

# RT 系列 Series

## 特点 Features

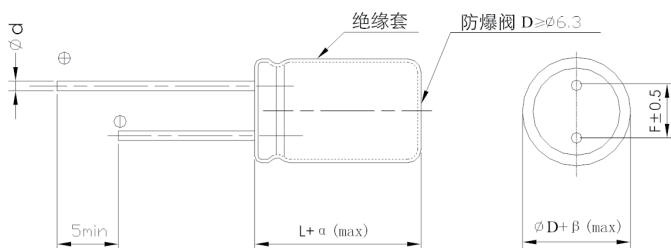
- 耐高纹波电流，高频超低阻抗。  
High ripple current, Extremely Low impedance at high frequency.
- 105°C, 4000~10000小时寿命。  
High reliability withstanding 10000 hours load life at 105°C  
(4000~10000 hours for smaller case size as specified bellow)
- 符合RoHS指令。  
Complied to the RoHS directive.



## 主要技术性能 Specifications

| 项目 Items   | 特性 Performance Characteristics   |             |              |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
|--|--|-------------|--------------|--------|--------|-----------|-----------------|-------------|-------------|-----------|-------------|-----------------|--------------|------|------|------|------|------|------|
| 使用温度范围<br>Operating Temperature Range                          | -40~+105°C   |             |              |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 额定电压范围<br>Rated Voltage Range                                  | 6.3~100V   |             |              |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 标称容量范围<br>Nominal Capacitance Range                            | 0.47~15000μF   |             |              |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 标称容量允许偏差<br>Capacitance Tolerance                              | ± 20% (120Hz, +20°C)   |             |              |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 漏电流<br>Leakage Current   | $I \leq 0.01CV$ (μA) or 3μA, 取较大值 2分钟(at 20°C, after 2 minutes, whichever is greater)  |             |              |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 损耗角正切值 (tgδ)<br>Dissipation Factor (+20°C, 120Hz)              | <table border="1"> <tr> <td><math>U_r</math> (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>tgδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> </tr> </table> <p>容量大于1000μF者，每增加1000μF，其损耗角正切值增加0.02<br/>When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.</p>   | $U_r$ (V)   | 6.3          | 10     | 16     | 25        | 35              | 50          | 63          | 100       | tgδ         | 0.22            | 0.19         | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 |
| $U_r$ (V)  | 6.3  | 10          | 16           | 25     | 35     | 50        | 63              | 100         |             |           |             |                 |              |      |      |      |      |      |      |
| tgδ  | 0.22   | 0.19        | 0.16         | 0.14   | 0.12   | 0.10      | 0.09            | 0.08        |             |           |             |                 |              |      |      |      |      |      |      |
| 温度特性 Temperature Characteristics<br>(Impedance ratio at 120Hz) | <table border="1"> <tr> <td><math>U_r</math> (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25~100</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> </tr> </table>  | $U_r$ (V)   | 6.3          | 10     | 16     | 25~100    | Z-25°C / Z+20°C | 4           | 3           | 2         | 2           | Z-40°C / Z+20°C | 8            | 6    | 4    | 3    |      |      |      |
| $U_r$ (V)  | 6.3  | 10          | 16           | 25~100 |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| Z-25°C / Z+20°C  | 4  | 3           | 2            | 2      |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| Z-40°C / Z+20°C  | 8  | 6           | 4            | 3      |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 耐久性<br>Load Life   | <table border="1"> <tr> <td>ΦD</td> <td>Φ5, 6.3</td> <td>Φ8, 10</td> <td>≥Φ12.5</td> </tr> <tr> <td>6.3~10(V)</td> <td>4,000 hours</td> <td>6,000 hours</td> <td>8,000 hours</td> </tr> <tr> <td>16~100(V)</td> <td>5,000 hours</td> <td>7,000 hours</td> <td>10,000 hours</td> </tr> </table> <p>+105°C加额定电压，恢复16小时后：<br/>After applying rated voltage at +105°C and then resumed for 16 hours:<br/>容量变化率 Capacitance change : ±25%初始测量值以内 ±25% of the initial measured value<br/>漏电流 Leakage current : ≤初始规定值 ≤The initial specified value<br/>损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value</p> | ΦD          | Φ5, 6.3      | Φ8, 10 | ≥Φ12.5 | 6.3~10(V) | 4,000 hours     | 6,000 hours | 8,000 hours | 16~100(V) | 5,000 hours | 7,000 hours     | 10,000 hours |      |      |      |      |      |      |
| ΦD   | Φ5, 6.3  | Φ8, 10      | ≥Φ12.5       |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 6.3~10(V)  | 4,000 hours  | 6,000 hours | 8,000 hours  |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 16~100(V)  | 5,000 hours  | 7,000 hours | 10,000 hours |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |
| 高温贮存<br>Shelf Life   | <p>+105°C, 1000小时贮存后，恢复16小时后：<br/>After storage for 1000 hours at +105°C and then resumed for 16 hours:<br/>容量变化率 Capacitance change : ±25%初始测量值以内 ±25% of the initial measured value<br/>漏电流 Leakage current : ≤2倍初始规定值 ≤2times of the initial specified value<br/>损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value</p>  |             |              |        |        |           |                 |             |             |           |             |                 |              |      |      |      |      |      |      |

