

VEH Series

Features

- $4\phi \sim 10\phi$, 105°C, 2,000 hours assured
- Vertical chip type miniaturized, Low impedance capacitors
- Designed for surface mounting on high density PC board
- RoHS compliant
- AEC-Q200 compliant

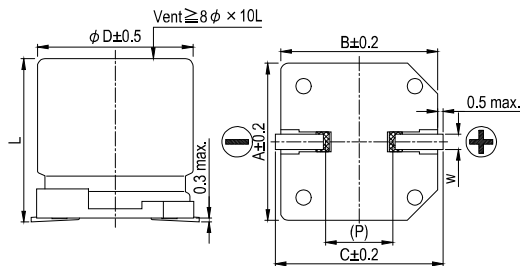


Marking color: Black

Specifications

Items	Performance																							
Category Temperature Range	-55°C ~ +105°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> </tr> </thead> <tbody> <tr> <td>Tanδ (max.)</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.16</td> <td>0.13</td> <td>0.13</td> </tr> </tbody> </table>	Rated Voltage	6.3	10	16	25	35	50	Tanδ (max.)	0.30	0.26	0.22	0.16	0.13	0.13									
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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 colspan="2">Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <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> <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> <td>3</td> </tr> </tbody> </table>	Rated Voltage		6.3	10	16	25	35	50	Impedance Ratio	Z(-25°C) / Z(+20°C)	4	3	2	2	2	2	Z(-55°C) / Z(+20°C)	10	7	5	3	3	3
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Diagram of Dimensions



Lead Spacing and Diameter

Unit: mm

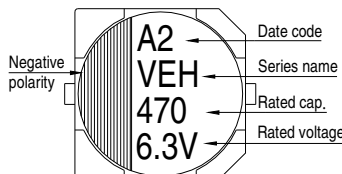
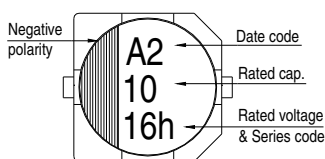
φ D	L	A	B	C	W	P
4	5.7 ± 0.3	4.3	4.3	5.1	0.5 ~ 0.8	1.0
5	5.7 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	5.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
8	10 ± 0.5	8.3	8.3	9.0	0.7 ~ 1.1	3.1
10	10 ± 0.5	10.3	10.3	11.0	0.7 ~ 1.1	4.7

The diagram is marking " () " for reference dimension.

Marking

φ D ≤ 6.3 mm

φ D = 8 ~ 10 mm





Dimension: $\phi D \times L$ (mm)
 Ripple Current: mA/rms at 100k Hz, 105°C
 Impedance: Ω / at 100k Hz, 20°C

Dimension and Permissible Ripple Current

Rated Volt. (Vdc)		6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)			50V (1H)		
Cap. (μ F)	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
3.3	3R3																4×5.7	5.0	30
4.7	4R7										4×5.7	3.2	65	4×5.7	3.2	65	4×5.7	5.0	30
10	100							4×5.7	3.2	65	5×5.7	1.5	110	5×5.7	1.5	110	5×5.7	3.0	50
22	220				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	2.0	70
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	8×10	0.6	300
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	8×10	0.6	300
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	8×10	0.6	300
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	10×10	0.3	500
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			
330	331	8×10	0.45	450	8×10	0.45	450	8×10	0.45	450	10×10	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															

Part Numbering System

VEH Series	470 μ F	$\pm 20\%$	6.3V	Carrier Tape	8 $\phi \times 10L$	General Purpose
VEH	471	M	0J	TR	-	0810
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case Size
						Application

Note: For more details, please refer to "Part Numbering System - SMD Type" on page 106.