VSS Series

Features

- 4φ ~ 6.3φ, 85℃, 2,000 hours assured
- Vertical chip type miniaturized for 4.5mm height capacitor
- 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 = 0.01CV or 3 (μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF V = rated DC working voltage in V
Dissipation Factor (Tanδ at 120Hz, 20℃)	

Rated Voltage	4	6.3	10	16	25	35	50
Tanδ (max)	0.50	0.30	0.24	0.19	0.16	0.14	0.14

Low Temperature Characteristics (at 120Hz)

Impedance ratio shall not exceed the values given in the table below.

Rated Voltage		4	6.3	10	16	25	35	50
Impedance Ratio	Z(-25℃)/Z(+20℃)	7	4	3	2	2	2	2
	Z(-40℃)/Z(+20℃)	15	8	5	4	3	3	3

Endurance

Test Time		2,000 Hrs
Capacitance Change	4 ~ 6.3V	Within ±30% of initial value
	10 ~ 50V	Within ±25% of initial value
Dissipation Factor		Less than 300% of specified value
Leakage Current		Within specified value

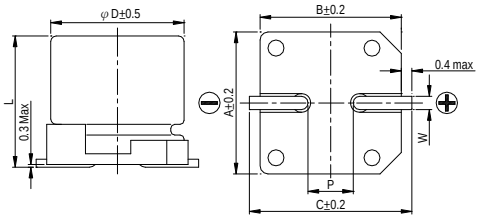
* The above Specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 2,000 hours at 85℃.

Shelf Life Test: Test time: 1,000 hours; other items are the same as those for the Endurance.

Ripple Current & Frequency Multipliers

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

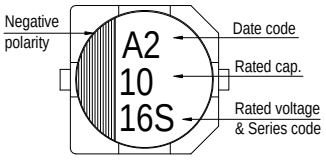
Diagram of Dimensions



Lead Spacing and Diameter Unit: mm

φD	L	A	B	C	W	P ± 0.2
4	4.5 ± 0.2	4.3	4.3	5.1	0.5 ~ 0.8	1.0
5	4.5 ± 0.2	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	4.5 ± 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		4V (0G)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
μF	Contents	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA
0.47	R47													4×4.5	4.0
1	010													4×4.5	8.4
2.2	2R2													4×4.5	13
3.3	3R3													4×4.5	17
4.7	4R7									4×4.5	16	4×4.5	18	5×4.5	20
10	100							4×4.5	23	5×4.5	27	5×4.5	29	6.3×4.5	33
22	220			4×4.5	23	5×4.5	33	5×4.5	37	6.3×4.5	42	6.3×4.5	46		
33	330	4×4.5	28	5×4.5	37	5×4.5	41	6.3×4.5	49	6.3×4.5	52				
47	470	4×4.5	33	5×4.5	45	6.3×4.5	70	6.3×4.5	58						
100	101	5×4.5	56	6.3×4.5	70										