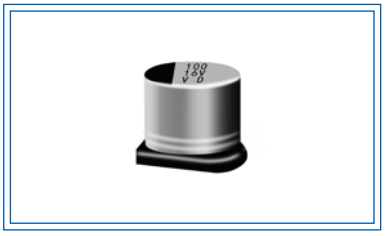
Surface Mount

VD 片式铝电解电容
SMD Aluminum Electrolytic Capacitors

- 低阻抗。Low impedance.
- 适用于再流焊。Reflow soldering is available.
- 适用于高密度表面组装。Available for high density surface mounting.
- 工作温度范围宽 (-55℃ ~+105℃)。Operating over wide temperature range.
- RoHS 指令已对应完毕。Adapted to the RoHS directive.

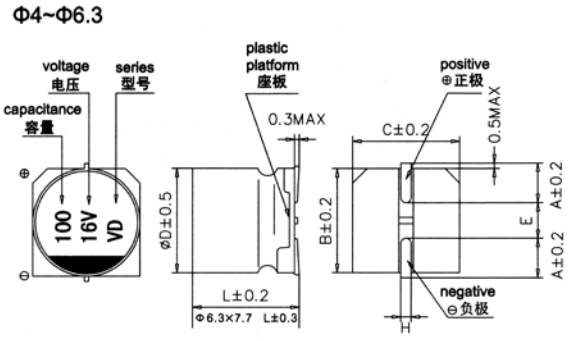


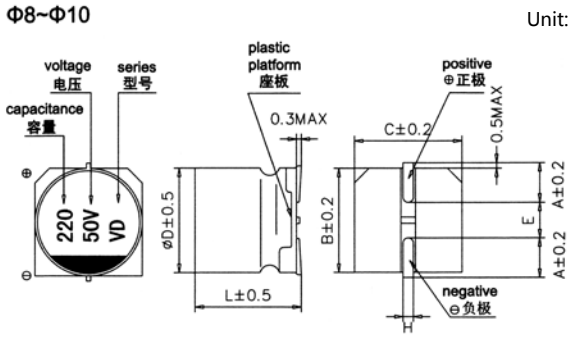
主要技术性能 *Specifications*

<table>
<tr><th>项 目 Item</th><th>特 性 Performance Characteristics</th></tr>
<tr><td>工作温度范围
Operating Temperature Range</td><td>-55℃ ~+105℃</td></tr>
<tr><td>额定电压范围
Rated Voltage Range</td><td>6.3~50V</td></tr>
<tr><td>标称电容量范围
Nominal Capacitance Range</td><td>1~1500μF</td></tr>
<tr><td>标称电容量允许偏差
Capacitance Tolerance</td><td>±20%(+20℃ ,120Hz)</td></tr>
<tr><td>漏电流
Leakage Current</td><td>I ≤ 0.01$C_R U_R$ or 3(μA), 取较大者 (2 分钟) Whichever is greater (at 20℃ , after 2 minutes)
C_R: 标称电容量 Nominal capacitance(μF), U_R: 额定电压 Rated voltage(V)</td></tr>
<tr><td>损耗角正切值 (tgδ)
Dissipation Factor (Max)
(+20℃ ,120Hz)</td><td>
<table>
<tr><td>U_R(V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr>
<tr><td>tgδ</td><td>0.26(0.28)</td><td>0.20(0.24)</td><td>0.16(0.20)</td><td>0.14(0.16)</td><td>0.12(0.14)</td><td>0.12(0.14)</td></tr>
</table>
注：( ) 为 ΦD>8 products</td></tr>
<tr><td>耐久性
Load Life</td><td>+105℃施加额定电压 5000 小时后 (ΦD=4 , 5 和 6.3 为 2000 小时) , 电容器应满足以下要求：
After 5000 hours(2000 hours for ΦD=4, 5 and 6.3) application of rated voltage at 105℃ , the capacitor shall meet the following requirement:
<table>
<tr><td>电容量变化率
Capacitance change</td><td>±30% 初始测量值以内
Within ±30% of the initial value</td></tr>
<tr><td>损耗角正切
Dissipation factor</td><td>≤ 200% 初始规定值
Not more than 200% of the initial specified value</td></tr>
<tr><td>漏电流
Leakage current</td><td>≤ 初始规定值
Not more than the initial specified value</td></tr>
</table></td></tr>
<tr><td>高温贮存
Shelf Life</td><td>+105℃ 贮存 1000 小时后，电容器应满足以上耐久性要求。
After storage for 1000 hours at 105℃ ,the capacitors shall meet the requirement of load life above.</td></tr>
<tr><td>低温特性
Low Temperature Stability
阻抗比
Impedance Ratio(120Hz)</td><td>
<table>
<tr><td>U_R(V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr>
<tr><td>Z-25℃ /+20℃</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td></tr>
<tr><td>Z-40℃ /+20℃</td><td>5</td><td>4</td><td>4</td><td>3</td><td>3</td><td>3</td></tr>
</table></td></tr>
<tr><td>耐焊接热
Resistance to Soldering Heat</td><td>在 250℃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℃ for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement:
<table>
<tr><td>电容量变化率
Capacitance change</td><td>±10% 初始测量值以内
Within ±10% of the initial value</td></tr>
<tr><td>损耗角正切
Dissipation factor</td><td>≤ 初始规定值
Not more than the initial specified value</td></tr>
<tr><td>漏电流
Leakage current</td><td>≤ 初始规定值
Not more than the initial specified value</td></tr>
</table></td></tr>
</table>

