VEB Series

Features

- 4φ ~ 6.3φ, 85℃, 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
- AEC-Q200 Parts Avaliable: Replace “S” Suffix with “KS” or “LS” Suffix

Marking color: Black

Specifications

Items	Performance
Category Temperature Range	-40℃ ~ +85℃
Capacitance Tolerance	±20% (at 120 Hz, 20℃)
Leakage Current (at 20℃)	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℃)

Rated Voltage		6.3	10	16	25	35	50	63
Tanδ (max)	4φ	0.35	0.30	0.25	0.25	0.25	0.25	--
	5 ~ 6.3φ	0.30	0.25	0.20	0.15	0.15	0.15	0.15

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	63
Impedance Ratio	Z(-25℃)/Z(+20℃)	3	3	2	2	2	2	2
	Z(-40℃)/Z(+20℃)	8	5	4	3	3	3	3

Endurance (with the polarity inverted every 250 hours)

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

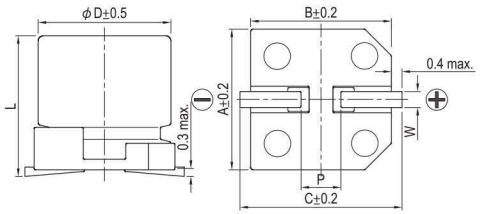
Test Time	1,000 Hrs
Capacitance Change	Within ±20% of initial value
Tanδ	Less than 200% of specified value
Leakage Current	Within specified value

* 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 and Frequency Multipliers

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

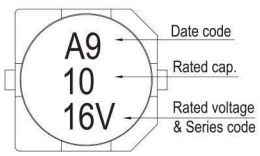
Diagram of dimensions



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

Marking



Dimension and Permissible Ripple Current

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

Rated Volt. (VDC)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)	
Cap. (μF)	Contents	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									4×5.3	10	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		5φ×5.3L	
VEB	**100**	**M**	**1C**	**TR**	**-**	**0505**	**S**
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case size	Regional Code

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