

# VB

## 特点 Features

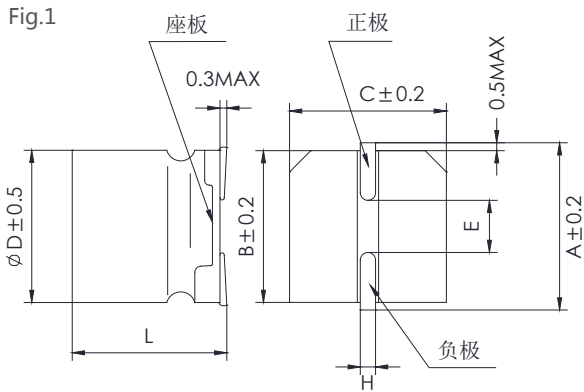
- 保证105°C 2000小时。Endurance 2000h at 105°C.
- 额定电压范围：6.3~100V。Rated Voltage Range:6.3~100V.
- 低阻抗品。LOW ESR Type.
- 满足RoHS。RoHS Compliant.



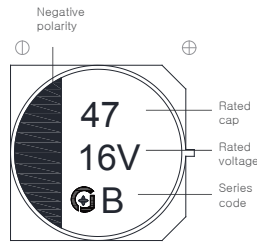
## 主要技术性能 Specifications

项目 Items	特性 Performance Characteristics										
类别温度范围 Category Temperature Range	-55 ~ +105°C										
额定电压范围 Rated Voltage(U <sub>R</sub> )	6.3 ~ 100V										
标称容量范围 Nominal Capacitance Range(C <sub>N</sub> )	4.7 ~ 3300μF										120Hz, +20°C
标称容量允许偏差 Allowed Capacitance Tolerance(C <sub>T</sub> )	±20%(M)										120Hz, +20°C
漏电流 Leakage Current(I <sub>L</sub> )	≤0.01C <sub>R</sub> U <sub>R</sub> 或者3μA 取较大值 ( Whichever is greater )										+20°C after 2 minutes
损耗角正切值 Tangent of loss angle(Tanδ)	U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	80	100	Max. 120Hz, +20°C
	Tanδ	0.26	0.20	0.16	0.14	0.12	0.12	0.10	0.08	0.07	
低温特性 Characteristics at Low Temperature	U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	80	100	Max. 120Hz
	Z <sub>25°C</sub> / Z <sub>+20°C</sub>	4	3	2	2	2	2	2	2	2	
	Z <sub>-55°C</sub> / Z <sub>+20°C</sub>	8	5	4	3	3	3	3	3	3	
耐久性 Load Life	+105°C, 连续施加额定电压2000小时, 恢复16小时后: After applying rated voltage for 2000 hours at 105°C and then recovery 16 hours:										
	电容量变化率 Capacitance change	±30%初始值以内 Within ±30% of initial value									
	损耗角正切值 Tanδ	≤ 300%初始规定值 Not more than 300% of specified value									
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value									
高温贮存 Shelf Life	+105°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +105°C and then recovery 16 hours:										
	电容量变化率 Capacitance change	±30%初始值以内 Within ±30% of initial value									
	损耗角正切值 Tanδ	≤ 300%初始规定值 Not more than 300% of specified value									
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value									
耐焊接热 Resistance to Soldering Heat	在250°C的条件下, 电容器在热板上保持30秒, 然后从热板上取出电容器, 让其在室温下恢复, 电容器应满足以下要求: The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement.										
	电容量变化率 Capacitance change	±10%初始值以内 Within ±10% of initial value									
	损耗角正切值 Tanδ	≤ 初始规定值 Not more than specified value									
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value									

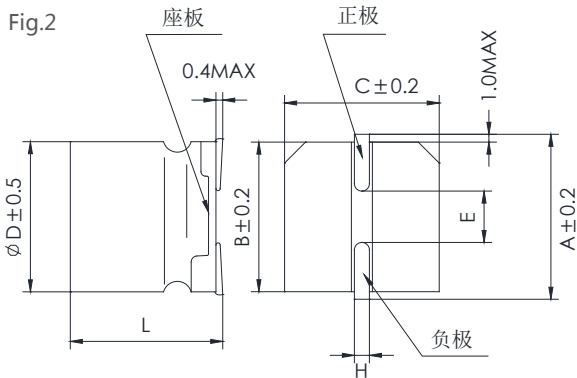
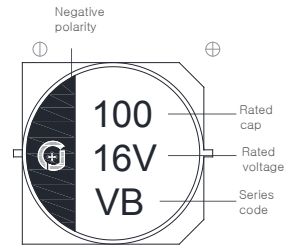
尺寸图 Dimensional drawings



