

**CK** 宽温品 片式铝电解电容  
Chip Type Aluminum Electrolytic Capacitors



**产品特点 Features**

适用-55℃~+105℃温度范围, 寿命2,000小时; 性能稳定, 可靠性高; 产品直径: φ 4mm~ φ 16.5mm  
-55℃~+105℃ temperature range, life 2000 hours; stable performance, high reliability  
The diameter of the product: φ 4mm~ φ 12.5mm

**主要技术性能 Specifications**

| 项目 Items  | 特性 Characteristics   |             |      |   |      |      |      |      |      |      |
|---|--|-------------|------|---|------|------|------|------|------|------|
| 工作温度范围<br>Category Temperature Range                                    | -55℃~+105℃   |             |      |   |      |      |      |      |      |      |
| 额定电压范围<br>Rated Voltage Range   | 4~100V.DC  |             |      |   |      |      |      |      |      |      |
| 标称电容量范围<br>Nominal Capacitance Range                                    | 1μF ~ 2200 μF  |             |      |   |      |      |      |      |      |      |
| 标称电容量允许偏差<br>Nominal Capacitance Tolerance                              | ± 20%(120Hz,+20 °C)  |             |      |   |      |      |      |      |      |      |
| 泄漏电流范围<br>Leakage Current(MAX)  | I=0.01CV( μ A) or 3 ( μ A) after 2 minutes<br>I=Leakage Current( μ A) C=Nominal Capacitance( μ F) V=Roted Voltage(V)   |             |      |   |      |      |      |      |      |      |
| 损耗角正切值<br>Dissipation Factor(MAX)<br>Tan δ (20℃,120Hz)                  | Rated Voltage(V)   | 4           | 6.3  | 10  | 16   | 25   | 35   | 50   | 63   | 100  |
|   | Tan δ  | 0.35        | 0.30 | 0.24                                      | 0.20 | 0.18 | 0.16 | 0.14 | 0.14 | 0.14 |
| 耐久性 Load Life   | +105℃施加额定工作电压2000H后, 放置16H, 电容器应满足以下要求。<br>After applying rated voltage with max ripple current for 2000hrs at 105℃,and then resumed 16 hours, the capacitors shall meet the following requirements  |             |      |   |      |      |      |      |      |      |
|   | Capacitance Change   | ± 30%初始值以内  |      | Within ± 30% of the initial value         |      |      |      |      |      |      |
|   | Dissipation Factor   | ≤ 200%初始值以内 |      | Not more than 200% of the specified value |      |      |      |      |      |      |
|   | Leakage Current  | ≤ 初始规定值     |      | Not more than the specified value         |      |      |      |      |      |      |
| 高温贮存 Shelf Life   | +105℃, 贮存1000H后, 放置16H, 电容器应满足以下要求。<br>After storage for 1000hrs at 105℃, then resumed 16 hours, the capacitors shall meet the following requirements  |             |      |   |      |      |      |      |      |      |
|   | Capacitance Change   | ± 30%初始值以内  |      | Within ± 30% of the initial value         |      |      |      |      |      |      |
|   | Dissipation Factor   | ≤ 200%初始值以内 |      | Not more than 200% of the specified value |      |      |      |      |      |      |
|   | Leakage Current  | ≤ 300%初始值以内 |      | Within 300% of initial specified value    |      |      |      |      |      |      |
| 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。<br>The capacitors shall be kept on then hot plate maintained at 250℃ for 30 seconds.After removing from the hot plate and restored at room temperature, they meet the following requirement: |             |      |   |      |      |      |      |      |      |
|   | Capacitance Change   | ± 10%初始值以内  |      | Within ± 10% of the initial value         |      |      |      |      |      |      |
|   | Dissipation Factor   | ≤ 初始规定值     |      | Not more than the initial specified value |      |      |      |      |      |      |
|   | Leakage Current  | ≤ 初始规定值     |      | Not more than the initial specified value |      |      |      |      |      |      |
| 低温特性及阻抗比<br>Low Temperature Stability<br>Impedance Ratio (MAX)<br>120Hz | Roted Voltage (V)  | 4           | 6.3  | 10  | 16   | 25   | 35   | 50   | 63   | 100  |
|   | Z-25℃/Z+20℃ (120Hz)  | < Φ8        | 7    | 4   | 3    | 2    | 2    | 2    | 2    | 2    |
|   |  | ≥ Φ8        | 7    | 5   | 4    | 3    | 2    | 2    | 2    | 2    |
|   | Z-40℃/Z+20℃ (120Hz)  | < Φ8        | 15   | 8   | 8    | 4    | 4    | 3    | 3    | 3    |
|   |  | ≥ Φ8        | 15   | 10  | 8    | 6    | 4    | 3    | 3    | 3    |