## 外形图及尺寸表 Case Size Table



单位 Unit: mm

|   |     |     |          |     |      |     |     |
|---|-----|-----|----------|-----|------|-----|-----|
| D | 5   | 6.3 | 8        | 10  | 12.5 | 16  | 18  |
| F | 2.0 | 2.5 | 3.5      | 5.0 | 5.0  | 7.5 | 7.5 |
| d | 0.5 |     | 0.5, 0.6 | 0.6 |      | 0.8 | 0.8 |

|      |                |      |                |
|------|----------------|------|----------------|
| αMAX | ε L < 20 > 1.5 | βMAX | ε D < 20 > 0.5 |
|      | ε L ≥ 20 > 2.0 |      | ε D ≥ 20 > 1.0 |

## 频率修正系数 Frequency Coefficient

| Freq.(Hz)  | 120  | 1K   | 10K  | 100K |
|------------|------|------|------|------|
| CAP(μF)    |      |      |      |      |
| ~180       | 0.40 | 0.75 | 0.90 | 1.00 |
| 220~560    | 0.50 | 0.85 | 0.94 | 1.00 |
| 680~1800   | 0.60 | 0.87 | 0.95 | 1.00 |
| 2200~3900  | 0.75 | 0.90 | 0.95 | 1.00 |
| 4700~15000 | 0.85 | 0.95 | 0.98 | 1.00 |

目录中记载的内容可能未经提示而变更。贵司在购买时请要求提供承诺书，并以此为准使用。

The contents recorded in the catalogue might be changed without any reminder. Please ask for providing the datasheet and take it as standard when purchasing.



