

RVT-UT Series

WIDE TEMPERATURE 宽温品

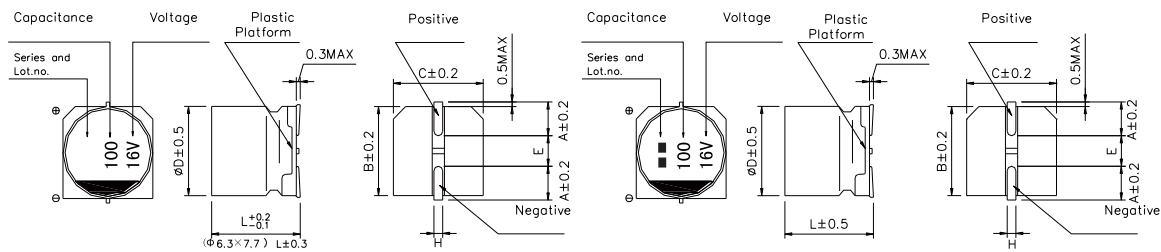
- Operating with wide temperature range -55 ~ +105 °C
适用于 -55 ~ +105 °C 的宽温范围
- Load life of 2000 hours
负荷寿命2000小时
- Comply with the RoHS directive
符合RoHS指令



■ 主要技术性能 Specification

| 项目 Item | 特性 Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|------|------|------|------|------|-------|------|------|--------------------|--|---|-----|----|----|----|----|-------|-----|--------|--------------------|--------|------|------|------|------|------|------|------|--------------------|------|-----------|------|------|------|------|------|------|-----------|--------------------|------|---|---|---|---|---|---|---|--------------------|----|----|----|---|---|---|---|---|
| 使用温度范围 Operating temperature range | -55 ~ +105 °C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 额定电压范围 Rated voltage range | 4 ~ 100V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 标称电容容量范围 Nominal capacitance range | 0.1 ~ 6800µF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 标称电容容量允许偏差 Capacitance tolerance | ± 20% (120Hz, +20°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 漏电流 Leakage current | $I \leq 0.01CV$ 或 $3(\mu A)$ 2分钟 取较大者 (at 20°C, after 2 minutes) (whichever is greater) | $I \leq 0.02CV + 15(\mu A)$ 1分钟 (1 minute) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 损耗角正切值 (tg δ) Dissipation factor (+20°C, 120Hz) | <table border="1"> <thead> <tr> <th colspan="2">U_R (V)</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">tg δ</td> <td>∅4~∅10</td> <td>0.35</td> <td>0.26</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> </tr> <tr> <td>∅12.5~∅16</td> <td>0.42</td> <td>0.38</td> <td>0.34</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.14</td> <td>0.12</td> </tr> </tbody> </table> | | | | | | | | | | U _R (V) | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | tg δ | ∅4~∅10 | 0.35 | 0.26 | 0.20 | 0.16 | 0.14 | 0.12 | 0.12 | 0.12 | 0.12 | ∅12.5~∅16 | 0.42 | 0.38 | 0.34 | 0.30 | 0.26 | 0.22 | 0.18 | 0.14 | 0.12 | | | | | | | | | | | | | | | | |
| U _R (V) | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tg δ | ∅4~∅10 | 0.35 | 0.26 | 0.20 | 0.16 | 0.14 | 0.12 | 0.12 | 0.12 | 0.12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ∅12.5~∅16 | 0.42 | 0.38 | 0.34 | 0.30 | 0.26 | 0.22 | 0.18 | 0.14 | 0.12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 温度特性 Temperature characteristics (Impedance ratio at 120Hz) | <table border="1"> <thead> <tr> <th colspan="2"></th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50-63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">∅4~∅10</td> <td>Z(-25°C) / Z(20°C)</td> <td>7</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>15</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>4</td> </tr> <tr> <td rowspan="2">∅12.5~∅16</td> <td>Z(-25°C) / Z(20°C)</td> <td>7</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>17</td> <td>12</td> <td>10</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> </tr> </tbody> </table> | | | | | | | | | | | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50-63 | 100 | ∅4~∅10 | Z(-25°C) / Z(20°C) | 7 | 4 | 3 | 2 | 2 | 2 | 2 | 3 | Z(-40°C) / Z(20°C) | 15 | 8 | 6 | 4 | 4 | 3 | 3 | 4 | ∅12.5~∅16 | Z(-25°C) / Z(20°C) | 7 | 5 | 4 | 3 | 2 | 2 | 2 | 2 | Z(-40°C) / Z(20°C) | 17 | 12 | 10 | 8 | 5 | 4 | 3 | 3 |
| | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50-63 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ∅4~∅10 | Z(-25°C) / Z(20°C) | 7 | 4 | 3 | 2 | 2 | 2 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Z(-40°C) / Z(20°C) | 15 | 8 | 6 | 4 | 4 | 3 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ∅12.5~∅16 | Z(-25°C) / Z(20°C) | 7 | 5 | 4 | 3 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Z(-40°C) / Z(20°C) | 17 | 12 | 10 | 8 | 5 | 4 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 耐久性 Load life | After 2000 hrs. (1000 hrs. for ∅4~∅6.3x5.4) application of the rated voltage at 105°C, they meet the characteristics listed below. 在105°C环境中施加额定工作电压2000小时 (∅4~∅6.3x5.4 为1000小时)后, 电容器的特性符合下表的要求。 电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤the initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 高温贮存 Shelf life | +105°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±10%初始测量值以内 10% of the initial measured value 漏电流 Leakage current : ≤ 2倍初始规定值 ≤2times of the initial specified value 损耗角正切值 Dissipation factor : ≤ 2倍初始规定值 ≤2times of the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

