



VEC Series

Features

- $4\phi \sim 6.3\phi$, 85°C, 2,000 hours assured
- Vertical chip type miniaturized for 5.5mm, high capacitors
- Low Leakage Current Lead free reflow soldering is available
- Designed for surface mounting on high density PC board
- RoHS Compliance

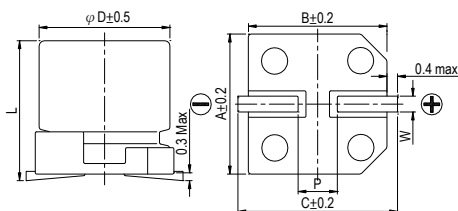


Marking color: Black

Specifications

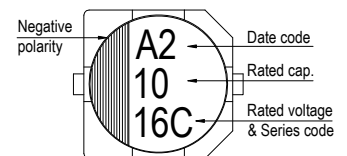
Items	Performance																													
Category Temperature Range	-40°C ~ +85°C																													
Capacitance Tolerance	±20% (at 120Hz, 20°C)																													
Leakage Current (at 20°C)	I = 0.002CV or 0.5 (μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF V = rated DC working voltage in V																													
Tanδ (at 120Hz, 20°C)	<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></tr><tr><td>Tanδ (max)</td><td>0.28</td><td>0.24</td><td>0.20</td><td>0.14</td><td>0.12</td><td>0.10</td></tr></table>							Rated Voltage	6.3	10	16	25	35	50	Tanδ (max)	0.28	0.24	0.20	0.14	0.12	0.10									
Rated Voltage	6.3	10	16	25	35	50																								
Tanδ (max)	0.28	0.24	0.20	0.14	0.12	0.10																								
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>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td rowspan="2">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>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></table>							Rated Voltage		6.3	10	16	25	35	50	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
Rated Voltage		6.3	10	16	25	35	50																							
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																							
Endurance	<table><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>Tanδ</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 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															
Test Time	2,000 Hrs																													
Capacitance Change	Within ±20% of initial value																													
Tanδ	Less than 200% of specified value																													
Leakage Current	Within specified value																													
Shelf Life Test	<table><tr><td>Test Time</td><td>1,000 Hrs</td></tr><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></table> <p>* The above Specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 85°C without voltage applied.</p>							Test Time	1,000 Hrs	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 200% of specified value	Leakage Current	Within specified value															
Test Time	1,000 Hrs																													
Capacitance Change	Within ±20% of initial value																													
Tanδ	Less than 200% of specified value																													
Leakage Current	Within specified value																													
Ripple Current & Frequency Multipliers	<table><tr><td>Frequency (Hz)</td><td>50</td><td>120</td><td>1k</td><td>10k up</td></tr><tr><td>Multiplier</td><td>0.7</td><td>1.0</td><td>1.3</td><td>1.4</td></tr></table>							Frequency (Hz)	50	120	1k	10k up	Multiplier	0.7	1.0	1.3	1.4													
Frequency (Hz)	50	120	1k	10k up																										
Multiplier	0.7	1.0	1.3	1.4																										

Diagram of Dimensions



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

Marking



Dimension & Permissible Ripple Current

Dimension: φD × L(mm)

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

V. DC		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
μF	Contents	φ D×L	mA	φ D×L	mA	φ D×L	mA	φ D×L	mA	φ D×L	mA	φ D×L	mA
1	010											4×5.3	10
2.2	2R2											4×5.3	15
3.3	3R3											4×5.3	19
4.7	4R7							4×5.3	19	4×5.3	20	5×5.3	26
10	100			4×5.3	23	4×5.3	26	5×5.3	32	5×5.3	34	6.3×5.3	44
22	220	4×5.3	31	5×5.3	39	5×5.3	44	6.3×5.3	55	6.3×5.3	59		
33	330	5×5.3	44	5×5.3	48	6.3×5.3	63	6.3×5.3	67				
47	470	5×5.3	52	6.3×5.3	67	6.3×5.3	75						
100	101	6.3×5.3	89	6.3×5.3	98								

Part Numbering System

VEC series	10μF	±20%	16V	Carrier Tape		4φ×5.3L	Pb-free and PET coating case
<u>VEC</u>	<u>100</u>	<u>M</u>	<u>1C</u>	<u>TR</u>	-	<u>0405</u>	
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 12.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ABRACON:](#)

[EC-S-27.000M](#)