■ 尺寸图 Dimensions

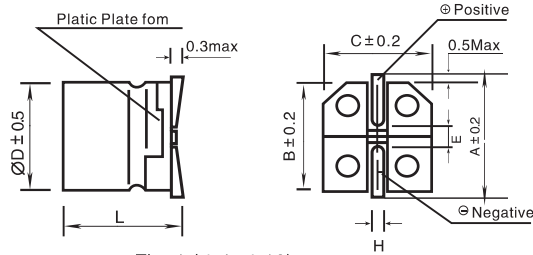


Fig. 1 (Φ4~Φ10)

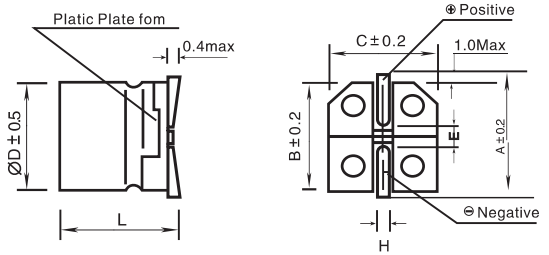


Fig. 2 (≥Φ16.5)

单位: mm

| ΦD   | L          | A    | B    | C    | E   | H       | Fig.No. |
|------|------------|------|------|------|-----|---------|---------|
| 4    | 5.4 ± 0.3  | 5.0  | 4.3  | 4.3  | 1.0 | 0.5~0.9 | 1       |
| 5    | 5.4 ± 0.3  | 6.0  | 5.3  | 5.3  | 1.5 | 0.5~0.9 | 1       |
| 6.3  | 5.4 ± 0.3  | 7.2  | 6.6  | 6.6  | 2.1 | 0.5~0.9 | 1       |
| 6.3  | 7.7 ± 0.3  | 7.2  | 6.6  | 6.6  | 2.1 | 0.5~0.9 | 1       |
| 8    | 6.5 ± 0.5  | 9.1  | 8.3  | 8.3  | 3.1 | 0.8~1.1 | 1       |
| 8    | 10.2 ± 0.5 | 9.1  | 8.3  | 8.3  | 3.1 | 0.8~1.1 | 1       |
| 10   | 10.2 ± 0.5 | 11.1 | 10.3 | 10.3 | 4.5 | 0.8~1.1 | 1       |
| 12.5 | 13.5 ± 0.5 | 13.7 | 13.0 | 13.0 | 4.4 | 1.0~1.4 | 2       |
| 16   | 16.5 ± 0.5 | 16.7 | 17   | 17   | 6.7 | 1.0~1.4 | 2       |

