

VXA 型片式铝电解电容  
VXA Series Chip Type Aluminum Electrolytic Capacitors

特点 Features

- 产品直径 Case diameter: Φ 4mm – Φ 18mm
- 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.
- 可应用于汽车模块。For automobile modules.
- 满足 AEC-Q200 认证。AEC-Q200 Compliant.

主要技术性能 Specifications

| 项目 Items                                                            | 特性 Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |                                                                  |      |      |      |      |      |      |      |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------|------|------|------|------|------|------|------|
| 工作温度范围<br>Operating Temperature Range                               | -55℃ ~+105℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |                                                                  |      |      |      |      |      |      |      |
| 额定电压范围<br>Rated Voltage Range                                       | 6.3 ~ 100V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                                                  |      |      |      |      |      |      |      |
| 标称容量范围<br>Nominal Capacitance Range                                 | 1 ~ 8200μF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                                                  |      |      |      |      |      |      |      |
| 标称容量允许偏差<br>NominalCapacitanceTolerance                             | ±20% (20℃, 120Hz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |                                                                  |      |      |      |      |      |      |      |
| 漏电流<br>Leakage Current                                              | Φ4~10: I≤0.01C <sub>R</sub> V <sub>R</sub> or 3(μA),: 取较大者 (2 分钟)<br>Φ12.5~18: I≤0.03C <sub>R</sub> V <sub>R</sub> or 4(μA),: 取较大者 (2 分钟)<br>C <sub>R</sub> : 标称容量 ( μ F)      U <sub>R</sub> : 额定电压 (V)<br>Φ4~10: I≤0.01C <sub>R</sub> V <sub>R</sub> or 3(μA) Whichever is greater(at 20℃,After 2 minutes)<br>Φ12.5~18: I≤0.03C <sub>R</sub> V <sub>R</sub> or 4(μA) Whichever is greater(at 20℃,After 2 minutes)<br>C <sub>R</sub> : Nominal Capacitance (μF)      U <sub>R</sub> : Rated voltages (V) |      |                                                                  |      |      |      |      |      |      |      |
| 损耗角正切 (tgδ)<br>Dissipation Factor (Max)<br>20℃, 120Hz               | U <sub>R</sub> (V)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6.3  | 10                                                               | 16   | 25   | 35   | 50   | 63   | 80   | 100  |
|                                                                     | tgδ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.32 | 0.24                                                             | 0.20 | 0.16 | 0.14 | 0.12 | 0.12 | 0.11 | 0.10 |
| 耐久性<br>Load Life                                                    | +105℃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 105℃, the capacitor shall meet the following requirement:                                                                                                                                                                                                                                                                                                                                                         |      |                                                                  |      |      |      |      |      |      |      |
|                                                                     | 电容量变化率<br>Capacitance Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      | ±20%初始值以内<br>Within ±20% of the initial value                    |      |      |      |      |      |      |      |
|                                                                     | 损耗角正切<br>Dissipation Factor                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      | ≤ 200%初始规定值<br>Not more than 200% of the initial specified value |      |      |      |      |      |      |      |
|                                                                     | 漏电流<br>Leakage Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      | ≤ 初始规定值<br>Not more than the initial specified value             |      |      |      |      |      |      |      |
| 高温贮存<br>Shelf Life                                                  | +105℃ 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 +105℃, the capacitors shall meet the requirement of load life above                                                                                                                                                                                                                                                                                                                                                                   |      |                                                                  |      |      |      |      |      |      |      |
| 低温特性<br>Low Temperature Stability<br>阻抗比<br>Impedance Ratio (120Hz) | U <sub>R</sub> (V)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6.3  | 10                                                               | 16   | 25   | 35   | 50   | 63   | 80   | 100  |
|                                                                     | Z(-25℃)/Z(+20℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4    | 4                                                                | 3    | 2    | 2    | 2    | 2    | 3    | 3    |
|                                                                     | Z(-55℃)/Z(+20℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12   | 8                                                                | 6    | 4    | 3    | 3    | 3    | 3    | 3    |
| 耐焊接热<br>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<br>Capacitance Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      | ±10%初始值以内<br>Within ±10% of the initial value                    |      |      |      |      |      |      |      |
|                                                                     | 损耗角正切 (tgδ)<br>Dissipation Factor                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      | ≤ 初始规定值<br>Not more than the initial specified value             |      |      |      |      |      |      |      |
|                                                                     | 漏电流<br>Leakage Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      | ≤ 初始规定值<br>Not more than the initial specified value             |      |      |      |      |      |      |      |

