VEC Series

Features

- 4φ ~ 6.3φ, 85℃, 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℃ ~ +85℃
Capacitance Tolerance	±20% (at 120Hz, 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 120Hz, 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 120Hz)

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
	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

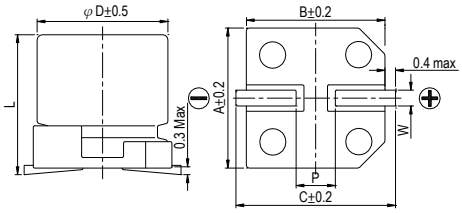
Test Time	1,000 Hrs
Capacitance Change	Within ±20% of initial value
Tanδ	Less than 200% of specified value
Leakage Current	Within specified value

* The above Specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 85℃ without voltage applied.

Ripple Current & Frequency Multipliers

Frequency (Hz)	50	120	1k	10k up
Multiplier	0.7	1.0	1.3	1.4

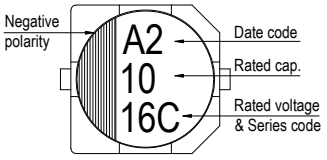
Diagram of Dimensions



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

Marking



Dimension & Permissible Ripple Current

Dimension: φD × L(mm)

Ripple Current: mA/rms at 120 Hz, 85℃

V. DC / 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		
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
VEC	**100**	**M**	**1C**	**TR**	**-**	**0405**	
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.