VGB Series

Features

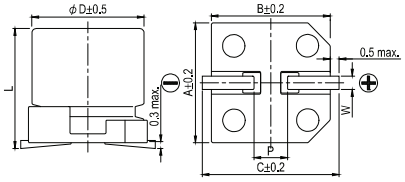
- 4φ ~ 6.3φ, 105℃, 2,000 hours assured
- Bi-polarized capacitors for 6 mm high capacitors
- Designed for surface mounting on high density PC board
- RoHS compliance
- AEC-Q200 qualified

Marking color: Black

Specifications

Items	Performance
Category Temperature Range	-55℃ ~ +105℃
Capacitance Tolerance	±20% (at 120 Hz, 20℃)
Leakage Current (at 20℃)	I = 0.05CV or 10 (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): 0.24 / 0.20 / 0.17 / 0.17 / 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 Impedance Ratio Z(-25℃)/Z(+20℃): 4 / 3 / 2 / 2 / 2 / 2 Impedance Ratio Z(-40℃)/Z(+20℃): 8 / 6 / 4 / 4 / 3 / 3
Endurance (with the polarity inverted every 250 hours)	Test Time: 2,000 Hrs Capacitance Change: Within ±30% of initial value Tanδ: 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 105℃.
Shelf Life Test	Test Time: 1,000 Hrs Capacitance Change: Within ±30% of initial value Tanδ: 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 exposing them for 1,000 hours at 105℃ without voltage applied.
Ripple Current and Frequency Multipliers	Frequency (Hz): 50 / 120 / 1k / 10k up Multiplier: 0.7 / 1.0 / 1.36 / 1.5

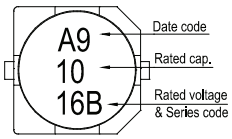
Diagram of dimensions



Lead Spacing and Diameter — Unit: mm

φD	L	A	B	C	W	P ± 0.2
4	5.7 ± 0.3	4.3	4.3	5.1	0.5 ~ 0.8	1.0
5	5.7 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	5.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0

Marking



Dimension: φD × L(mm)
Ripple Current: mA/rms at 120 Hz, 105℃

Dimension and Permissible Ripple Current

Rated Volt. (V$_{DC}$)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
Cap. (μF)	Contents	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA
1	010											4×5.7	8.4
2.2	2R2									4×5.7	8.4	5×5.7	13
3.3	3R3							5×5.7	12	5×5.7	16	5×5.7	17
4.7	4R7					4×5.7	12	5×5.7	16	5×5.7	18	6.3×5.7	20
10	100			4×5.7	17	5×5.7	23	6.3×5.7	27	6.3×5.7	29		
22	220	5×5.7	28	6.3×5.7	33	6.3×5.7	37						
33	330	6.3×5.7	37	6.3×5.7	41	6.3×5.7	49						
47	470	6.3×5.7	45										

Part Numbering System

VGB Series	10μF	±20%	16V	Carrier Tape		5φ×5.7L	
VGB	**100**	**M**	**1C**	**TR**	**-**	**0506**	**XX**
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case Size	

S = Standard
KS = AEC-Q200 Qualified, Safety Critical Application
LS = AEC-Q200 Qualified, Non-Safety Critical Application

https://surgecomponents.com

Surge Components Inc. (USA)
sales@surgecomponents.com
+1 (631) 595-1818

Surge Components EMEA (Europe)
emea@surgecomponents.com
+44-204-593 0098

Surge Components.Ltd. (Asia)
surgehk@surgecomponents.com.hk
+852-2172-7607