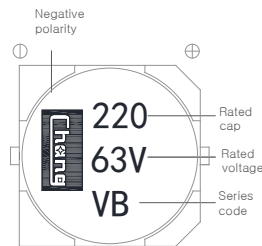
Marking  
 $\phi D=4 \sim 5\text{mm}$



$\phi D=6.3 \sim 10.2\text{mm}$



$\phi D=12.5\text{mm}$



尺寸表 Size table

单位 Unit: mm

$\phi D$	L	A	B	C	$E \pm 0.2$	H	Fig.No.
4	$5.4^{+0.2}_{-0.1}$	5.0	4.3	4.3	1.0	0.5 ~ 0.8	1
4	$5.8 \pm 0.3$	5.0	4.3	4.3	1.0		
5	$5.4^{+0.2}_{-0.1}$	6.0	5.3	5.3	1.3		
5	$5.8 \pm 0.3$	6.0	5.3	5.3	1.3		
6.3	$5.4^{+0.2}_{-0.1}$	7.3	6.6	6.6	2.2		
6.3	$5.8 \pm 0.3$	7.3	6.6	6.6	2.2		
6.3	$7.7 \pm 0.3$	7.3	6.6	6.6	2.2	0.8 ~ 1.1	1
8	$6.5 \pm 0.5$	8.9	8.3	8.3	2.3		
8	$10/10.5 \pm 0.5$	9.0	8.3	8.3	3.1		
10	$10/10.5 \pm 0.5$	11.0	10.3	10.3	4.5	0.8 ~ 1.1	1
10	$12.5 \pm 0.5$	11.0	10.3	10.3	4.5		
12.5	$13.5 \pm 0.5$	13.6	13	13	4.5	1.1 ~ 1.4	2
12.5	$16 \pm 0.5$	13.6	13	13	4.5		

规格特性表  
Table of specifications and characteristics

U <sub>r</sub> (V) C <sub>r</sub> (μF)	6.3V			10V			16V			25V			35V		
	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω
4.7							4*5.4	80	1.8	4*5.4	80	1.8	4*5.4	80	1.8
10							4*5.8	90	1.35	4*5.8	90	1.35	5*5.4	150	0.76
22	4*5.4	80	1.8	4*5.4	80	1.8	5*5.4	150	0.76	5*5.4	150	0.76	6.3*5.4	230	0.44
47	5*5.4	150	0.76	5*5.4	150	0.76	5*5.8	160	0.70	6.3*5.4	230	0.44	6.3*7.7	280	0.34
100	6.3*5.4	230	0.44	6.3*5.4	230	0.44	6.3*5.4	230	0.44	6.3*7.7	280	0.34	8*10.5	600	0.17
220	6.3*5.8	240	0.36	6.3*5.8	240	0.36	6.3*7.7	280	0.34	8*10.5	600	0.17	10*10.5	850	0.09
330	6.3*7.7	280	0.34	6.3*7.7	280	0.34	8*10.5	600	0.17	8*10.5	600	0.17	10*10.5	850	0.09
470	8*10.5	600	0.17	8*10.5	600	0.17	10*10.5	850	0.09	10*10.5	850	0.09	10*12.5	1000	0.075
680	8*10.5	600	0.17	10*10.5	850	0.09	10*10.5	850	0.09	12.5*13.5	1190	0.06	12.5*13.5	1190	0.06
1000	10*10.5	850	0.09	10*10.5	850	0.09	12.5*13.5	1190	0.06	12.5*16	1260	0.056			
1500	10*10.5	850	0.09	12.5*13.5	1190	0.06	12.5*16	1260	0.056						
2200	12.5*13.5	1190	0.06	12.5*16	1260	0.056									
3300	12.5*16	1260	0.056												

U <sub>r</sub> (V) C <sub>r</sub> (μF)	50V			63V			80V			100V		
	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 105°C mA	ESR <sub>max</sub> 100KHz 25°C Ω
4.7	4*5.4	30	5.0	5*5.4	50	3.0						
10	5*5.4	85	1.52	6.3*5.4	80	1.75	6.3*7.7	60	2.4	6.3*7.7	60	2.4
22	6.3*5.4	165	0.88	6.3*7.7	120	1.2	8*10.5	130	1.3	8*10.5	130	1.3
33	6.3*7.7	185	0.68	8*10.5	250	0.65	10*10.5	200	0.7	10*10.5	200	0.7
47	8*10.5	300	0.34	8*10.5	250	0.65	10*10.5	200	0.7	12.5*13.5	460	0.32
100	10*10.5	670	0.18	10*10.5	400	0.35	12.5*13.5	460	0.32	12.5*13.5	460	0.32
220	10*12.5	730	0.15	12.5*13.5	720	0.15	12.5*16	570	0.25			
330	12.5*13.5	650	0.12									
470	12.5*16	870	0.1									

额定纹波电流频率修正系数  
Frequency correction factor for ripple current

Frequency ( Hz )	50Hz	120Hz	300Hz	1KHz	≥10KHz
Coefficient ( kf )	0.35	0.50	0.64	0.83	1.00