

VL 型片式铝电解电容

VL Series Chip Type Aluminum Electrolytic Capacitors

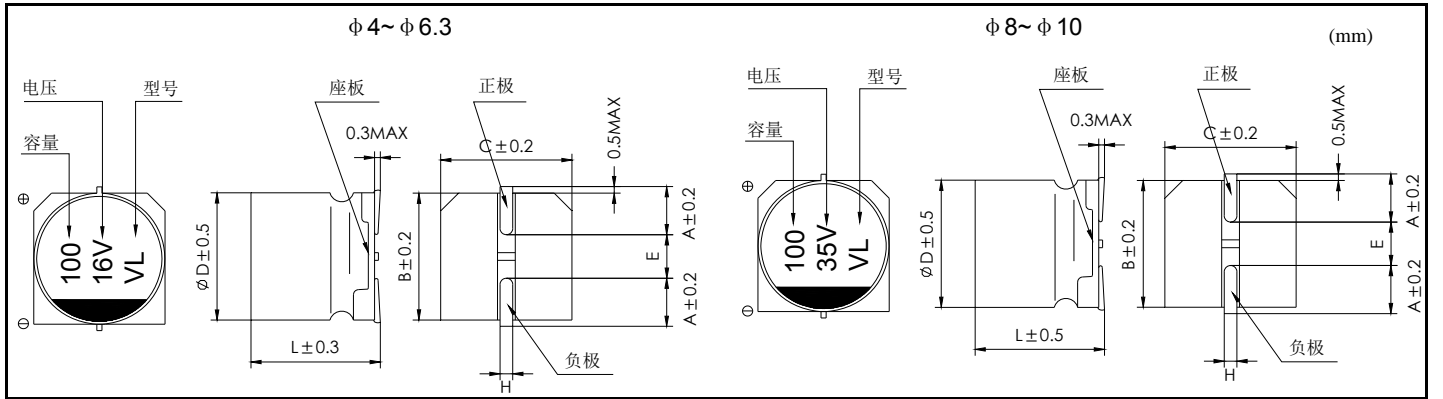
## 特点 Features

- +105°C 3000-5000 小时保证品。load life of 3000-5000 hours at +105°C
- 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 (2002/95/EC) 已对应完毕。Adapted to the ROHS directive (2002/95/EC)。

## 主要技术性能 Specifications

项目 Items	特性 Characteristics						
工作温度范围 Operating Temperature Range	-40°C ~ +105°C						
额定电压范围 Rated Voltage Range	6.3V ~ 50V						
标称容量范围 Nominal Capacitance Range	1 ~ 1000 $\mu$ F						
标称容量允许偏差 Nominal Capacitance Tolerance	$\pm 20\%$ (20°C, 120Hz)						
漏电流 Leakage Current	$I \leq 0.01C_R V_R$ or 3( $\mu$ A), 取较大者 (2 分钟) $C_R$ : 标称容量 ( $\mu$ F) $U_R$ : 额定电压 (V) $I \leq 0.01C_R V_R$ or 3( $\mu$ A) Whichever is greater (at 20°C, after 2 minutes) $C_R$ : Nominal Capacitance ( $\mu$ F) $U_R$ : Rated voltages (V)						
损耗角正切 (tg $\delta$ ) Dissipation Factor (Max) 20°C, 120Hz	$U_R$ (V)	6.3	10	16	25	35	50
	tg $\delta$	0.32	0.24	0.20	0.16	0.13	0.12
耐久性 Load Life	+105°C 施加额定电压 5000 小时后 ( $\Phi D=4, 5$ 和 6.3 为 3000 小时), 电容器应满足以下要求: After 5000 hours (3000 hours for $\Phi D = 4, 5$ and 6.3) . application of rated voltage at 105°C, the capacitor shall meet the following requirement:						
	容量变化率 Capacitance Change	$\pm 30\%$ 初始值以内 Within $\pm 30\%$ of the initial value					
	损耗角正切 Dissipation Factor	$\leq 300\%$ 初始规定值 Not more than 300% of the initial specified value					
	漏电流 Leakage Current	$\leq$ 初始规定值 Not more than the initial specified value					
高温贮存 Shelf Life	+105°C 贮存 1000 小时后, 加额定工作电压 30 分钟, 电容器应满足以上耐久性要求 After storage for 1000 hours at +105°C, $U_R$ to be applied for 30 minutes, the capacitors shall meet the requirement of load life above						
低温特性 Low Temperature Stability 阻抗比 Impedance Ratio (120Hz)	$U_R$ (V)	6.3	10	16	25	35	50
	$Z(-25^\circ\text{C})/Z(+20^\circ\text{C})$	4	3	2	2	2	2
	$Z(-40^\circ\text{C})/Z(+20^\circ\text{C})$	10	7	5	3	3	3
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.						
	容量变化率 Capacitance Change	$\pm 10\%$ 初始值以内 Within $\pm 10\%$ of the initial value					
	损耗角正切 (tg $\delta$ ) Dissipation Factor	$\leq$ 初始规定值 Not more than the initial specified value					
	漏电流 Leakage Current	$\leq$ 初始规定值 Not more than the initial specified value					

尺寸图 Dimensions



mm

	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8x10.5	10x10.5
A	1.8	2.1	2.4	2.4	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	5.8	5.8	5.8	7.7	10.5	10.5
H	0.5 ~ 0.8				0.8~1.1	

■ 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

V	6.3		10		16		25		35		50	
	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA
1.0											4×5.8	8
2.2											4×5.8	12
3.3											4×5.8	17
4.7									4×5.8	20	5×5.8	21
10					4×5.8	20	5×5.8	30	5×5.8	30	6.3×5.8	35
22			5×5.8	30	5×5.8	35	6.3×5.8	45	6.3×5.8	50	6.3×7.7	52
33	5×5.8	40	5×5.8	40	6.3×5.8	50	6.3×5.8	50	6.3×7.7	62	8x10.5	80
47	5×5.8	45	6.3×5.8	55	6.3×5.8	60	6.3×7.7	65	8x10.5	100	8x10.5	95
100	6.3×5.8	70	6.3×5.8	75	6.3×7.7	90	8x10.5	140	10x10.5	260	10x10.5	99
220	6.3×7.7	105	8x10.5	170	10x10.5	230	10x10.5	230	10x10.5	230		
330	8x10.5	245	10x10.5	245	10x10.5	240	10x10.5	250				
470	10x10.5	350	10x10.5	350	10x10.5	360						
1000	10x10.5	350										

I~=Rated ripple current (mA) (105°C, 120Hz) I~=额定纹波电流 (mA) (105°C, 120Hz)

■ 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	0.70	1.00	1.17	1.36	1.50