■ 标准品一览表 Standard Size

| V    | 6.3       |     | 10        |     | 16        |     | 25        |     | 35        |     | 50        |      | 63        |     | 100       |      |
|------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|------|-----------|-----|-----------|------|
| μF   | D×Lmm     | mA  | D×Lmm     | mA  | D×Lmm     | mA  | D×Lmm     | mA  | D×Lmm     | mA  | D×Lmm     | mA   | D×Lmm     | mA  | D×Lmm     | mA   |
| 1    |           |     |           |     |           |     |           |     |           |     | 4×5.4     | 8.0  | 4×5.4     | 7.2 | 4×5.4     | 7.2  |
| 2.2  |           |     |           |     |           |     |           |     |           |     | 4×5.4     | 12   | 4×5.4     | 12  | 6.3×5.4   | 15   |
| 3.3  |           |     |           |     |           |     |           |     | 4×5.4     | 14  | 4×5.4     | 14   | 5×5.4     | 14  | 6.3×5.4   |      |
| 4.7  |           |     |           |     |           |     | 4×5.4     | 14  | 4×5.4     | 15  | 4×5.4     | 14   | 5×5.4     | 17  | 6.3×5.4   | 23   |
|      |           |     |           |     |           |     |           |     |           |     | 5×5.4     | 17   | 6.3×5.4   | 22  | 6.3×7.7   | 38   |
| 10   |           |     |           |     | 4×5.4     |     | 4×5.4     | 15  | 4×5.4     | 15  | 5×5.4     | 23   | 6.3×5.4   | 41  |           |      |
|      |           |     |           |     |           |     | 5×5.4     | 21  | 5×5.4     | 22  | 6.3×5.4   | 25   | 6.3×7.7   | 26  | 6.3×7.7   | 38   |
| 22   | 4×5.4     | 22  | 4×5.4     | 21  | 4×5.4     | 21  | 5×5.4     | 26  | 5×5.4     | 30  |           |      | 6.3×7.7   | 53  | 8×10.2    | 90   |
|      |           |     | 5×5.4     | 26  | 5×5.4     | 28  | 6.3×5.4   | 37  | 6.3×5.4   | 40  | 6.3×5.4   | 43   | 8×6.5     | 80  |           |      |
| 33   | 4×5.4     | 23  | 4×5.4     | 23  |           |     | 5×5.4     | 30  | 6.3×5.4   | 45  |           |      |           |     |           |      |
|      | 5×5.4     | 28  | 5×5.4     | 34  | 5×5.4     | 29  | 6.3×5.4   | 45  | 8×6.5     | 86  | 6.3×7.7   | 63   | 8×10.2    | 116 | 10×10.2   | 136  |
| 47   | 4×5.4     | 26  | 4×5.4     | 27  | 5×5.4     | 33  | 5×5.4     | 30  |           |     | 6.3×5.4   | 54   | 6.3×7.7   | 66  | 8×10.2    | 125  |
|      |           |     |           |     |           |     | 6.3×5.4   | 49  | 6.3×5.4   | 54  |           |      |           |     | 10×10.2   | 148  |
|      | 5×5.4     | 34  | 5×5.4     | 31  | 6.3×5.4   | 48  | 8×6.5     | 93  | 6.3×7.7   | 75  | 8×10.2    | 120  | 10×10.2   | 168 |           |      |
| 100  | 5×5.4     | 40  | 5×5.4     | 40  | 6.3×5.4   | 63  | 6.3×5.4   | 49  | 6.3×5.4   | 45  |           |      |           |     |           |      |
|      | 6.3×5.4   | 52  | 6.3×5.4   | 55  | 6.3×7.7   | 72  | 6.3×7.7   | 93  | 8×10.2    | 125 | 8×10.2    | 146  | 10×10.2   | 200 | 2.5×13.5  | 276  |
| 150  | 6.3×5.4   | 70  | 6.3×5.4   | 78  | 6.3×7.7   | 116 | 8×10.2    | 210 | 8×10.2    | 210 | 8×10.2    | 238  | 12.5×13.5 | 330 |           |      |
|      | 6.3×5.4   | 69  | 6.3×5.4   | 78  | 6.3×7.7   | 110 | 6.3×7.7   | 93  | 8×10.2    | 195 |           |      |           |     |           |      |
| 220  | 6.3×7.7   | 108 | 6.3×7.7   | 110 |           |     | 8×6.5     | 110 | 8×10.2    | 183 | 10×10.2   | 230  | 10×10.2   | 230 | 12.5×13.5 | 380  |
|      |           |     | 8×6.5     | 110 |           |     |           |     |           |     |           |      |           |     |           |      |
| 330  | 6.3×7.7   | 108 | 6.3×7.7   | 134 |           |     | 8×10.2    | 201 | 8×10.2    | 228 | 10×10.2   | 247  | 10×10.2   | 230 |           |      |
|      |           |     | 8×10.2    | 108 |           |     |           |     |           |     |           |      | 12.5×13.5 | 360 | 16×21.5   | 9000 |
| 470  | 6.3×7.7   | 125 | 6.3×7.7   | 160 | 8×10.2    | 240 | 8×10.2    | 228 |           |     |           |      |           |     |           |      |
|      | 8×10.2    | 214 | 8×10.2    | 214 | 10×10.2   | 300 | 10×10.2   | 286 | 10×10.2   | 286 | 12.5×13.5 | 360  | 16×16.5   | 750 |           |      |
| 680  | 8×10.2    | 214 | 10×10.2   | 277 | 10×10.2   | 322 | 10×13.5   | 400 | 10×13.5   | 400 |           |      |           |     |           |      |
|      |           |     |           |     |           |     | 12.5×13.5 | 440 | 12.5×13.5 | 440 |           |      |           |     |           |      |
| 1000 | 8×10.2    | 235 | 8×10.2    | 230 |           |     |           |     |           |     |           |      |           |     |           |      |
|      | 10×10.2   | 310 | 10×10.2   | 320 | 10×10.2   | 347 | 12.5×13.5 | 500 |           |     | 16×16.5   | 1050 |           |     |           |      |
| 1500 | 10×10.2   | 320 | 10×12.5   | 480 | 12.5×13.5 | 540 |           |     |           |     |           |      |           |     |           |      |
|      |           |     | 12.5×13.5 | 540 |           |     |           |     |           |     |           |      |           |     |           |      |
| 2200 | 12.5×13.5 | 600 | 12.5×13.5 | 600 |           |     |           |     |           |     |           |      |           |     |           |      |

