



片式铝电解电容 SMD Aluminum Electrolytic Capacitors

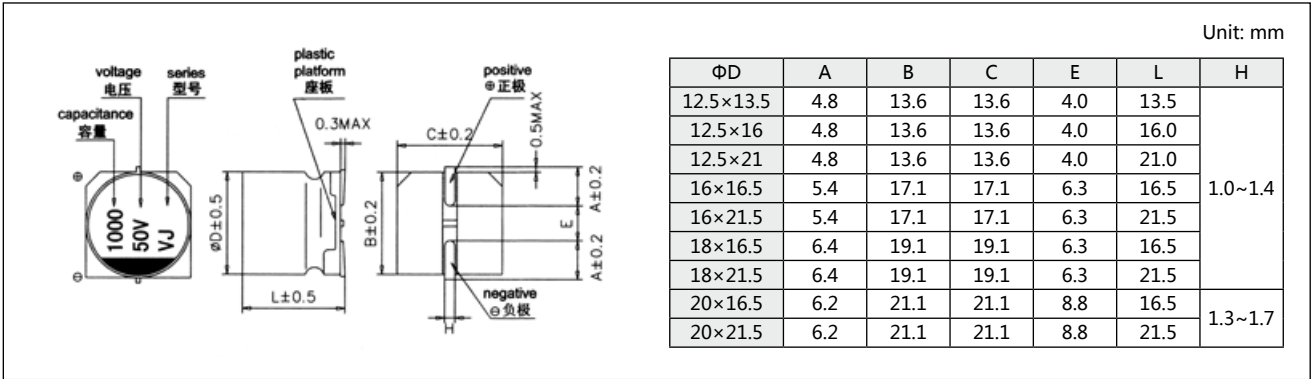
- 适用于电容器尺寸较大情况 (Φ12.5, Φ16, Φ18, Φ20)。
Higher Capacitance in larger case sizes (Φ12.5, Φ16, Φ18, Φ20).
- 适用于再流焊。Reflow soldering is available.
- 适用于高密度表面组装。Available for high density surface mounting.
- RoHS 指令已对应完毕。Adapted to the RoHS directive.



主要技术性能 Specifications

项 目 Item	特 性 Performance Characteristics																																											
工作温度范围 Category Temperature Range	-55℃ ~+105℃ (6.3~100V _{dc}), -40℃ ~+105℃ (160~450V _{dc})																																											
额定电压范围 Rated Voltage Range	6.3~450V _{dc}																																											
标称电容量允许偏差 Capacitance Tolerance	±20% (+20℃ , 120Hz)																																											
漏电流 Leakage Current	6.3~100V, I ≤ 0.03C _R U _R or 4(μA), 取较大者 (1 分钟) 160~450V, I = 0.04C _R U _R + 100(μA)max (1 分钟) C _R : 标称电容量 Nominal capacitance(μF), U _R : 额定电压 Rated voltage(V)																																											
损失角正切值 (tg δ) Dissipation Factor (Max) (+20℃,120Hz)	<table><tr><td>Rated Voltage(V_{dc})</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160~250</td><td>400~450</td></tr><tr><td>tgδ(Max.)</td><td>0.26</td><td>0.22</td><td>0.18</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td><td>0.15</td><td>0.20</td></tr></table>											Rated Voltage(V _{dc})	6.3	10	16	25	35	50	63	100	160~250	400~450	tgδ(Max.)	0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.08	0.15	0.20											
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注：超过 1000μF 的产品，每增加 1000μF，其值便增加 0.02。 For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.																																												
耐久性 Endurance	+105℃施加额定电压 5000 小时后，电容器应满足以下要求： After 5000 hours' application of rated voltage at 105℃ , the capacitor shall meet the following requirement:																																											
	电容量变化率 Capacitance change		±20% 初始测量值以内 Within ±20% of the initial value																																									
	损失角正切值 Dissipation factor		≤ 200% 初始规定值 Not more than 200% of the initial specified value																																									
	漏电流 Leakage current		≤ 初始规定值 Not more than the initial specified value																																									
高温贮存 Shelf Life	+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.																																											
温度特性 (阻抗比 Max.) Temperature characteristics (Max. Impedance ratio) (120Hz)	<table><tr><td>Rated Voltage(V_{dc})</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160~250</td><td>400~450</td></tr><tr><td>Z(-25℃)/Z(+20℃)</td><td>5</td><td>4</td><td>3</td><td>2</td><td>2</td><td>5</td><td>2</td><td>2</td><td>3</td><td>6</td></tr><tr><td>Z(-40℃)/Z(+20℃)</td><td>10</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>6</td><td>10</td></tr></table>											Rated Voltage(V _{dc})	6.3	10	16	25	35	50	63	100	160~250	400~450	Z(-25℃)/Z(+20℃)	5	4	3	2	2	5	2	2	3	6	Z(-40℃)/Z(+20℃)	10	8	6	4	3	3	3	3	6	10
	Rated Voltage(V _{dc})	6.3	10	16	25	35	50	63	100	160~250	400~450																																	
	Z(-25℃)/Z(+20℃)	5	4	3	2	2	5	2	2	3	6																																	
Z(-40℃)/Z(+20℃)	10	8	6	4	3	3	3	3	6	10																																		
耐焊接热 Resistance to Soldering Heat	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:																																											
	电容量变化率 Capacitance change		±10% 初始测量值以内 Within ±10% of the initial value																																									
	损失角正切值 Dissipation factor		≤ 初始规定值 Not more than the initial specified value																																									
	漏电流 Leakage current		≤ 初始规定值 Not more than the initial specified value																																									