## 尺寸 Dimensions

| CAP(μF) \ WV |     | 6.3V(0J) |       |        | 10V(1A) |       |        | 16V(1C) |       |        | 25V(1E) |       |        |
|--------------|-----|----------|-------|--------|---------|-------|--------|---------|-------|--------|---------|-------|--------|
|              |     | Size     | ESR   | Ripple | Size    | ESR   | Ripple | Size    | ESR   | Ripple | Size    | ESR   | Ripple |
| 10           | 100 |          |       |        |         |       |        |         |       |        | 5×11    | 1.20  | 120    |
| 22           | 220 |          |       |        |         |       |        |         |       |        | 5×11    | 1.00  | 130    |
| 33           | 330 |          |       |        |         |       |        |         |       |        | 5×11    | 0.90  | 150    |
| 47           | 470 |          |       |        |         |       |        | 5×11    | 0.58  | 210    | 5×11    | 0.58  | 210    |
| 100          | 101 | 5×11     | 0.58  | 210    | 5×11    | 0.58  | 210    | 6.3×11  | 0.22  | 340    | 6.3×11  | 0.22  | 350    |
| 220          | 221 | 6.3×11   | 0.26  | 290    | 6.3×11  | 0.32  | 340    | 8×11.5  | 0.13  | 510    | 8×11.5  | 0.15  | 640    |
| 330          | 331 | 6.3×11   | 0.21  | 340    | 6.3×11  | 0.20  | 380    | 8×11.5  | 0.10  | 640    | 8×16    | 0.087 | 840    |
| 470          | 471 | 8×11.5   | 0.14  | 400    | 8×11.5  | 0.20  | 640    | 8×16    | 0.087 | 840    | 8×20    | 0.069 | 1050   |
|              |     |          |       |        |         |       |        | 10×12.5 | 0.080 | 865    | 10×16   | 0.060 | 1210   |
| 680          | 681 | 8×11.5   | 0.13  | 640    | 8×16    | 0.085 | 840    | 8×20    | 0.060 | 1050   | 10×20   | 0.046 | 1400   |
|              |     |          |       |        |         |       |        | 10×16   | 0.046 | 1150   |         |       |        |
| 820          | 821 | 8×11.5   | 0.10  | 720    |         |       |        |         |       |        |         |       |        |
| 1000         | 102 | 8×16     | 0.08  | 850    | 8×20    | 0.069 | 1050   | 10×20   | 0.046 | 1400   | 12.5×20 | 0.035 | 1900   |
|              |     | 10×12.5  | 0.08  | 870    | 10×16   | 0.060 | 1210   |         |       |        |         |       |        |
| 1200         | 122 | 8×20     | 0.069 | 1050   |         |       |        |         |       |        |         |       |        |
|              |     | 10×16    | 0.064 | 1200   |         |       |        |         |       |        |         |       |        |
| 1500         | 152 | 10×20    | 0.050 | 1380   | 10×25   | 0.042 | 1650   | 12.5×20 | 0.035 | 1900   | 12.5×25 | 0.027 | 2230   |
| 2200         | 222 | 10×25    | 0.042 | 1650   | 12.5×20 | 0.035 | 1900   | 12.5×25 | 0.027 | 2230   | 16×25   | 0.025 | 2780   |
| 3300         | 332 | 12.5×20  | 0.035 | 1900   | 12.5×25 | 0.030 | 2125   | 16×25   | 0.025 | 2420   | 16×30   | 0.020 | 2920   |
| 4700         | 472 | 12.5×25  | 0.030 | 2200   | 16×25   | 0.025 | 2400   | 16×30   | 0.020 | 2920   | 18×35   | 0.018 | 3520   |
| 6800         | 682 | 16×25    | 0.025 | 2400   | 16×30   | 0.020 | 2920   | 18×35   | 0.018 | 3520   |         |       |        |
| 10000        | 103 | 16×30    | 0.020 | 2920   | 18×35   | 0.018 | 3520   |         |       |        |         |       |        |
| 15000        | 153 | 16×30    | 0.020 | 2920   |         |       |        |         |       |        |         |       |        |

