VEC Series

This series is not recommended for new design

Features

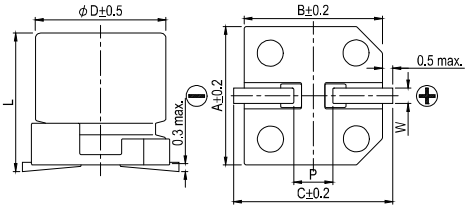
- 4φ ~ 6.3φ, 85℃, 2,000 hours assured
- Low Leakage Current Lead free reflow soldering is available
- Designed for surface mounting on high density PC board
- RoHS compliance

Marking color: Black

Specifications

Items	Performance
Category Temperature Range	-40℃ ~ +85℃
Capacitance Tolerance	±20% (at 120 Hz, 20℃)
Leakage Current (at 20℃)	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 120 Hz, 20℃)	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 120 Hz)	Impedance ratio shall not exceed the values given in the table below. Rated Voltage: 6.3 / 10 / 16 / 25 / 35 / 50 Impedance Ratio Z(-25℃)/Z(+20℃): 3 / 3 / 2 / 2 / 2 / 2 Impedance Ratio Z(-40℃)/Z(+20℃): 8 / 5 / 4 / 3 / 3 / 3
Endurance	Test Time: 2,000 Hrs Capacitance Change: Within ±20% of initial value Tanδ: Less than 200% of specified value Leakage Current: Within specified value * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 2,000 hours at 85℃.
Shelf Life Test	The specifications shall be satistied the same as endurane when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 85℃ without voltage applied.
Ripple Current and Frequency Multipliers	Frequency (Hz): 50 / 120 / 1k / 10k up Multiplier: 0.7 / 1.0 / 1.3 / 1.4

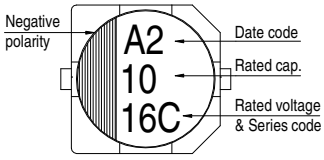
Diagram of Dimensions



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
6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0

Marking



Dimension and Permissible Ripple Current

Dimension: φD × L(mm)
Ripple Current: mA/rms at 120 Hz, 85℃

Rated Volt. (V_{DC}) / Cap. (μF)	Contents	6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
		φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×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	6.3×5.3	56
33	330	5×5.3	44	5×5.3	48	6.3×5.3	63	6.3×5.3	67	6.3×5.3	71		
47	470	5×5.3	52	6.3×5.3	67	6.3×5.3	75	6.3×5.3	79				
100	101	6.3×5.3	89	6.3×5.3	98	6.3×7.7	103	6.3×7.7	105				
150	151	6.3×7.7	125	6.3×7.7	135								

Part Numbering System

VEC Series	10μF	±20%	16V	Carrier Tape		4φ×5.3L	Pb-free and Coated Case
VEC	**100**	**M**	**1C**	**TR**	**-**	**0405**	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case Size	Lead Wire and Case Type

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