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

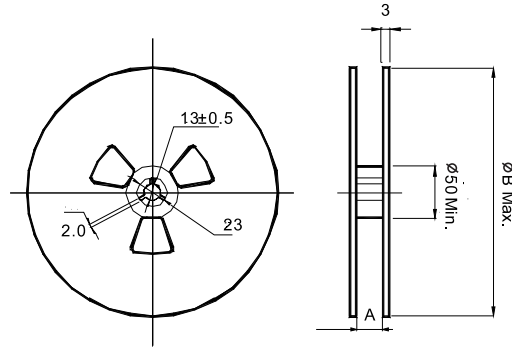
■ 纹波电流修正系数/频率系数 Multiplier For Ripple Current / Frequency coefficient

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

注: 以上所提供的设计及特性参数仅供参考, 任何修改不做预先通知, 如在使用上有疑问, 请在采购前与我们联系, 以便提供技术上的协助。  
 Note: all designs and specifications are for reference only and are subject to change without prior notice, if any doubt about safety for your application, please contact us immediately for technical assistance before purchase.



卷筒 Taping Reel And Packing Quantity



| 规格<br>Specification | 卷装数量<br>Quantity/Reel | 盒装数量<br>Quantity/Bag | A ± 0.3<br>(MM) | B ± 2<br>(MM) |
|---------------------|-----------------------|----------------------|-----------------|---------------|
| Φ4*5.4              | 2000 pcs              | 20000 pcs            | 14              | 382           |
| Φ5*5.4              | 1000 pcs              | 10000 pcs            | 14              | 382           |
| Φ6.3*5.4            | 1000 pcs              | 10000 pcs            | 18              | 382           |
| Φ6.3*7.7            | 1000 pcs              | 10000 pcs            | 18              | 382           |
| Φ6.3*10.2           | 700 pcs               | 7000 pcs             | 18              | 382           |
| Φ8*6.5              | 1000 pcs              | 10000 pcs            | 18              | 382           |
| Φ8*10.2             | 500 pcs               | 5000 pcs             | 26              | 382           |
| Φ8*12.5             | 400 pcs               | 4000 pcs             | 26              | 382           |
| Φ10*10.2            | 500 pcs               | 5000 pcs             | 26              | 382           |
| Φ10*12.5            | 400 pcs               | 4000 pcs             | 26              | 382           |
| Φ10*13.5            | 300 pcs               | 3000 pcs             | 26              | 382           |
| Φ12.5*13.5          | 200 pcs               | 1600 pcs             | 34              | 382           |
| Φ12.5*16            | 200 pcs               | 1600 pcs             | 34              | 382           |
| Φ16*16.5            | 125 pcs               | 250 pcs              | 46              | 332           |
| Φ16*21.5            | 75 pcs                | 150 pcs              | 46              | 332           |
| Φ18*16.5            | 125 pcs               | 250 pcs              | 46              | 332           |
| Φ18*21.5            | 75 pcs                | 150 pcs              | 46              | 332           |
| Φ20*16.5            | 100 pcs               | 200 pcs              | 46              | 332           |
| Φ20*21.5            | 50 pcs                | 100 pcs              | 46              | 332           |

焊接方法和再流焊允许范围 Soldering method and allowable range of the reflow

| 焊接方式<br>Soldering Method      | 再流焊的允许范围<br>Allowable Range of Reflow   |
|-------------------------------|---|
| 热板再流焊<br>Hot-Plate Reflow     | <p>电容器端面上峰值温度<br/>Peak temp.at capacitor Terminal(°C)</p> <p>再流焊时间(秒)<br/>Reflow time(second)</p> |
| 红外线再流焊<br>Infrared-Ray Reflow | <p>电容器端面上峰值温度<br/>Peak temp.at capacitor Terminal(°C)</p> <p>再流焊时间(秒)<br/>Reflow time(second)</p> |