## 尺寸图 Dimensions

Fig.1

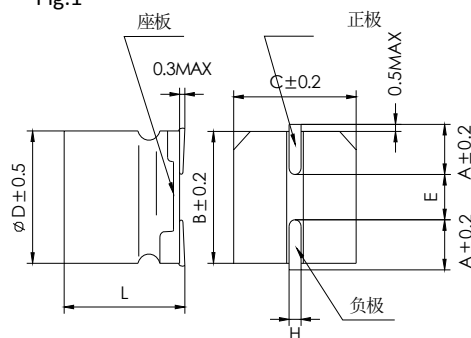
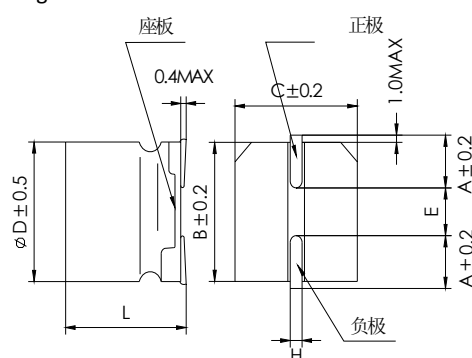
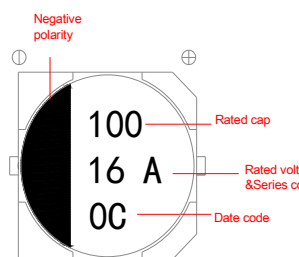
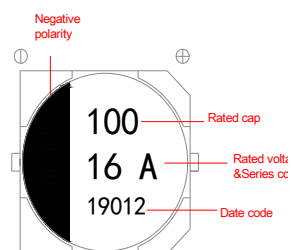
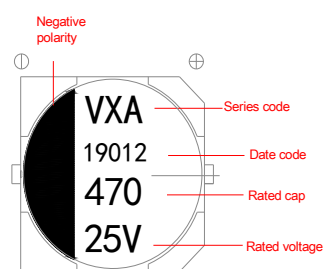
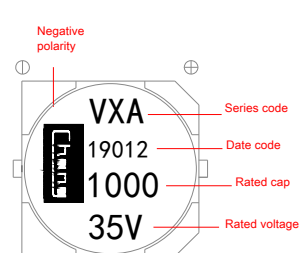


Fig.2



## Marking

 $\Phi D=4\sim 5\text{mm}$  $\Phi D=6.3\text{mm}$  $\Phi D=8\sim 10\text{mm}$  $\Phi D\geq 12.5\text{mm}$ 

尺寸表

单位: mm

| ΦD   | L        | A   | B    | C    | E±0.2 | H       | Fig. No. |
|------|----------|-----|------|------|-------|---------|----------|
| 4    | 5.8±0.3  | 1.8 | 4.3  | 4.3  | 1.0   | 0.5~0.8 | 1        |
| 5    | 5.8±0.3  | 2.1 | 5.3  | 5.3  | 1.3   |         |          |
| 6.3  | 5.8±0.3  | 2.4 | 6.6  | 6.6  | 2.2   |         |          |
| 6.3  | 7.7±0.3  | 2.4 | 6.3  | 6.3  | 2.2   |         |          |
| 8    | 6.5±0.3  | 3.1 | 8.3  | 8.3  | 2.3   |         |          |
| 8    | 10.5±0.5 | 2.9 | 8.3  | 8.3  | 3.1   | 0.8~1.1 | 2        |
| 10   | 10.5±0.5 | 3.2 | 10.3 | 10.3 | 4.5   |         |          |
| 12.5 | 13.5±0.5 | 4.7 | 13   | 13   | 4.5   | 1.1~1.4 |          |
| 12.5 | 16.0±0.5 | 4.7 | 13   | 13   | 4.5   |         |          |
| 16   | 16.5±0.5 | 5.4 | 17   | 17   | 6.4   |         |          |
| 16   | 21.5±0.5 | 5.4 | 17   | 17   | 6.4   |         |          |
| 18   | 16.5±0.5 | 6.3 | 19   | 19   | 6.4   |         |          |
| 18   | 21.5±0.5 | 6.3 | 19   | 19   | 6.4   |         |          |

