

# RVT-VT

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



表面安装



小型薄形品



宽温度品



耐清洗品

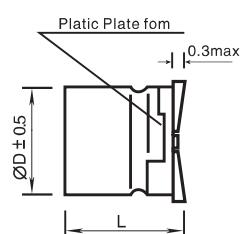
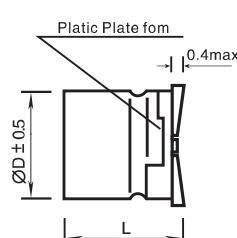
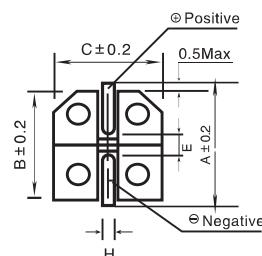
**产品特点 Features**

适用 $-55^{\circ}\text{C} \sim +105^{\circ}\text{C}$ 温度范围，寿命2,000小时；性能稳定，可靠性高；产品直径： $\phi 4\text{mm} \sim \phi 16.5\text{mm}$   
 $-55^{\circ}\text{C} \sim +105^{\circ}\text{C}$  temperature range, life 2000 hours; stable performance, high reliability  
The diameter of the product:  $\phi 4\text{mm} \sim \phi 12.5\text{mm}$

**■ 主要技术性能 Specifications**

| 项目 Items  | 特性 Characteristics  |  |      |      |      |      |      |      |      |      |
|---|---|--|------|------|------|------|------|------|------|------|
| 工作温度范围<br>Category Temperature Range  | $-55^{\circ}\text{C} \sim +105^{\circ}\text{C}$   |  |      |      |      |      |      |      |      |      |
| 额定电压范围<br>Rated Voltage Range   | $4 \sim 100\text{V.DC}$   |  |      |      |      |      |      |      |      |      |
| 标称电容量范围<br>NominalCapacitance Range   | $1\mu\text{F} \sim 2200\mu\text{F}$   |  |      |      |      |      |      |      |      |      |
| 标称电容量允许偏差<br>NominalCapacitance Tolerance   | $\pm 20\%(120\text{Hz}, +20^{\circ}\text{C})$   |  |      |      |      |      |      |      |      |      |
| 泄漏电流范围<br>Leakage Current(MAX)  | $I=0.01CV(\mu\text{A}) \text{ or } 3(\mu\text{A}) \text{ after } 2 \text{ minutes}$<br>$I=\text{Leakage Current}(\mu\text{A}) \quad C=\text{Nominal Capacitance}(\mu\text{F}) \quad V=\text{Rated Voltage(V)}$  |  |      |      |      |      |      |      |      |      |
| 损耗角正切值<br>Dissipation Factor(MAX)<br>$\tan\delta(20^{\circ}\text{C}, 120\text{Hz})$ | 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   | $+105^{\circ}\text{C}$ 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 $105^{\circ}\text{C}$ , and then resumed 16 hours, the capacitors shall meet the following requirements  |  |      |      |      |      |      |      |      |      |
|   | Capacitance Change  | $\pm 30\%$ 初始值以内 Within $\pm 30\%$ of the initial value      |      |      |      |      |      |      |      |      |
|   | Dissipation Factor  | $\leq 200\%$ 初始值以内 Not more than 200% of the specified value |      |      |      |      |      |      |      |      |
|   | Leakage Current   | $\leq$ 初始规定值 Not more than the specified value               |      |      |      |      |      |      |      |      |
| 高温贮存 Shelf Life   | $+105^{\circ}\text{C}$ , 贮存1000H后, 放置16H, 电容器应满足以下要求。<br>After storage for 1000hrs at $105^{\circ}\text{C}$ , then resumed 16 hours, the capacitors shall meet the following requirements   |  |      |      |      |      |      |      |      |      |
|   | Capacitance Change  | $\pm 30\%$ 初始值以内 Within $\pm 30\%$ of the initial value      |      |      |      |      |      |      |      |      |
|   | Dissipation Factor  | $\leq 200\%$ 初始值以内 Not more than 200% of the specified value |      |      |      |      |      |      |      |      |
|   | Leakage Current   | $\leq 300\%$ 初始值以内 Within 300% of initial specified value    |      |      |      |      |      |      |      |      |
| 耐焊接热<br>Resistance to Soldering Heat  | 在 $250^{\circ}\text{C}$ 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 then hot plate maintained at $250^{\circ}\text{C}$ for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement: |  |      |      |      |      |      |      |      |      |
|   | Capacitance Change  | $\pm 10\%$ 初始值以内 Within $\pm 10\%$ of the initial value      |      |      |      |      |      |      |      |      |
|   | Dissipation Factor  | $\leq$ 初始规定值 Not more than the initial specified value       |      |      |      |      |      |      |      |      |
|   | Leakage Current   | $\leq$ 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             | Rated Voltage (V)   | 4  | 6.3  | 10   | 16   | 25   | 35   | 50   | 63   | 100  |
|   | Z- $25^{\circ}\text{C}/Z+20^{\circ}\text{C}$<br>(120Hz)   | < $\Phi 8$   | 7    | 4    | 3    | 2    | 2    | 2    | 2    | 2    |
|   |   | $\geq \Phi 8$  | 7    | 5    | 4    | 3    | 2    | 2    | 2    | 2    |
|   | Z- $40^{\circ}\text{C}/Z+20^{\circ}\text{C}$<br>(120Hz)   | < $\Phi 8$   | 15   | 8    | 8    | 4    | 4    | 3    | 3    | 3    |
|   |   | $\geq \Phi 8$  | 15   | 10   | 8    | 6    | 4    | 3    | 3    | 3    |

