

## **VES Series**

#### **Features**

- 4 $\phi$  ~ 6.3 $\phi$ , 105°C, 1,000 hours assured
- Vertical chip type miniaturized for 5.5mm high capacitor
- · Designed for surface mounting on high density PC board
- RoHS Compliance

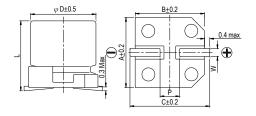


Marking color: Black

### Specifications

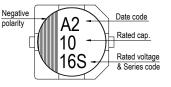
Items		Performance									
Category Temperature Range		-55°C ~ +105°C									
Capacitance Tolerance		±20% (at 120Hz, 20°C)									
Leakage Current (at 20°C)		I = 0.01CV or 3 (μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF $$ V = rated DC working voltage in V									
Tanō (at 120Hz, 20℃)		9 11 1 1 1 1 1 1							50 0.12		
		Impedance ratio shall not exceed the values given in the table below.									
Low Temperature		Rated Voltage			6.3	10	16	25	35	50	1
Characteristics (at 120Hz)		Impedance	Z(-25°C)/Z(	+20°C)	4	3	2	2	2	2	1
		Ratio	Z(-55°C)/Z(	+20°C)	8	5	4	3	3	3	
Endurance		Test Time Capacitance Change Tanō Leakage Current * The above Specifications shall be satisfied when th 1,000 hours at 105°C.			1,000 Hrs  Within ±20% of initial value  Less than 200% of specified value  Within specified value he capacitors are restored to 20°C after the rated				d voltage	applied for	
			Test Time Capacitance Ch	ango			1,000 Hrs				
Shelf Life Test		Tanō					Within ±20% of initial value  Less than 200% of specified value				
		Leakage Current Within specified value  * The above Specifications shall be satisfied when the capacitors are restored to 20°C after exposin at 105°C without voltage applied.							exposing	them fo	r 1,000 hours
	at 105 C	without voitage	е арріїєч.								
Ripple Current &		Fr	equency (Hz)	50		120	1k	1	l0k up		
Frequency Multipliers			Multiplier	0.7		1.0	1.3		1.4	1	

#### Diagram of Dimensions



# Marking

Lead	Spacing a	Unit: mm				
$\phi D$	L	Α	В	С	W	P ± 0.2
4	$5.3 \pm 0.2$	4.3	4.3	5.1	0.5 ~ 0.8	1.0
5	$5.3 \pm 0.2$	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	$5.3 \pm 0.2$	6.6	6.6	7.2	0.5 ~ 0.8	2.0



### Dimension: $\phi D \times L(mm)$

Ripple Current: mA/rms at 120 Hz, 105°C

Dimension & Permissible Ripple Current								Ripple Current: mA/rms at 120 Hz,					
V. DC 6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)			
μF	Contents	$\phi$ D×L	mA	$\phi$ D×L	mA	$\phi$ D×L	mA	$\phi$ D×L	mA	$\phi$ D×L	mA	$\phi$ D×L	mA
1	010											4×5.3	7
2.2	2R2											4×5.3	10
3.3	3R3											4×5.3	12
4.7	4R7							4×5.3	12	4×5.3	14	5×5.3	17
10	100			4×5.3	15	4×5.3	16	5×5.3	21	5×5.3	23	6.3×5.3	26
22	220	4×5.3	21	5×5.3	25	5×5.3	28	6.3×5.3	36	6.3×5.3	50	6.3×5.3	51
33	330	5×5.3	30	5×5.3	31	6.3×5.3	40	6.3×5.3	44				
47	470	5×5.3	36	6.3×5.3	43	6.3×5.3	47	6.3×5.3	60				
100	101	6.3×5.3	61	6.3×5.3	65	6.3×5.3	70						

#### Part Numbering System

VES series	10μF	±20%	16V	Carrier Tape		4 φ×5.3L	Pb-free and PET coating case
<u>VES</u>	<u>100</u>	<u>M</u>	<u>1C</u>	<u>TR</u>	-	<u>0405</u>	
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.