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

| μF   | V. DC<br>Contents | 6.3V (0J) |      | 10V (1A)  |      | 16V (1C)  |      | 25V (1E)  |      | 35V (1V)  |      |
|------|-------------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
|      |                   | ΦDxL      | mA   | ΦDxL      | mA   | ΦDxL      | mA   | ΦDxL      | mA   | ΦDxL      | mA   |
| 1    | 010               |           |      |           |      |           |      |           |      |           |      |
| 2.2  | 2R2               |           |      |           |      |           |      |           |      |           |      |
| 3.3  | 3R3               |           |      |           |      |           |      |           |      |           |      |
| 4.7  | 4R7               |           |      |           |      | 4*5.8     | 18   | 4*5.8     | 18   | 4*5.8     | 17   |
| 10   | 100               |           |      | 4*5.8     | 23   | 4*5.8     | 21   | 4*5.8     | 23   | 5*5.8     | 27   |
| 22   | 220               | 4*5.8     | 22   | 4*5.8     | 27   | 5*5.8     | 30   | 5*5.8     | 32   | 6.3*5.8   | 45   |
| 33   | 330               | 4*5.8     | 26   | 5*5.8     | 35   | 5*5.8     | 35   | 6.3*5.8   | 49   | 6.3*5.8   | 48   |
| 47   | 470               | 5*5.8     | 38   | 5*5.8     | 40   | 6.3*5.8   | 50   | 6.3*5.8   | 50   | 6.3*7.7   | 80   |
| 100  | 101               | 6.3*5.8   | 75   | 6.3*5.8   | 73   | 6.3*5.8   | 70   | 6.3*7.7   | 100  | 6.3*7.7   | 82   |
| 220  | 221               | 6.3*7.7   | 130  | 6.3*7.7   | 125  | 6.3*7.7   | 120  | 8*10.5    | 278  | 8*10.5    | 277  |
| 330  | 331               | 8*10.5    | 320  | 8*10.5    | 300  | 8*10.5    | 290  | 8*10.5    | 298  | 10*10.5   | 380  |
| 470  | 471               | 8*10.5    | 340  | 8*10.5    | 320  | 10*10.5   | 410  | 10*10.5   | 398  | 12.5*13.5 | 540  |
| 680  | 681               | 10*10.5   | 420  | 10*10.5   | 410  | 10*10.5   | 380  | 12.5*13.5 | 640  | 12.5*16.5 | 610  |
| 1000 | 102               | 10*10.5   | 455  | 10*10.5   | 440  | 12.5*13.5 | 560  | 12.5*16   | 560  | 12.5*16   | 820  |
| 2200 | 222               | 12.5*13.5 | 690  | 12.5*13.5 | 690  | 16*16.5   | 910  | 16*16.5   | 910  | 18*21.5   | 1080 |
| 3300 | 332               | 12.5*16   | 860  | 16*16.5   | 960  | 16*16.5   | 960  | 18*16.5   | 1200 |           |      |
| 4700 | 472               | 16*16.5   | 1050 | 16*16.5   | 1030 | 18*16.5   | 1250 | 18*21.5   | 1340 |           |      |
| 6800 | 682               | 18*16.5   | 1300 | 18*16.5   | 1290 |           |      |           |      |           |      |
| 8200 | 822               | 18*21.5   | 1500 | 18*21.5   | 1480 |           |      |           |      |           |      |

| μF   | V. DC<br>Contents | 50V (1H)  |      | 63V (1J)  |     | 80V (1K)  |      | 100V (2A) |     |
|------|-------------------|-----------|------|-----------|-----|-----------|------|-----------|-----|
|      |                   | ΦDxL      | mA   | ΦDxL      | mA  | ΦDxL      | mA   | ΦDxL      | mA  |
| 1    | 010               | 4*5.8     | 8    | 4*5.8     | 8   |           |      |           |     |
| 2.2  | 2R2               | 4*5.8     | 12   | 4*5.8     | 12  |           |      |           |     |
| 3.3  | 3R3               | 4*5.8     | 15   | 5*5.8     | 17  |           |      |           |     |
| 4.7  | 4R7               | 5*5.8     | 20   | 6.3*5.8   | 23  | 6.3*5.8   | 28   | 6.3*5.8   | 20  |
| 10   | 100               | 6.3*5.8   | 33   | 6.3*5.8   | 33  | 6.3*7.7   | 48   | 6.3*7.7   | 32  |
| 22   | 220               | 6.3*5.8   | 40   | 6.3*7.7   | 60  | 8*10.5    | 105  | 8*10.5    | 100 |
| 33   | 330               | 6.3*7.7   | 68   | 8*10.5    | 143 | 8*10.5    | 105  | 10*10.5   | 150 |
| 47   | 470               | 6.3*7.7   | 72   | 8*10.5    | 150 | 10*10.5   | 160  | 12.5*13.5 | 180 |
| 100  | 101               | 8*10.5    | 210  | 10*10.5   | 310 | 12.5*13.5 | 270  | 12.5*13.5 | 250 |
| 220  | 221               | 10*10.5   | 338  | 12.5*13.5 | 480 | 16*16.5   | 470  | 16*16.5   | 450 |
| 330  | 331               | 12.5*13.5 | 500  | 16*16.5   | 660 | 18*16.5   | 600  | 18*16.5   | 590 |
| 470  | 471               | 12.5*16   | 580  | 16*16.5   | 700 | 18*21.5   | 1000 | 18*21.5   | 980 |
| 1000 | 102               | 18*16.5   | 1000 |           |     |           |      |           |     |

Dimension: ΦDxL (mm)

Ripple Current: mA/rms at 120Hz, 105℃

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

|                |      |       |       |      |        |
|----------------|------|-------|-------|------|--------|
| Frequency 频率   | 50Hz | 120Hz | 300Hz | 1KHz | ≥10KHz |
| Coefficient 系数 | 0.70 | 1.00  | 1.17  | 1.36 | 1.50   |