## ■ 尺寸图 Dimensions

Fig. 1 ( $\Phi 4\sim\Phi 10$ )Fig. 2 ( $\geq \Phi 16.5$ )

单位: mm

| $\Phi D$ | L              | A    | B    | C    | E   | H       | Fig.No. |
|----------|----------------|------|------|------|-----|---------|---------|
| 4        | $5.4 \pm 0.3$  | 5.0  | 4.3  | 4.3  | 1.0 | 0.5~0.9 | 1       |
| 5        | $5.4 \pm 0.3$  | 6.0  | 5.3  | 5.3  | 1.5 | 0.5~0.9 | 1       |
| 6.3      | $5.4 \pm 0.3$  | 7.2  | 6.6  | 6.6  | 2.1 | 0.5~0.9 | 1       |
| 6.3      | $7.7 \pm 0.3$  | 7.2  | 6.6  | 6.6  | 2.1 | 0.5~0.9 | 1       |
| 8        | $6.5 \pm 0.5$  | 9.1  | 8.3  | 8.3  | 3.1 | 0.8~1.1 | 1       |
| 8        | $10.2 \pm 0.5$ | 9.1  | 8.3  | 8.3  | 3.1 | 0.8~1.1 | 1       |
| 10       | $10.2 \pm 0.5$ | 11.1 | 10.3 | 10.3 | 4.5 | 0.8~1.1 | 1       |
| 12.5     | $13.5 \pm 0.5$ | 13.7 | 13.0 | 13.0 | 4.4 | 1.0~1.4 | 2       |
| 16       | $16.5 \pm 0.5$ | 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     |         |    |
|---------|-------|----|-------|-------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----|
| $\mu F$ | D×Lmm | mA | D×Lmm | mA    | D×Lmm   | mA    | D×Lmm   | mA      | D×Lmm   | mA      | D×Lmm   | mA      | D×Lmm   | mA      | D×Lmm   | mA      |    |
| 0.1     |       |    |       |       |         |       |         |         |         |         | 4×5.4   | 0.7     |         |         |         |         |    |
| 0.22    |       |    |       |       |         |       |         |         |         |         | 4×5.4   | 1.6     |         |         |         |         |    |
| 0.33    |       |    |       |       |         |       |         |         |         |         | 4×5.4   | 2.5     |         |         |         |         |    |
| 0.47    |       |    |       |       |         |       |         |         |         |         | 4×5.4   | 3.5     |         |         |         |         |    |
| 0.68    |       |    |       |       |         |       |         |         |         |         | 4×5.4   | 5       |         |         |         |         |    |
| 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      | 6.3×5.4 | 43      | 6.3×7.7 | 53      |         |         |    |
|         |       |    |       | 5×5.4 | 26      | 5×5.4 | 28      | 6.3×5.4 | 37      | 6.3×5.4 | 40      |         | 8×6.5   | 80      | 8×10.2  | 90      |    |
| 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     |         |         |    |
|         | 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     | 10×10.2 | 148     |    |

