

#### VS1 Series 片式铝电解电容器标准品

Standard Aluminum Electrolytic Capacitor of V-chip Type

- 适用于回流焊 • 适用于高密度表面组装
- 性能稳定、可靠性高。 • 寿命：85℃，2000 小时
- Reflow soldering is available • Available for high density surface mounting
- High stability and reliability • Life time: 85℃,2000Hrs

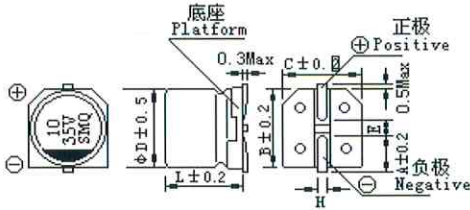


#### ■ 主要技术性能 Specifications

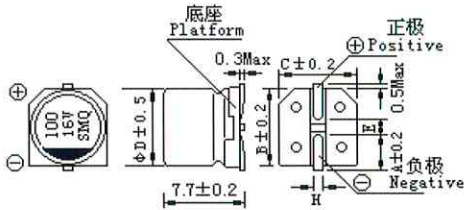
使用温度范围 Operating Temperature Range	- 40 ~ +85℃						
额定电压范围 Rated Voltage Range	6.3 ~ 50V DC						
标称容量允许偏差 Capacitance Tolerance	± 20% (120Hz, 20℃)						
漏电流(20℃) Leakage Current	I ≤ 0.01C <sub>n</sub> U <sub>n</sub> (μA) 或 3μA 取较大者 (2 分钟) Less than 0.01C <sub>n</sub> U <sub>n</sub> or 3μA Whichever is greater (after 2 minutes)						
损耗角正切值 Dissipation Factor (120Hz 20℃)	U <sub>n</sub> (V)	6.3	10	16	25	35	50
tg δ	φ 4 ~ φ 6.3	0.26	0.22	0.18	0.16	0.13	0.12
	φ 8/ φ 10	0.35	0.26	0.20	0.16	0.14	0.12
温度特性 (120Hz) Temperature Characteristics Impedance Ratio (120Hz)	U <sub>n</sub> (V)	6.3	10	16	25	35	50
	Z <sub>-40℃</sub> / Z <sub>+20℃</sub>	8	8	4	4	3	3
耐久性 Load Life	+85℃施加额定电压 2000 小时,恢复 16 小时后,电容器应满足下列要求 After applying rated voltage for 2000 hours at +85℃ and then resumed 16 hours. The capacitor shall meet the following limits.						
	电容量变化率 Capacitance change	≤ ± 20% 初始测量值 ≤ ± 20% of Initial measured value					
	漏电流值 Leakage	≤ 规定值 ≤ The specified value					
	损耗角正切值 Dissipation factor	≤ 200% 规定值 ≤ 200% of the specified value					
高温贮存 Shelf Life	+85℃,1000 小时,恢复 16 小时后,电容器应满足下列要求。 After storage for 1000 hours at +85℃ and then resumed 16 hours, the capacitor shall meet the following limits.						
	电容量变化率 Capacitance change	≤ ± 20% 初始测量值 ≤ ± 20% of Initial measured value					
	漏电流值 Leakage	≤ 2 倍规定值 ≤ 200% of the specified value					
	损耗角正切值 Dissipation factor	≤ 200% 规定值 ≤ 200% of the specified value					
耐焊接热 Resistance to Soldering Heat	在 250℃ 的条件下,电容器应在热板上保持 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, then meet the following requirement.						
	电容量变化率 Capacitance change	≤ ± 10% 初始测量值 ≤ ± 10% of Initial measured value					
	漏电流值 Leakage	≤ 规定值 ≤ The specified value					
	损耗角正切值 Dissipation factor	≤ 规定值 ≤ The specified value					

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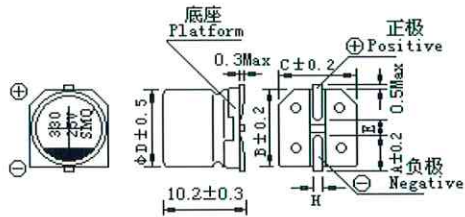
### ■ 尺寸及印字 Dimensions & Marking ( $\phi 4 \sim \phi 6.3$ )



( $\phi 6.3 \times 7.7$ )



( $\phi 8 \sim \phi 10 \times 10.2$ )



Size	mm					
	$\phi 4 \times 5.4$	$\phi 5 \times 5.4$	$\phi 6.3 \times 5.4$	$\phi 6.3 \times 7.7$	$\phi 8 \times 10.2$	$\phi 10 \times 10.2$
A	1.8	2.1	2.4	2.5	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.4	5.4	5.4	7.7	10.2	10.2
H	0.5~0.9				0.9~1.1	

### ■ 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

$\mu F$	6.3		10		16		25		35		50	
	D x L mm	I ~ mA	D x L mm	I ~ mA	D x L mm	I ~ mA	D x L mm	I ~ mA	D x L mm	I ~ mA	D x L mm	I ~ mA
0.1											4 x 5.4	1.0
0.22											4 x 5.4	2.0
0.33											4 x 5.4	2.8
0.47											4 x 5.4	4.0
1.0											4 x 5.4	8.4
2.2											4 x 5.4	13
3.3									4 x 5.4	18	4 x 5.4	17
4.7							4 x 5.4	16	4 x 5.4	20	5 x 5.4	20
10					4 x 5.4	23	4 x 5.4	24	5 x 5.4	29	6.3 x 5.4	33
22	4 x 5.4	28	4 x 5.4	30	5 x 5.4	37	5 x 5.4	38	6.3 x 5.4	46	6.3 x 5.4	43
33	5 x 5.4	37	5 x 5.4	41	5 x 5.4	44	6.3 x 5.4	52	6.3 x 5.4	53	6.3 x 7.7	85
47	5 x 5.4	45	6.3 x 5.4	52	5 x 5.4 6.3 x 5.4	48 58	6.3 x 5.4	60	6.3 x 5.4 6.3 x 7.7	55 70	6.3 x 7.7 8 x 10.2	90 140
100	5 x 5.4 6.3 x 5.4	50 70	6.3 x 5.4	76	6.3 x 5.4	86	6.3 x 7.7	130	6.3 x 7.7 8 x 10.2	80 175	8 x 10.2 10 x 10.2	145 195
220	6.3 x 5.4	95	6.3 x 7.7	150	6.3 x 7.7	150	8 x 10.2	232	8 x 10.2 10 x 10.2	185 265	10 x 10.2	415
330	6.3 x 7.7	150	8 x 10.2	240	8 x 10.2	270	10 x 10.2	305	10 x 10.2	324		
470	8 x 10.2	265	8 x 10.2	290	8 x 10.2 10 x 10.2	280 330	10 x 10.2	393	10 x 10.2	395		
1000	10 x 10.2	400	10 x 10.2	454								
1500	10 x 10.2	489										

I ~ 额定纹波电流 Rated ripple current: (mA, 85°C, 120Hz)

### ■ 额定纹波电流的频率系数 Frequency coefficient of rated ripple current

Frequency 频率		50Hz	120Hz	300Hz	1KHz	$\geq 10\text{KHz}$
Coefficient 系数	0.1 ~ 47 $\mu F$	0.80	1.00	1.20	1.30	1.50
	100 ~ 1500 $\mu F$	0.80	1.00	1.10	1.15	1.20