外形图及尺寸 *Diagram of Dimensions*



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 Item Cap.(μF)	6.3		10		16		25		35		50	
	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)
220									12.5×13.5	280	12.5×16	320
330							12.5×13.5	320	12.5×16	360	● 16×16.5	440
470						360	12.5×16	400	● 16×16.5	490	△ 18×16.5	550
1000					● 16×16.5	630	△ 18×16.5	700	△ 18×16.5	750	18×21.5	820
2200	● 16×16.5	750	● 16×16.5	810	18×16.5	930	18×21.5	1050	20×21.5	1150		
3300	△ 18×16.5	930	△ 18×16.5	1000	18×21.5	1150						
4700	★ 18×21.5	1100	18×21.5	1200								
6800	20×21.5	1350	20×21.5	1450								

V Item Cap.(μF)	63		100		160		200		250		400		450	
	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)	ΦD×L (mm)	I~ (mA)
3.3													12.5×13.5	40
4.7									12.5×13.5	65	12.5×16	50	12.5×16	50
10							12.5×13.5	80	12.5×16	105	16×16.5	85	16×16.5	85
22							12.5×16	105	● 16×16.5	180	18×21.5	130	18×21.5	130
33					12.5×13.5	95	● 16×16.5	220	△ 18×16.5	230	20×21.5	160	20×21.5	160
47			12.5×13.5	160	● 16×16.5	260	△ 18×16.5	270	★ 18×21.5	280				
68	12.5×13.5	175	12.5×16	205	△ 18×16.5	320	★ 18×21.5	330	20×21.5	340				
100	12.5×16	225	● 16×16.5	285	★ 16×21.5	380	20×21.5	410						
220	● 16×16.5	385	△ 18×16.5	440										
330	△ 18×16.5	490	20×21.5	500										
470	18×21.5	590												

●标记：还可以对应 Φ12.5×21 △标记：还可以对应 Φ16×21.5 ★标记：还可以对应 Φ20×16.5
I~ = 额定纹波电流 Rated ripple current (mA)(+105° C, 120Hz)

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

V	Frequency(Hz)	50Hz	120Hz	300Hz	1kHz	≥ 10KHz
	Cap.(μF)					
6.3 ~ 100	< 68	0.70	1.00	1.35	1.57	2.00
	100~470	0.80	1.00	1.23	1.34	1.50
	1000~6800	0.85	1.00	1.10	1.13	1.15
160~450	3.3~100	0.80	1.00	1.25	1.40	1.60