■ 外形图及尺寸图 Case size table



*1. Voltage mark for 6.3V is [6V] 6.3V的产品标识为 [6V]
 *2. Applicable to ∅6.3x7.7 适用于∅6.3x7.7
 *3. Applicable to ∅8x10.5~∅10 适用于∅8x10.5~∅10
 *4. Applicable to ∅12.5~∅16 适用于∅12.5~∅16

V-Chip

| ∅D x L | 4 x 5.4 | 5 x 5.4 | 6.3 x 5.4 | 6.3 x 7.7 | 8 x 6.2 | 8 x 10.5 | 10 x 10.5 | 10 x 13.5 | 12.5 x 13.5 | 12.5 x 16 | 16 x 16.5 |
|---------|---------|---------|-----------|-----------|---------|----------|-----------|-----------|-------------|-----------|-----------|
| A | 1.8 | 2.1 | 2.4 | 2.4 | 3.3 | 2.9 | 3.2 | 3.2 | 4.7 | 4.7 | 5.5 |
| B | 4.3 | 5.3 | 6.6 | 6.6 | 8.3 | 8.3 | 10.3 | 10.3 | 13.0 | 13.0 | 17.0 |
| C | 4.3 | 5.3 | 6.6 | 6.6 | 8.3 | 8.3 | 10.3 | 10.3 | 13.0 | 13.0 | 17.0 |
| E ± 0.2 | 1.0 | 1.3 | 2.2 | 2.2 | 2.2 | 3.1 | 4.4 | 4.4 | 4.4 | 4.4 | 6.7 |
| L | 5.4 | 5.4 | 5.4 | 7.7 | 6.2 | 10.5 | 10.5 | 13.5 | 13.5 | 16.0 | 16.5 |

