

Features

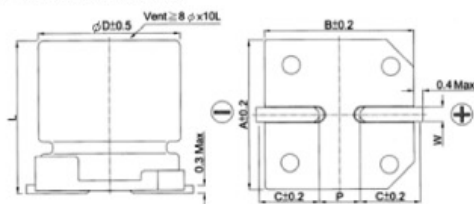
- 4 ~ 10 ϕ , 105°C, 2,000 hours assured
- Vertical chip type miniaturized
- Low impedance capacitors
- Designed for surface mounting on high density PC board.
- RoHS Compliance



SPECIFICATIONS

Items	Performance																				
Operating Temperature Range	-55°C ~ +105°C																				
Capacitance Tolerance	±20% (at 120Hz, 20°C)																				
Leakage Current (at 20°C)	I = 0.01CV or 3 (μ A) whichever is greater (after 2 minutes) 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"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</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> </tr> </table>	Rated Voltage	6.3	10	16	25	35	Tan δ (max)	0.30	0.26	0.22	0.16	0.13								
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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> </tr> <tr> <td rowspan="2">Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-55°C)/Z(+20°C)</td> <td>10</td> <td>7</td> <td>5</td> <td>3</td> <td>3</td> </tr> </table>	Rated Voltage		6.3	10	16	25	35	Impedance Ratio	Z(-25°C)/Z(+20°C)	4	3	2	2	2	Z(-55°C)/Z(+20°C)	10	7	5	3	3
Rated Voltage		6.3	10	16	25	35															
Impedance Ratio	Z(-25°C)/Z(+20°C)	4	3	2	2	2															
	Z(-55°C)/Z(+20°C)	10	7	5	3	3															
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 ($\phi D \leq 6.3\text{mm}$: ±25%)</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 105°C.</p>	Test Time	2,000 hrs	Capacitance Change	Within ±20% of initial value ($\phi D \leq 6.3\text{mm}$: ±25%)	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.																				
Ripple Current & Frequency Multipliers	<table border="1"> <tr> <td>Frequency(Hz)</td> <td>50, 60</td> <td>120</td> <td>1K</td> <td>10K up</td> </tr> <tr> <td>Multiplier</td> <td>0.64</td> <td>0.8</td> <td>0.93</td> <td>1.0</td> </tr> </table>	Frequency(Hz)	50, 60	120	1K	10K up	Multiplier	0.64	0.8	0.93	1.0										
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DIAGRAM OF DIMENSIONS



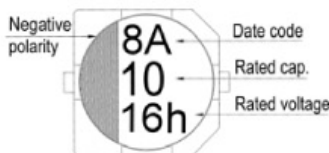
LEAD SPACING AND DIAMETER

Unit: mm

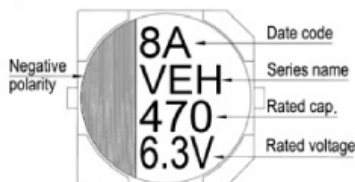
ϕD	L	A	B	C	W	P±0.2
4	5.7 ± 0.3	4.3	4.3	2.0	0.5 ~ 0.8	1.0
5	5.7 ± 0.3	5.3	5.3	2.3	0.5 ~ 0.8	1.5
6.3	5.7 ± 0.3	6.6	6.6	2.7	0.5 ~ 0.8	2.0
8	10 ± 0.5	8.4	8.4	3.0	0.7 ~ 1.1	3.1
10	10 ± 0.5	10.4	10.4	3.3	0.7 ~ 1.1	4.7
10	10.3 ± 0.5	10.4	10.4	3.3	0.7 ~ 1.1	4.7

MARKING

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



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



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

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

Impedance: Ω / at 100K Hz, 20°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V DC		6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)		
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
4.7	4R7										4×5.7	3.2	65	4×5.7	3.2	65
10	100							4×5.7	3.2	65	5×5.7	1.5	110	5×5.7	1.5	110
22	220							5×5.7	1.5	110	6.3×5.7	0.85	170	6.3×5.7	0.85	170
33	330	4×5.7	3.2	65	5×5.7	1.5	110	6.3×5.7	0.85	170	6.3×5.7	0.85	170	6.3×5.7	0.85	170
47	470	5×5.7	1.5	110	6.3×5.7	0.85	170	6.3×5.7	0.85	170	6.3×5.7	0.85	170	8×10	0.45	450
100	101	6.3×5.7	0.85	170	6.3×5.7	0.85	170	8×10	0.45	450	8×10	0.45	450	8×10	0.45	450
150	151	6.3×5.7	0.85	170	6.3×5.7	0.85	170	8×10	0.45	450	8×10	0.45	450	8×10	0.45	450
220	221	6.3×5.7	0.85	170	8×10	0.45	450	8×10	0.45	450	8×10	0.45	450	10×10	0.25	670
											10×10	0.25	670			
330	331	8×10	0.45	450	8×10	0.45	450	8×10	0.45	450	10×10.3	0.25	670			
470	471	8×10	0.45	450	8×10	0.45	450	10×10	0.25	670						
820	821	10×10	0.25	670	10×10	0.25	670									
1,000	102	10×10	0.25	670												