

Features

- 4 ~ 16 ϕ , 105°C, 2,000 ~ 5,000 hours assured
- Large capacitance with ultra low impedance capacitors
- Designed for surface mounting on high density PC board.
- RoHS Compliance



SPECIFICATIONS

Items	Performance																																																					
Operating Temperature Range	6.3 ~ 63V					80 ~ 100V																																																
	-55 ~ +105℃					-40 ~ +105℃																																																
Capacitance Tolerance	±20% (at 120Hz, 20℃)																																																					
Leakage Current (at 20℃)	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℃)	<table><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>80</td><td>100</td></tr><tr><td>Tan δ (max)</td><td>0.30</td><td>0.26</td><td>0.22</td><td>0.16</td><td>0.13</td><td>0.10</td><td>0.08</td><td>0.08</td><td>0.07</td></tr></table>										Rated Voltage	6.3	10	16	25	35	50	63	80	100	Tan δ (max)	0.30	0.26	0.22	0.16	0.13	0.10	0.08	0.08	0.07																								
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When the capacitance exceeds 1,000 μ F, 0.002 shall be added every 1,000 μ F increase.																																																						
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below.																																																					
	Rated Voltage		6.3	10	16	25	35	50	63	80	100																																											
	Impedance Ratio	Z(-25℃)/Z(+20℃)	4	3	2	2	2	2	2	2	2																																											
		Z(-55℃)/Z(+20℃)	8	5	4	3	3	3	3	3	3																																											
Load Life Test	<table><tr><td>Test Time</td><td colspan="10">2,000 Hrs for ϕ D = 4 ~ 6.3mm; 5,000 Hrs for ϕ D ≥ 8mm</td></tr><tr><td>Capacitance Change</td><td colspan="10">Within ±30% of initial value</td></tr><tr><td>Dissipation Factor</td><td colspan="10">Less than 300% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="10">Within specified value</td></tr></table>										Test Time	2,000 Hrs for ϕ D = 4 ~ 6.3mm; 5,000 Hrs for ϕ D ≥ 8mm										Capacitance Change	Within ±30% of initial value										Dissipation Factor	Less than 300% of specified value										Leakage Current	Within specified value									
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* The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 2,000 ~ 5,000 hours at 105℃.																																																						
Shelf Life Test	<table><tr><td>Test Time</td><td colspan="10">1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="10">Within ±30% of initial value</td></tr><tr><td>Dissipation Factor</td><td colspan="10">Less than 300% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="10">Within specified value</td></tr></table>										Test Time	1,000 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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Ripple Current & Frequency Multipliers	<table><tr><td>Frequency(Hz)</td><td colspan="2">50, 60</td><td colspan="2">120</td><td colspan="2">1K</td><td colspan="3">10K up</td></tr><tr><td>Multiplier</td><td colspan="2">0.60</td><td colspan="2">0.70</td><td colspan="2">0.85</td><td colspan="3">1.0</td></tr></table>										Frequency(Hz)	50, 60		120		1K		10K up			Multiplier	0.60		0.70		0.85		1.0																										
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Multiplier	0.60		0.70		0.85		1.0																																															

DIAGRAM OF DIMENSIONS

Fig. 1

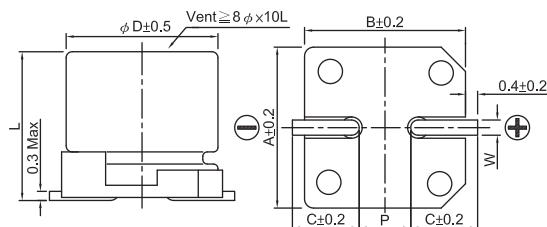
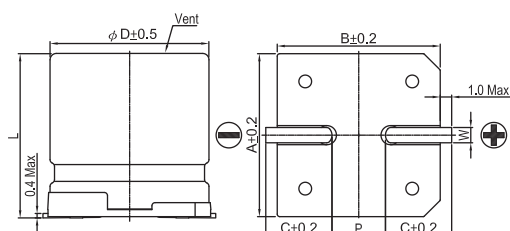


Fig. 2



LEAD SPACING AND DIAMETER

Unit: mm

ϕD	L	A	B	C	W	P ± 0.2	Fig. No.
4	5.7 $\pm$ 0.3	4.3	4.3	2.0	0.5 ~ 0.8	1.0	1
5	5.7 $\pm$ 0.3	5.3	5.3	2.3	0.5 ~ 0.8	1.5	1
6.3	5.7 $\pm$ 0.3	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