外形图及尺寸 *Diagram of Dimensions*

Unit: mm





ΦD	A	B	C	E	L	H
4×5.4	1.8	4.3	4.3	1.0	5.4	0.5-0.8
5×5.4	2.1	5.3	5.3	1.3	5.4	
6.3×5.4	2.4	6.6	6.6	2.2	5.4	
6.3×7.7	2.4	6.6	6.6	2.2	7.7	

ΦD	A	B	C	E	L	H
8×10.5	2.9	8.3	8.3	3.1	10	0.8-1.1
10×10.5	3.2	10.3	10.3	4.5	10	

标称电容量、额定电压、额定纹波电流与外形尺寸对应表
Nominal capacitance,rated voltage,rated ripple current and case size table

V	6.3			10			16			25			35			50		
Item / Cap.(μF)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)
1.0																4×5.4	5.00	30
2.2																4×5.4	5.00	30
3.3																4×5.4	5.00	30
4.7													4×5.4	1.80	80	5×5.4	1.52	85
10										4×5.4	1.80	80	5×5.4	0.76	150	6.3×5.4	0.88	165
15							4×5.4	1.80	80	5×5.4	0.76	150	5×5.4	0.76	150	6.3×5.4	0.88	165
22				4×5.4	1.80	80	5×5.4	0.76	80	5×5.4	0.76	80	5×5.4	0.76	150	6.3×5.4	0.88	165
27	4×5.4	1.80	80	5×5.4	0.76	150	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.68	185
33	5×5.4	0.76	150	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.68	185
47	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.68	185
56	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.34	280	8×10.5	0.34	350
68	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.34	280	8×10.5	0.34	350
100	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.34	280	8×10.5	0.17	600	8×10.5	0.18	300
150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.34	280	8×10.5	0.17	600	8×10.5	0.17	600	10×10.5	0.18	670
220	6.3×5.4	0.44	230	6.3×7.7	0.34	280	6.3×7.7	0.34	280	8×10.5	0.17	600	8×10.5	0.17	600	10×10.5	0.18	670
330	6.3×7.7	0.34	280	8×10.5	0.17	600	8×10.5	0.17	600	8×10.5	0.17	600	10×10.5	0.09	850			
470	8×10.5	0.17	600	8×10.5	0.17	600	8×10.5	0.17	600	10×10.5	0.09	850						
680	8×10.5	0.17	600	10×10.5	0.09	670	10×10.5	0.09	850									
1000	8×10.5	0.17	600	10×10.5	0.09	850												
1500	10×10.5	0.09	850															

I~ = 额定纹波电流 Rated ripple current (mA) (105° C ,100KHz)

20° C ,100KHz 时的电阻 (Ω) MAX

额定纹波电流的频率系数 *Frequency coefficient of ripple current*

Frequency 频率	50Hz	120Hz	300Hz	1kHz	≥ 10KHz
Coefficient 系数	0.35	0.50	0 .64	0.83	1.00