

VGB Series

Features

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

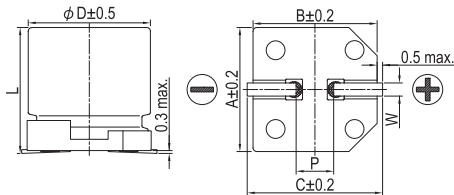


Marking color: Black

Specifications

Items	Performance																							
Category Temperature Range	-55°C ~ +105°C																							
Capacitance Tolerance	±20% (at 120 Hz, 20°C)																							
Leakage Current (at 20°C)	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°C)	<table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.24</td> <td>0.20</td> <td>0.17</td> <td>0.17</td> <td>0.15</td> <td>0.15</td> </tr> </tbody> </table>	Rated Voltage	6.3	10	16	25	35	50	Tanδ (max)	0.24	0.20	0.17	0.17	0.15	0.15									
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Diagram of dimensions

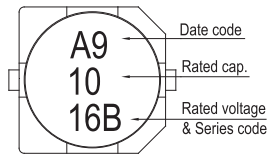


Marking

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



Dimension and Permissible Ripple Current

Dimension: φD × L(mm)

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

Cap. (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											4×5.7	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	5 φ × 5.7L	General Purpose
VGB	100	M	1C	TR	-	0506
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case Size
						Application

Note: For more details, please refer to "Part Numbering System - SMD Type" on page 106.

VGN Series

Features

- 8φ ~ 18φ, 105°C, 2,000 hours assured
- Bi-polarized series for operations wide temperature range
- Designed for surface mounting on high density PC board
- RoHS compliant
- AEC-Q200 compliant



Marking color: Black

Specifications

Items	Performance																													
Category Temperature Range	-55°C ~ +105°C																													
Capacitance Tolerance	±20% (at 120 Hz, 20°C)																													
Leakage Current (at 20°C)	I = 0.03CV or 4 (μA) whichever is greater (after 1 minutes) Where, C = rated capacitance in μF, V = rated DC working voltage in V																													
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Diagram of Dimensions

Fig. 1

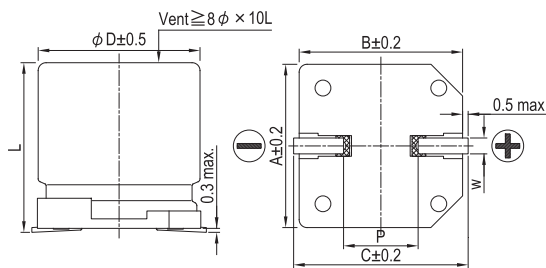
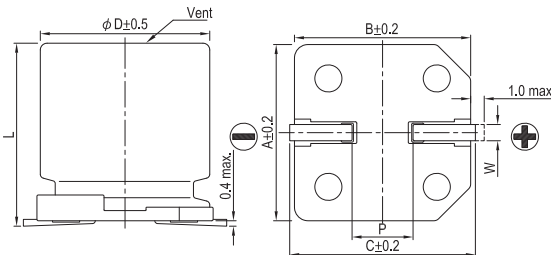


Fig. 2

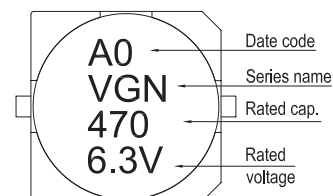


Lead Spacing and Diameter

Unit: mm

φD	L	A	B	C	W	P ± 0.2	Fig. No.
8	10 ± 0.5	8.3	8.3	9.0	0.7 ~ 1.1	3.1	1
10	10 ± 0.5	10.3	10.3	11.0	0.7 ~ 1.3	4.7	1
12.5	13.5 ± 0.5	13.0	13.0	13.7	1.1 ~ 1.4	4.4	2
12.5	16 ± 0.5	13.0	13.0	13.7	1.1 ~ 1.4	4.4	2
16	16.5 ± 0.5	17.0	17.0	18.0	1.1 ~ 1.4	6.4	2
16	21.5 ± 0.5	17.0	17.0	18.0	1.1 ~ 1.4	6.4	2
18	16.5 ± 0.5	19.0	19.0	20.0	1.1 ~ 1.4	6.4	2
18	21.5 ± 0.5	19.0	19.0	20.0	1.1 ~ 1.4	6.4	2

Marking





Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 120 Hz, 105°C

Dimension and Permissible Ripple Current

Rated Volt. (V _{DC})		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap. (μF)	Contents	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA
22	220											8×10	40			12.5×13.5	100
33	330							8×10	50	8×10	50	10×10	60			12.5×16	150
47	470							8×10	60	10×10	70	12.5×13.5	130	12.5×13.5	140	16×16.5	180
100	101			8×10	100	8×10	100	10×10	110	12.5×13.5	180	12.5×16	230	16×16.5	270	18×21.5	310
220	221	8×10	120	10×10	150	10×10	150	12.5×13.5	270	16×16.5	330	18×16.5 16×21.5	400 400	18×21.5	440		
330	331	10×10	170	10×10	170	12.5×13.5	310	16×16.5	370	18×16.5 16×21.5	450 450	18×21.5	540	18×21.5	590		
470	471	12.5×13.5	270	12.5×13.5	340	16×16.5	420	16×16.5	490	18×21.5	590	18×21.5	640				
1,000	102	12.5×16	500	16×16.5	600	18×16.5 16×21.5	670 670	18×21.5	780								
2,200	222	18×16.5 16×21.5	740 740	18×21.5	830												
3,300	332	18×21.5	920														

Part Numbering System

VGN Series	470μF	±20%	6.3V	Carrier Tape	12.5 ϕ × 13.5L	General Purpose
VGN	471	M	0J	TR	-	1313
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case Size
						Application

Note: For more details, please refer to "Part Numbering System - SMD Type" on page 106.

SMD