■ 尺寸 Dimensions

| μF | WV Code 代码 | 4 | | 6.3 | | 10 | | 16 | | 25 | |
|------|------------------|--------------------------|--------------|----------------------------|--------------|--------------------------|--------------|---|-----------------------|-------------------------|------------------------|
| | | 0G | | 0J | | 1A | | 1C | | 1E | |
| 4.7 | 4R7 | | | | | | | | | 4 x 5.4 | 13 |
| 10 | 100 | | | | | | | 4 x 5.4 | 18 | (4 x 5.4) 5 x 5.4 | (14) 20 |
| 22 | 220 | | | 4 x 5.4 | 22 | (4 x 5.4) 5 x 5.4 | (20) 25 | (4 x 5.4) 5 x 5.4 | (20) 27 | (5 x 5.4) 6.3 x 5.4 | (25) 36 |
| 33 | 330 | (4 x 5.4) 5 x 5.4 | (18) 30 | (4 x 5.4) 5 x 5.4 | (22) 27 | (4 x 5.4) 5 x 5.4 | (22) 30 | (5 x 5.4) 6.3 x 5.4 | (28) 40 | (5 x 5.4) 6.3 x 5.4 | (29) 44 |
| 47 | 470 | (4 x 5.4) 5 x 5.4 | (24) 36 | (4 x 5.4) 5 x 5.4 | (25) 33 | (5 x 5.4) 6.3 x 5.4 | (30) 41 | (5 x 5.4) 6.3 x 5.4 | (31) 48 | 6.3 x 5.4 (8 x 6.2) | 48 (91) |
| 100 | 101 | (5 x 5.4) 6.3 x 5.4 | (43) 60 | (5 x 5.4) 6.3 x 5.4 | (39) 50 | (5 x 5.4) 6.3 x 5.4 | (52) 53 | 6.3 x 5.4 (8 x 6.2) | 60 (120) | 6.3 x 7.7 | 91 |
| 150 | 151 | 6.3 x 5.4 | 52 | 6.3 x 5.4 | 55 | 6.3 x 5.4 | 62 | 6.3 x 7.7 | 95 | (6.3 x 7.7) 8 x 10.5 | (100) 140 |
| 220 | 221 | 6.3 x 5.4 | 57 | (6.3 x 5.4) 6.3 x 7.7 | (67) 105 | (6.3 x 5.4) 6.3 x 7.7 | (103) 105 | (6.3 x 7.7) (8 x 6.2) 8 x 10.5 | (105) (85) 150 | 8 x 10.5 | 175 |
| 330 | 331 | 6.3 x 7.7 | 100 | 6.3 x 7.7 | 105 | 8 x 10.5 | 196 | 8 x 10.5 | 195 | (8 x 10.5) 10 x 10.5 | (220) 240 |
| 470 | 471 | 6.3 x 7.7 | 105 | (6.3 x 7.7) 8 x 10.5 | (120) 210 | (8 x 10.5) 10 x 10.5 | (210) 260 | (8 x 10.5) 10 x 10.5 | 295 (230) | 10 x 10.5 | 280 |
| 680 | 681 | 8 x 10.5 | 210 | 8 x 10.5 | 210 | 10 x 10.5 | 270 | 10 x 10.5 | 315 | 10 x 13.5 | 400 |
| 1000 | 102 | 8 x 10.5 | 230 | (8 x 10.5) 10 x 10.5 | (230) 300 | 10 x 10.5 | 315 | (10 x 10.5) (10 x 13.5) 12.5 x 13.5 | (340) (390) 500 | 12.5 x 13.5 | 580 |
| 1500 | 152 | 10 x 10.5 | 315 | (10 x 10.5) 10 x 13.5 | (315) 450 | 10 x 13.5 | 460 | 12.5 x 13.5 | 550 | 12.5 x 16 | 850 |
| 2200 | 222 | (10 x 10.5) 10 x 13.5 | (340) 440 | (10 x 13.5) 12.5 x 13.5 | (500) 620 | 12.5 x 13.5 | 680 | (12.5 x 16) 16 x 16.5 | (750) 950 | 16 x 16.5 | 1050 |
| 3300 | 332 | 10 x 13.5 | 490 | (12.5 x 13.5) 12.5 x 16 | (660) 700 | 16 x 16.5 | 1000 | 16 x 16.5 | 1000 | | |
| 4700 | 472 | 12.5 x 13.5 | 600 | 16 x 16.5 | 1000 | | | | | | |
| 6800 | 682 | (12.5 x 16) 16 x 16.5 | 950 (650) | | | | | | | Case size 尺寸 | Ripple current 纹波电流 |

