



# VS VS

## 型片式铝电解电容

## Series Chip Type Aluminum Electrolytic Capacitors

### 特点 Features

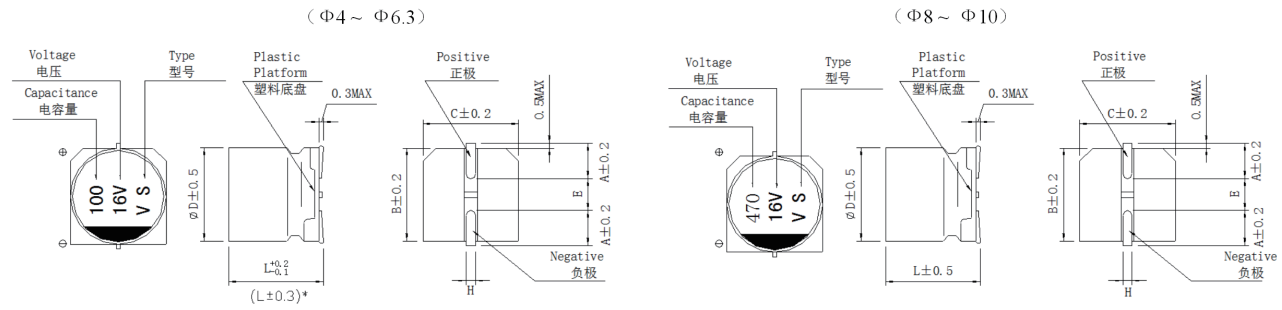
- 产品直径 Case diameter:  $\Phi$  4mm –  $\Phi$  10mm.
- 适用于再流焊。Reflow soldering is available.
- 适用于高密度表面组装。Available for high density surface mounting.
- ROHS指令已对应完毕。Adapted to the ROHS directive.



### 主要技术性能 Specifications

| 项目 Items  | 特性 Performance Characteristics   |   |      |      |      |      |      |      |      |   |
|---|--|---|------|------|------|------|------|------|------|---|
| 工作温度范围<br>Operating Temperature Range                               | -40°C ~ 85°C   |   |      |      |      |      |      |      |      |   |
| 额定电压范围<br>Rated Voltage Range                                       | 6.3V ~ 100V  |   |      |      |      |      |      |      |      |   |
| 标称容量范围<br>Nominal Capacitance Range                                 | 0.1 ~ 1500 $\mu$ F   |   |      |      |      |      |      |      |      |   |
| 标称容量允许偏差<br>Nominal Capacitance Tolerance                           | $\pm$ 20% ( 20°C , 120Hz )   |   |      |      |      |      |      |      |      |   |
| 漏电流<br>Leakage Current  | I $\leq$ 0.01CRVR or 3( $\mu$ A), 取较大者 ( 2分钟 ) CR : 标称容量 ( $\mu$ F ) UR : 额定电压 ( V )<br>I $\leq$ 0.01CRVR or 3( $\mu$ A) Whichever is greater(at 20°C, After 2 minutes)<br>CR: Nominal Capacitance ( $\mu$ F) UR: Rated voltages (V)                       |   |      |      |      |      |      |      |      |   |
| 损耗角正切 ( tg $\delta$ )<br>Dissipation Factor (Max)<br>20°C, 120Hz    | U <sub>r</sub> (V)   | 6.3   | 10   | 16   | 25   | 35   | 50   | 63   | 100  |   |
|   | tg $\delta$  | 0.28  | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.12 | 0.10 |   |
| 耐久性<br>Load Life  | +85°C施加额定电压2000小时后, 电容器应满足以下要求:<br>After 2000 hours' application of rated voltage at 85°C, the capacitor shall meet the following requirement:   |   |      |      |      |      |      |      |      |   |
|   | 容量变化率<br>Capacitance Change  | $\pm$ 20%初始值以内<br>Within $\pm$ 20% of the initial value               |      |      |      |      |      |      |      |   |
|   | 损耗角正切<br>Dissipation Factor  | $\leq$ 200%初始规定值<br>Not more than 200% of the initial specified value |      |      |      |      |      |      |      |   |
| 高温贮存<br>Shelf Life  | +85°C贮存1000小时后, 电容器应满足以上耐久性要求<br>After storage for 1000 hours at +85°C, the capacitors shall meet the requirement of load life above   |   |      |      |      |      |      |      |      |   |
|   | U <sub>r</sub> (V)   | 6.3   | 10   | 16   | 25   | 35   | 50   | 63   | 100  |   |
| 低温特性<br>Low Temperature Stability<br>阻抗比<br>Impedance Ratio (120Hz) | Z(-25°C)/Z(+20°C)  | < $\Phi$ 8  | 4    | 3    | 2    | 2    | 2    | 2    | 2    | 2 |
|   |  | $\geq$ $\Phi$ 8   | 5    | 4    | 3    | 2    | 2    | 2    | 2    | 2 |
|   | Z(-40°C)/Z(+20°C)  | < $\Phi$ 8  | 8    | 8    | 4    | 4    | 3    | 3    | 3    | 3 |
|   |  | $\geq$ $\Phi$ 8   | 10   | 8    | 6    | 4    | 3    | 3    | 3    | 3 |
| 耐焊接热<br>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:<br>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<br>Capacitance Change  | $\pm$ 10%初始值以内<br>Within $\pm$ 10% of the initial value               |      |      |      |      |      |      |      |   |
|   | 损耗角正切<br>Dissipation Factor  | $\leq$ 初始规定值<br>Not more than the initial specified value             |      |      |      |      |      |      |      |   |
|   | 漏电流<br>Leakage Current   | $\leq$ 初始规定值<br>Not more than the initial specified value             |      |      |      |      |      |      |      |   |

