

VEB Series

Features

- 4 φ ~ 6.3 φ, 85°C, 2,000 hours assured
- Vertical chip type miniaturized
- Bi-polarized capacitors for 5.5 mm high capacitors
- Designed for surface mounting on high density PC board
- RoHS compliance

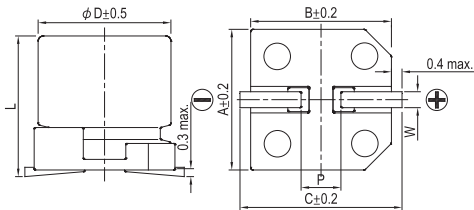


Marking color: Black

Specifications

Items	Performance																								
Category Temperature Range	-40°C ~ +85°C																								
Capacitance Tolerance	±20% (at 120 Hz, 20°C)																								
Leakage Current (at 20°C)	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																								
Tanδ (at 120 Hz, 20°C)	<table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td>Tanδ</td> <td>4 φ</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> </tr> <tr> <td>(max)</td> <td>5 ~ 6.3 φ</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> </tr> </tbody> </table>	Rated Voltage	6.3	10	16	25	35	50	63	Tanδ	4 φ	0.35	0.30	0.25	0.25	0.25	0.25	(max)	5 ~ 6.3 φ	0.30	0.25	0.20	0.15	0.15	0.15
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Low Temperature Characteristics (at 120 Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td>Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td></td> <td>Z(-40°C)/Z(+20°C)</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	Rated Voltage	6.3	10	16	25	35	50	63	Impedance Ratio	Z(-25°C)/Z(+20°C)	3	3	2	2	2	2		Z(-40°C)/Z(+20°C)	8	5	4	3	3	3
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Endurance (with the polarity inverted every 250 hours)	<table border="1"> <thead> <tr> <th>Test Time</th> <th>2,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table> <p>* The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 2,000 hours at 85°C.</p>	Test Time	2,000 Hrs	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 200% of specified value	Leakage Current	Within specified value																
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Diagram of dimensions

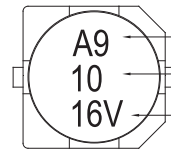


Marking

Lead Spacing and Diameter

Unit: mm

φD	L	A	B	C	W	P ± 0.2
4	5.3 ± 0.2	4.3	4.3	5.1	0.5 ~ 0.8	1.0
5	5.3 ± 0.2	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	5.3 ± 0.2	6.6	6.6	7.2	0.5 ~ 0.8	2.0



Date code
Rated cap.
Rated voltage & Series code

Dimension and Permissible Ripple Current

Dimension: φD × L(mm)

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

Rated Volt. (V _{DC})	Cap. (μF)	Contents	6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)	
			φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA
0.33	R33												4×5.3	4.1		
0.47	R47												4×5.3	4.9		
1	010												4×5.3	7.2	5×5.3	9.4
2.2	2R2												5×5.3	14		
3.3	3R3								4×5.3	13	5×5.3	17	5×5.3	17		
4.7	4R7					4×5.3	14	5×5.3	20	5×5.3	21	6.3×5.3	24	6.3×5.3	24	
10	100			4×5.3	18	5×5.3	26	6.3×5.3	35	6.3×5.3	35	6.3×5.3	35			
22	220	5×5.3	27	6.3×5.3	40	6.3×5.3	45									
33	330	6.3×5.3	45	6.3×5.3	50	6.3×5.3	55									
47	470	6.3×5.3	54													

Part Numbering System

VEB Series	10μF	±20%	16V	Carrier Tape	5 φ × 5.3L	Pb-free and PET coating case
VEB	100	M	1C	TR	-	0505
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case size
						Lead Wire and Coating Type

Note: For more details, please refer to "Part Numbering System (SMD Type)" on page 15.