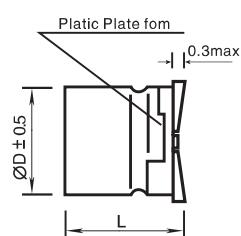
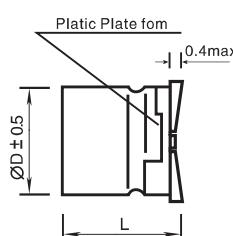
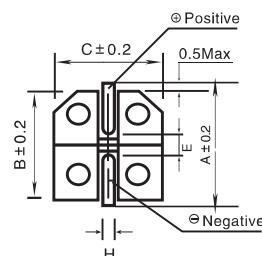
mA额定纹波电流 Rated ripple current(mA, 105°C, 120Hz)

## ■ 纹波电流补正系数 / 频率系数 Multiplier For Ripple Current / Frequency coefficient

| 频率 Frequency   | 50Hz | 120Hz | 300Hz | 1kHz | $\geq 10\text{kHz}$ |
|----------------|------|-------|-------|------|---------------------|
| 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络，以便提供技术上的协助。  
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## ■ 尺寸图 Dimensions

Fig. 1 ( $\Phi 4 \sim \Phi 10$ )Fig. 2 ( $\geq \Phi 16.5$ )

单位: mm

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

## ■ 标准品一览表 Standard Size

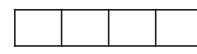
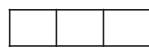
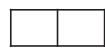
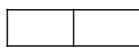
| V<br>$\mu F$ | 6.3       |     | 10        |     | 16        |     | 25        |     | 35        |     | 50        |     | 63        |     | 100       |      |
|--------------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|------|
|              | D×Lmm     | mA   |
| 100          | 5×5.4     | 40  | 5×5.4     | 40  | 6.3×5.4   | 63  | 6.3×5.4   | 49  | 6.3×5.4   | 45  | 8×10.2    | 146 | 10×10.2   | 200 | 12.5×13.5 | 276  |
|              | 6.3×5.4   | 52  | 6.3×5.4   | 55  | 6.3×7.7   | 72  | 6.3×7.7   | 93  | 6.3×7.7   | 87  | 8×10.2    | 125 |           |     |           |      |
| 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 |           |      |
| 220          | 6.3×5.4   | 69  | 6.3×5.4   | 78  | 6.3×7.7   | 110 | 6.3×7.7   | 93  | 8×10.2    | 195 | 10×10.2   | 230 | 12.5×13.5 | 380 |           |      |
|              | 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 |           |     |           |      |
| 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 | 12.5×13.5 | 360 | 16×21.5   | 9000 |
|              |           |     | 8×10.2    | 108 |           |     |           |     |           |     |           |     |           |     |           |      |
| 470          | 6.3×7.7   | 125 | 6.3×7.7   | 160 | 8×10.2    | 240 | 8×10.2    | 228 | 10×10.2   | 286 | 12.5×13.5 | 360 | 16×16.5   | 750 |           |      |
|              | 8×10.2    | 214 | 8×10.2    | 214 | 10×10.2   | 300 | 10×10.2   | 286 |           |     |           |     |           |     |           |      |
| 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 | 12.5×13.5 | 440 |           |     |           |     |           |      |
| 1000         | 8×10.2    | 235 | 8×10.2    | 230 | 10×10.2   | 347 | 12.5×13.5 | 500 | 16×16.5   | 750 |           |     |           |     |           |      |
|              | 10×10.2   | 310 | 10×10.2   | 320 |           |     |           |     |           |     |           |     |           |     |           |      |
| 1500         | 10×10.2   | 320 | 10×12.5   | 480 | 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)

