

VD 片式铝电解电容

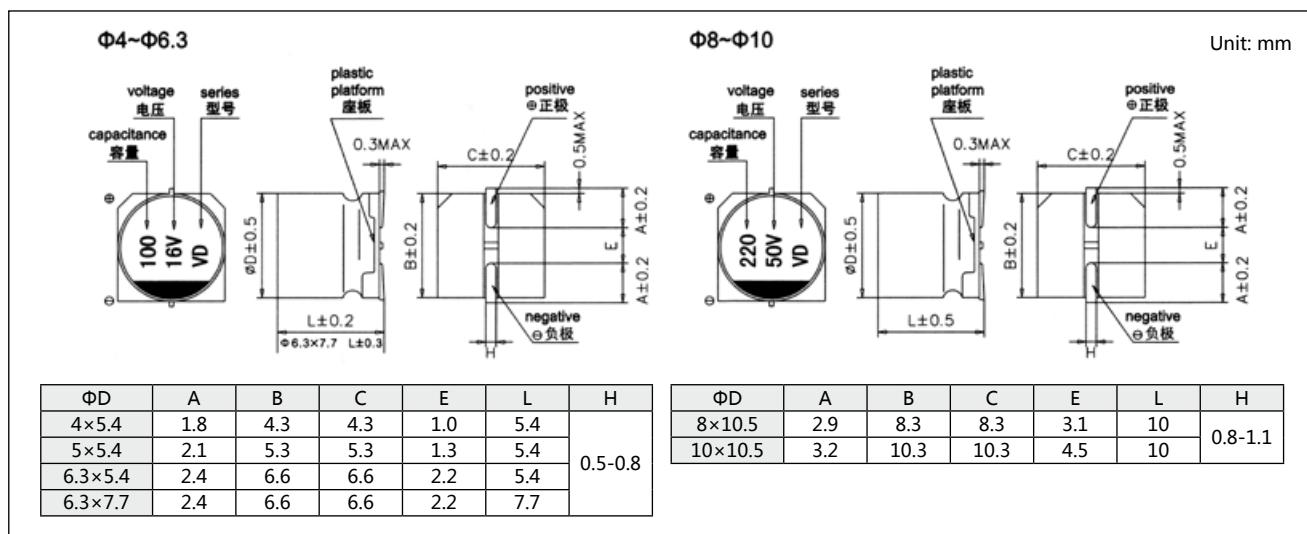
SMD Aluminum Electrolytic Capacitors

- 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°C ~ +105°C)。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

| 项 目 Item | 特 性 Performance Characteristics | | | | | | |
|---|--|---|------------|------------|------------|------------|------------|
| 工作温度范围 Category Temperature Range | -55°C ~ +105°C | | | | | | |
| 额定电压范围 Rated Voltage Range | 6.3~50V _{dc} | | | | | | |
| 标称电容量允许偏差 Capacitance Tolerance | $\pm 20\%$ (+20°C, 120Hz) | | | | | | |
| 漏电流 Leakage Current | $I \leq 0.01C_R U_R$ or $3(\mu A)$, 取较大者 (2分钟) Whichever is greater (at 20°C, after 2 minutes) 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 (tgδ) Dissipation Factor (Max) (+20°C, 120Hz) | Rated Voltage(V _{dc}) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | tgδ(Max.) | 0.26(0.28) | 0.20(0.24) | 0.16(0.20) | 0.14(0.16) | 0.12(0.14) | 0.12(0.14) |
| | 注：() 为 $\Phi D > 8$ products | | | | | | |
| 耐久性 Endurance | +105°C 施加额定电压 5000 小时后 ($\Phi D = 4, 5$ 和 6.3 为 2000 小时), 电容器应满足以下要求: After 5000 hours (2000 hours for $\Phi D = 4, 5$ and 6.3) application of rated voltage at 105°C, the capacitor shall meet the following requirement: | | | | | | |
| | 电容量变化率 Capacitance change | $\pm 30\%$ 初始测量值以内 Within $\pm 30\%$ of the initial value | | | | | |
| | 损失角正切值 Dissipation factor | $\leq 200\%$ 初始规定值 Not more than 200% 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, 电容器应满足以上耐久性要求。 After storage for 1000 hours at 105°C, the capacitors shall meet the requirement of load life above. | | | | | | |
| 温度特性 (阻抗比 Max.) Temperature characteristics (Max. Impedance ratio) (120Hz) | Rated Voltage(V _{dc}) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | Z(-25°C)/Z(+20°C) | 3 | 2 | 2 | 2 | 2 | 2 |
| | Z(-40°C)/Z(+20°C) | 5 | 4 | 4 | 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: | | | | | | |
| | 电容量变化率 Capacitance change | $\pm 10\%$ 初始测量值以内 Within $\pm 10\%$ of the initial value | | | | | |
| | 损失角正切值 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 | | | | | |

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 | 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 |
| 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 |