| CAP(μF) \ WV |     | 35V(1V) |       |        | 50V(1H) |       |        | 63V(1J) |       |        | 100V(2A) |       |        |
|--------------|-----|---------|-------|--------|---------|-------|--------|---------|-------|--------|----------|-------|--------|
|              |     | Size    | ESR   | Ripple | Size    | ESR   | Ripple | Size    | ESR   | Ripple | Size     | ESR   | Ripple |
| 0.47         | R47 |         |       |        | 5×11    | 5.50  | 20     |         |       |        | 5×11     | 6.00  | 15     |
| 1            | 010 |         |       |        | 5×11    | 3.00  | 45     |         |       |        | 5×11     | 4.50  | 20     |
| 2.2          | 2R2 |         |       |        | 5×11    | 2.50  | 60     |         |       |        | 5×11     | 3.00  | 30     |
| 3.3          | 3R3 |         |       |        | 5×11    | 2.20  | 65     |         |       |        | 5×11     | 2.70  | 40     |
| 4.7          | 4R7 | 5×11    | 1.50  | 40     | 5×11    | 1.90  | 100    |         |       |        | 5×11     | 2.50  | 65     |
| 6.8          | 6R8 |         |       |        |         |       |        |         |       |        | 5×11     | 1.80  | 105    |
| 10           | 100 |         |       |        | 5×11    | 1.50  | 130    | 5×11    | 1.50  | 105    | 6.3×11   | 1.20  | 140    |
| 15           | 150 |         |       |        |         |       |        |         |       |        | 6.3×11   | 1.00  | 140    |
| 22           | 220 |         |       |        | 5×11    | 0.70  | 200    | 6.3×11  | 0.96  | 200    | 8×11.5   | 0.70  | 210    |
| 33           | 330 | 5×11    | 0.58  | 210    | 6.3×11  | 0.60  | 280    | 6.3×11  | 0.96  | 200    | 10×12.5  | 0.50  | 240    |
| 47           | 470 | 6.3×11  | 0.22  | 340    | 6.3×11  | 0.38  | 290    | 8×11.5  | 0.40  | 360    | 10×12.5  | 0.34  | 400    |
| 68           | 680 |         |       |        |         |       |        | 8×11.5  | 0.30  | 420    | 10×16    | 0.30  | 460    |
| 100          | 101 | 8×11.5  | 0.16  | 460    | 8×11.5  | 0.16  | 600    | 10×12.5 | 0.10  | 685    | 10×25    | 0.16  | 800    |
|              |     |         |       |        |         |       |        |         |       |        | 12.5×20  | 0.18  | 820    |
| 220          | 221 | 8×16    | 0.087 | 900    | 10×16   | 0.084 | 1050   | 10×25   | 0.08  | 1100   | 16×20    | 0.073 | 1100   |
|              |     | 10×12.5 | 0.080 | 910    |         |       |        |         |       |        |          |       |        |
| 270          | 271 | 8×20    | 0.069 | 1000   |         |       |        |         |       |        |          |       |        |
| 330          | 331 | 10×16   | 0.060 | 1210   | 10×25   | 0.055 | 1480   | 12.5×20 | 0.075 | 1100   | 16×25    | 0.070 | 1300   |
| 470          | 471 | 10×20   | 0.046 | 1400   | 12.5×20 | 0.045 | 1670   | 12.5×30 | 0.060 | 1800   |          |       |        |
| 560          | 561 | 10×25   | 0.042 | 1650   |         |       |        |         |       |        |          |       |        |
| 680          | 681 | 12.5×20 | 0.035 | 1900   |         |       |        | 16×25   | 0.050 | 2000   |          |       |        |
| 820          | 821 |         |       |        |         |       |        | 18×25   | 0.048 | 2200   |          |       |        |
| 1000         | 102 | 12.5×25 | 0.027 | 2130   | 16×25   | 0.025 | 2410   | 16×35   | 0.040 | 2500   |          |       |        |
| 1200         | 122 |         |       |        |         |       |        | 18×30   | 0.030 | 2600   |          |       |        |
| 2200         | 222 | 16×30   | 0.025 | 2610   | 18×35   | 0.022 | 3180   |         |       |        |          |       |        |
| 3300         | 332 | 18×35   | 0.020 | 3200   |         |       |        |         |       |        |          |       |        |

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz

Maximum ESR (Ω) at 20°C 100KHz

单击下面可查看定价，库存，交付和生命周期等信息

[>>CHANG\(华威\)](#)