## ■ 纹波电流补正系数 / 频率系数 Multiplier For Ripple Current / Frequency coefficient

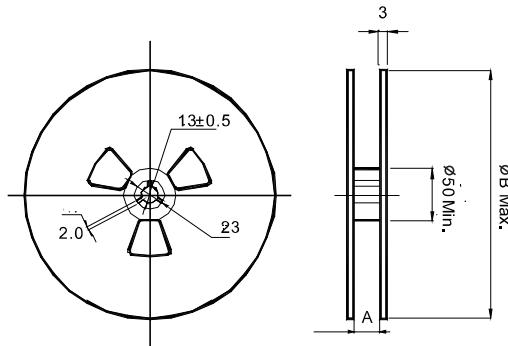
| 频率 Frequency   | 50Hz | 120Hz | 300Hz | 1kHz | $\geq 10\text{kHz}$ |
|----------------|------|-------|-------|------|---------------------|
| 系数 Coefficient | 0.70 | 1.00  | 1.17  | 1.36 | 1.50                |

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**产品编码解析 Explanation of Part Number**

**Series**
**Rated Voltage**
**Capacitance**
**Tol.**
**Case Size**

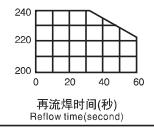
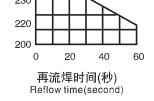
| Series | R.W<br>Voltage<br>(V) | Code | Capacitance<br>( $\mu$ F) | Code | Cap.Tol   | Code | Case Size | Code |
|--------|-----------------------|------|---------------------------|------|-----------|------|-----------|------|
| VT     | 4                     | 0G   | 0.1                       | 0R1  | $\pm 5$   | J    | 4*5.4     | 0405 |
| RVT    | 6.3                   | 0J   | 0.22                      | R22  | $\pm 10$  | K    | 5*5.4     | 0505 |
| RVE    | 10                    | 1A   | 0.33                      | R33  | $\pm 15$  | L    | 6.3*5.4   | 0605 |
| US     | 16                    | 1C   | 0.47                      | R47  | $\pm 20$  | M    | 6.3*7.7   | 0607 |
| UZ     | 25                    | 1E   | 1                         | 1R0  | $\pm 30$  | N    | 6.3*10.2  | 0610 |
| UN     | 35                    | 1V   | 1.5                       | 1R5  | + 20 - 10 | V    | 8*6.5     | 0806 |
| UH     | 50                    | 1H   | 2.2                       | 2R2  | + 20 - 5  | H    | 8*10.2    | 0810 |
| UL     | 63                    | 1J   | 3.3                       | 3R3  | + 10 - 20 | C    | 8*12.5    | 0812 |
| UV     | 80                    | 1K   | 4.7                       | 4R7  | + 100 - 0 | P    | 10*10.2   | 1010 |
| UD     | 100                   | 2A   | 5.6                       | 5R6  | + 30 - 10 | Q    | 10*12.5   | 1012 |
| UW     | 160                   | 2C   | 6.8                       | 6R8  | + 20 - 0  | R    | 10*13.5   | 1013 |
| SF     | 200                   | 2D   | 8.2                       | 8R2  | + 50 - 10 | T    | 12.5*13.5 | 1213 |
| SH     | 250                   | 2E   | 10                        | 100  | + 75 - 10 | U    | 12.5*16   | 1216 |
| SL     | 350                   | 2V   | 12                        | 120  | + 40 - 20 | X    | 16*16.5   | 1616 |
| SR     | 400                   | 2G   | 15                        | 150  | + 50 - 20 | S    | 16*21.5   | 1621 |
| SS     | 450                   | 2W   | 22                        | 220  | + 80 - 20 | Z    | 18*16.5   | 1816 |
| ST     | 500                   | 2H   | 33                        | 330  |           |      | 18*21.5   | 1821 |
| SU     |                       |      | 47                        | 470  |           |      | 20*16.5   | 2016 |
| HS     |                       |      | 56                        | 560  |           |      | 20*21.5   | 2021 |
|        |                       |      | 68                        | 680  |           |      |           |      |
|        |                       |      | 100                       | 101  |           |      |           |      |
|        |                       |      | 220                       | 221  |           |      |           |      |
|        |                       |      | 330                       | 331  |           |      |           |      |
|        |                       |      | 470                       | 471  |           |      |           |      |
|        |                       |      | 560                       | 561  |           |      |           |      |
|        |                       |      | 680                       | 681  |           |      |           |      |
|        |                       |      | 820                       | 821  |           |      |           |      |
|        |                       |      | 1000                      | 102  |           |      |           |      |
|        |                       |      | 1500                      | 152  |           |      |           |      |
|        |                       |      | 2200                      | 222  |           |      |           |      |
|        |                       |      | 3300                      | 332  |           |      |           |      |
|        |                       |      | 4700                      | 472  |           |      |           |      |
|        |                       |      | 6800                      | 682  |           |      |           |      |