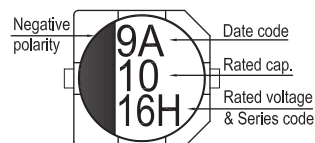


SMD Aluminum Electrolytic Capacitors

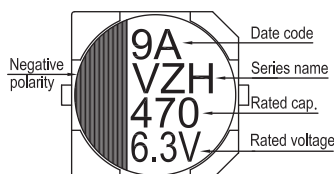
VZH

MARKING

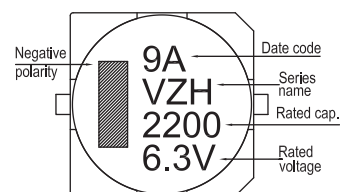
$\phi D \leq 6.3\text{mm}$



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



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



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

Ripple Current: mA/rms at 100K Hz, 105°C

Impedance: $\Omega/$ at 100K Hz, 20°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V. DC		6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)			50V (1H)		
μF	Contents	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA
1	010																4×5.7	2.9	60
2.2	2R2																4×5.7	2.9	60
3.3	3R3																4×5.7	2.9	60
4.7	4R7													4×5.7	1.35	80	5×5.7	1.52	85
10	100							4×5.7	1.35	80	4×5.7	1.35	80	5×5.7	0.80	150	6.3×5.7	0.88	165
22	220	4×5.7	1.35	80	4×5.7	1.35	80	5×5.7	0.80	150	5×5.7	0.80	150	6.3×5.7	0.44	230	6.3×5.7	0.88	165
33	330	4×5.7	1.35	80	5×5.7	0.80	150	6.3×5.7	0.44	230	6.3×5.7	0.44	230	6.3×5.7	0.44	230	6.3×7.7	0.68	185
47	470	5×5.7	0.80	150	6.3×5.7	0.44	230	6.3×5.7	0.44	230	6.3×5.7	0.44	230	6.3×5.7	0.44	230	6.3×7.7	0.68	185
68	680																8×10	0.34	369
100	101	6.3×5.7	0.44	230	6.3×5.7	0.44	230	6.3×5.7	0.44	230	6.3×7.7	0.36	280	8×10	0.17	450	8×10 10×10	0.34 0.18	369 553
150	151	6.3×5.7	0.44	230	6.3×5.7	0.44	230	6.3×7.7	0.36	280	8×10	0.17	450	8×10	0.17	450	10×10.3	0.18	553
220	221	6.3×7.7	0.36	280	6.3×7.7	0.36	280	6.3×7.7	0.36	280	8×10	0.17	450	10×10	0.09	670	10×10.3	0.18	553
330	331	8×10	0.17	450	8×10	0.17	450	8×10	0.17	450	8×10.3	0.17	450	12.5×13.5	0.070	820	12.5×13.5	0.12	650
470	471	8×10	0.17	450	8×10	0.17	450	8×10 10×10	0.17 0.09	450 670	10×10	0.09	670	12.5×16	0.060	950	16×16.5	0.073	1,000
680	681	8×10.3	0.17	450	10×10	0.09	670	10×10.3	0.09	670	12.5×13.5	0.070	820	12.5×16	0.060	950	16×16.5	0.073	1,000
1,000	102	8×10.3	0.17	450	10×10	0.09	670	12.5×13.5	0.070	820	12.5×16	0.060	950	16×16.5	0.054	1,260			
1,500	152	10×10.3	0.09	670	12.5×13.5	0.070	820	12.5×16	0.060	950	16×16.5	0.054	1,260						
2,200	222	12.5×13.5	0.070	820	12.5×16	0.060	950	16×16.5	0.054	1,260	16×16.5	0.054	1,260						
3,300	332	12.5×16	0.060	950	16×16.5	0.054	1,260	16×16.5	0.054	1,260									
4,700	472	16×16.5	0.054	1,260	16×16.5	0.054	1,260												

V. DC		63V (1J)			80V (1K)			100V (2A)		
μF	Contents	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA
4.7	4R7	5×5.7	1.90	70						
10	100	6.3×5.7	1.20	130						
22	220	6.3×7.7	0.90	150						
33	330	8×10	0.50	280						
47	470	8×10	0.50	280	10×10	0.7	200	10×10	0.7	200
100	101	10×10	0.25	450	10×10.3	0.7	200	12.5×13.5	0.32	450
150	151	12.5×13.5	0.15	700	12.5×13.5	0.32	450	12.5×16	0.26	550
220	221	12.5×13.5	0.15	700	12.5×16	0.26	550	16×16.5	0.17	650
330	331	16×16.5	0.082	900	16×16.5	0.17	650			
470	471	16×16.5	0.082	900						