.5	820	16×16.5	1,100				
2,200	222	12.5×13.5	890	12.5×13.5	960	16×16.5	1,150	16×16.5	1,450						
3,300	332	12.5×16	1,000	16×16.5	1,300	16×16.5	1,150								
4,700	472	16×16.5	1,400	16×16.5	1,300										
6,800	682	16×16.5	1,700												

V.DC μF Contents		100V (2A)		160V (2C)		200V (2D)		250V (2E)		400V (2G)		450V (2W)	
		$\phi D \times L$	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
4.7	4R7									12.5×13.5	120	12.5×13.5	120
10	100	8×10	90					12.5×13.5	150	12.5×13.5	120	12.5×16	130
22	220	8×10	90			12.5×13.5	240	12.5×13.5	150	16×16.5	140	16×16.5	140
33	330	10×10	120	12.5×13.5	240	12.5×16	310	12.5×16	240	16×16.5	140		
47	470	10×10	120	12.5×16	370	16×16.5	340	16×16.5	340				
68	680	12.5×13.5	380	16×16.5	500	16×16.5	340						
100	101	12.5×13.5	380										
220	221	16×16.5	500										