外形图及尺寸表 Case Size Table



\* Apply to 适用于 Φ6.3~7.7

|   | 4 × 5.4   | 5 × 5.4 | 6.3 × 5.4 | 6.3 × 7.7 | 8 × 6.5   | 8 × 10.5 | 10 × 10.5 |
|---|-----------|---------|-----------|-----------|-----------|----------|-----------|
| A | 1.8       | 2.1     | 2.4       | 2.4       | 2.9       | 2.9      | 3.2       |
| B | 4.3       | 5.3     | 6.6       | 6.6       | 8.3       | 8.3      | 10.3      |
| C | 4.3       | 5.3     | 6.6       | 6.6       | 8.3       | 8.3      | 10.3      |
| E | 1.0       | 1.3     | 2.2       | 2.2       | 2.3       | 3.1      | 4.5       |
| L | 5.4       | 5.4     | 5.4       | 7.7       | 6.5       | 10.5     | 10.5      |
| H | 0.5 ~ 0.8 |         |           |           | 0.8 ~ 1.1 |          |           |

(mm)

标称电容量、额定电压、额定纹波电流与尺寸对应表  
Nominal Capacitance, Rated Voltage, Rated Ripple Current and Case Size Table

| V<br>μF | 6.3       |          | 10        |          | 16        |          | 25        |          | 35        |          | 50        |          | 63        |          | 100       |          |
|---------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|
|         | D×L<br>mm | I~<br>mA | D×L<br>mm | I~<br>mA | D×L<br>mm | I~<br>mA | D×L<br>mm | I~<br>mA | D×L<br>mm | I~<br>mA | D×L<br>mm | I~<br>mA | D×L<br>mm | I~<br>mA | D×L<br>mm | I~<br>mA |
| 0.1     |           |          |           |          |           |          |           |          |           |          | 4×5.4     | 3.2      |           |          |           |          |
| 0.22    |           |          |           |          |           |          |           |          |           |          | 4×5.4     | 4.7      |           |          |           |          |
| 0.33    |           |          |           |          |           |          |           |          |           |          | 4×5.4     | 5.7      |           |          |           |          |
| 0.47    |           |          |           |          |           |          |           |          |           |          | 4×5.4     | 6.8      |           |          |           |          |
| 1.0     |           |          |           |          |           |          |           |          |           |          | 4×5.4     | 10       |           |          |           |          |
| 2.2     |           |          |           |          |           |          |           |          |           |          | 4×5.4     | 15       |           |          |           |          |
| 3.3     |           |          |           |          |           |          |           |          |           |          | 4×5.4     | 18       |           |          |           |          |
| 4.7     |           |          |           |          |           |          | 4×5.4     | 22       | 4×5.4     | 20       | 4×5.4     | 24       |           |          | 6.3×7.7   | 40       |
| 10      |           |          |           |          | 4×5.4     | 26       | 4×5.4     | 24       | 4×5.4     | 24       | 5×5.4     | 41       | 6.3×7.7   | 50       | 8×10.5    | 77       |
|         |           |          |           |          | 5×5.4     | 32       | 5×5.4     | 34       | 5×5.4     | 34       | 6.3×5.4   | 43       |           |          |           |          |