## 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) |
|---------------------|-----------------------|----------------------|-----------------|---------------|
| Φ 4*5.4             | 2000 pcs              | 20000 pcs            | 14              | 382           |
| Φ 5*5.4             | 1000 pcs              | 10000 pcs            | 14              | 382           |
| Φ 6.3*5.4           | 1000 pcs              | 10000 pcs            | 18              | 382           |
| Φ 6.3*7.7           | 1000 pcs              | 10000 pcs            | 18              | 382           |
| Φ 6.3*10.2          | 700 pcs               | 7000 pcs             | 18              | 382           |
| Φ 8*6.5             | 1000 pcs              | 10000 pcs            | 18              | 382           |
| Φ 8*10.2            | 500 pcs               | 5000 pcs             | 26              | 382           |
| Φ 8*12.5            | 400 pcs               | 4000 pcs             | 26              | 382           |
| Φ 10*10.2           | 500 pcs               | 5000 pcs             | 26              | 382           |
| Φ 10*12.5           | 400 pcs               | 4000 pcs             | 26              | 382           |
| Φ 10*13.5           | 300 pcs               | 3000 pcs             | 26              | 382           |
| Φ 12.5*13.5         | 200 pcs               | 1600 pcs             | 34              | 382           |
| Φ 12.5*16           | 200 pcs               | 1600 pcs             | 34              | 382           |
| Φ 16*16.5           | 125 pcs               | 250 pcs              | 46              | 332           |
| Φ 16*21.5           | 75 pcs                | 150 pcs              | 46              | 332           |
| Φ 18*16.5           | 125 pcs               | 250 pcs              | 46              | 332           |
| Φ 18*21.5           | 75 pcs                | 150 pcs              | 46              | 332           |
| Φ 20*16.5           | 100 pcs               | 200 pcs              | 46              | 332           |
| Φ 20*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     | 电容器端面上容许温度<br>Peak Temp at capacitor terminal (C)<br> |
| 红外线再流焊<br>Infrared-Ray Reflow | 电容器端面上容许温度<br>Peak Temp at capacitor terminal (C)<br> |