| 22      | 4×5.4     | 31       | 4×5.4     | 30       | 4×5.4     | 30       | 5×5.4     | 38       | 5×5.4     | 39       | 6.3×5.4   | 71       | 6.3×7.7   | 96       | 8×10.5    | 100      |
|         |           |          | 5×5.4     | 39       | 5×5.4     | 44       | 6.3×5.4   | 55       | 6.3×5.4   | 59       |           |          |           |          |           |          |
| 33      | 4×5.4     | 31       | 4×5.4     | 34       | 5×5.4     | 44       | 5×5.4     | 46       | 6.3×5.4   | 65       | 6.3×7.7   | 94       | 8×10.5    | 117      | 10×10.5   | 130      |
|         | 5×5.4     | 44       | 5×5.4     | 48       | 6.3×5.4   | 63       | 6.3×5.4   | 67       |           |          |           |          |           |          |           |          |
| 47      | 4×5.4     | 40       | 5×5.4     | 47       | 5×5.4     | 52       | 6.3×5.4   | 70       | 6.3×7.7   | 94       | 6.3×7.7   | 105      | 10×10.5   | 140      |           |          |
|         | 5×5.4     | 52       | 6.3×5.4   | 67       | 6.3×5.4   | 75       |           |          |           |          | 8×10.5    | 140      |           |          |           |          |
| 100     | 5×5.4     | 47       | 5×5.4     | 54       | 6.3×5.4   | 103      | 6.3×7.7   | 143      | 6.3×7.7   | 132      | 8×10.5    | 200      |           |          |           |          |
|         | 6.3×5.4   | 89       | 6.3×5.4   | 98       |           |          |           |          | 8×10.5    | 175      | 10×10.5   | 250      |           |          |           |          |
| 220     | 6.3×5.4   | 91       | 6.3×7.7   | 173      | 6.3×7.7   | 162      | 8×10.5    | 230      | 8×10.5    | 200      | 10×10.5   | 320      |           |          |           |          |
|         |           |          | 8×6.5     | 250      | 8×10.5    | 280      | 10×10.5   | 310      | 10×10.5   | 310      |           |          |           |          |           |          |
| 330     | 6.3×7.7   | 188      | 8×10.5    | 390      | 8×10.5    | 320      | 8×10.5    | 270      | 10×10.5   | 360      |           |          |           |          |           |          |
|         |           |          |           |          |           |          |           | 10×10.5  | 340       |          |           |          |           |          |           |          |
| 470     | 8×10.5    | 380      | 8×10.5    | 390      | 8×10.5    | 350      | 10×10.5   | 380      |           |          |           |          |           |          |           |          |
|         |           |          |           |          | 10×10.5   | 420      |           |          |           |          |           |          |           |          |           |          |
| 1000    | 8×10.5    | 370      | 10×10.5   | 580      |           |          |           |          |           |          |           |          |           |          |           |          |
|         | 10×10.5   | 700      |           |          |           |          |           |          |           |          |           |          |           |          |           |          |
| 1500    | 10×10.5   | 750      |           |          |           |          |           |          |           |          |           |          |           |          |           |          |

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