| μF | WV Code 代码 | 35 | | 50 | | 63 | | 100 | |
|------|------------------|--------------------------|------------|---------------------------------------|--------------------|---------------------------------------|------------------------|---|-----------------------|
| | | 1V | | 1H | | 1J | | 2A | |
| 0.1 | 0R1 | | | 4 x 5.4 | 0.7 | 4 x 5.4 | 0.7 | | |
| 0.22 | R22 | | | 4 x 5.4 | 1.6 | 4 x 5.4 | 1.6 | | |
| 0.33 | R33 | | | 4 x 5.4 | 2.5 | 4 x 5.4 | 2.5 | | |
| 0.47 | R47 | | | 4 x 5.4 | 3.5 | 4 x 5.4 | 3.5 | | |
| 1 | 010 | | | 4 x 5.4 | 7 | 4 x 5.4 | 7 | 4 x 5.4 | 7 |
| 2.2 | 2R2 | | | 4 x 5.4 | 11 | 4 x 5.4 | 11 | 6.3 x 5.4 | 14 |
| 3.3 | 3R3 | 4 x 5.4 | 13 | 4 x 5.4 | 13 | 5 x 5.4 | 13 | (6.3 x 5.4) 6.3 x 7.7 (8 x 6.2) | (20) 32 (30) |
| 4.7 | 4R7 | 4 x 5.4 | 14 | (4 x 5.4) 5 x 5.4 | (13) 16 | 5 x 5.4 | 16 | (6.3 x 5.4) 6.3 x 7.7 | (21) 35 |
| 10 | 100 | (4 x 5.4) 5 x 5.4 | (14) 21 | 6.3 x 5.4 | 24 | (6.3 x 5.4) 6.3 x 7.7 (8 x 6.2) | (24) 39 (25) | (6.3 x 7.7) 8 x 10.5 | (35) 77 |
| 22 | 220 | 6.3 x 5.4 | 38 | (6.3 x 5.4) 6.3 x 7.7 (8 x 6.2) | (42) 51 (70) | (6.3 x 7.7) 8 x 10.5 | (49) 98 | (8 x 10.5) 10 x 10.5 | (84) 126 |
| 33 | 330 | 6.3 x 5.4 (8 x 6.2) | 42 (84) | 6.3 x 7.7 | 60 | 8 x 10.5 | 112 | 10 x 10.5 | 133 |
| 47 | 470 | (6.3 x 5.4) 6.3 x 7.7 | (50) 70 | (6.3 x 7.7) 8 x 10.5 | (63) 120 | (8 x 10.5) 10 x 10.5 | (119) 160 | (10 x 10.5) (10 x 13.5) 12.5 x 13.5 | (140) (160) 250 |
| 68 | 680 | | | | | Case size 尺寸 | Ripple current 纹波电流 | (10 x 13.5) 12.5 x 13.5 | (180) 300 |

•Case size ∅D×L(mm), ripple current (mA rms) at 105°C 120Hz •尺寸∅D×L(mm), 纹波电流(mA rms)於 105°C 120Hz

V-Chip

■ 尺寸 Dimensions

| μF | WV Code 代码 | 35 | | 50 | | 63 | | 100 | |
|------|------------------|---|-----------------------|---|-----------------------|---|-----------------------|----------------------------|------------------------|
| | | 1V | | 1H | | 1J | | 2A | |
| 100 | 101 | (6.3 × 7.7) 8 × 10.5 | (84) 120 | (8 × 10.5) 10 × 10.5 | (140) 170 | (10 × 10.5) (10 × 13.5) 12.5 × 13.5 | (196) (210) 270 | (12.5 × 13.5) 16 × 16.5 | (380) 450 |
| 150 | 151 | 8 × 10.5 | 155 | 10 × 10.5 | 170 | 10 × 13.5 | 225 | | |
| 220 | 221 | (8 × 10.5) 10 × 10.5 | (190) 220 | (10 × 10.5) 10 × 13.5 | (220) 280 | (10 × 13.5) (12.5 × 13.5) 16 × 16.5 | (235) (470) 560 | 16 × 16.5 | 550 |
| 330 | 331 | 10 × 10.5 | 245 | (10 × 13.5) (12.5 × 13.5) 16 × 16.5 | (295) (420) 600 | (12.5 × 16) 16 × 16.5 | (510) 700 | | |
| 470 | 471 | (10 × 10.5) (10 × 13.5) 12.5 × 13.5 | (280) (375) 520 | (12.5 × 16) 16 × 16.5 | (520) 700 | 16 × 16.5 | 750 | | |
| 680 | 681 | (10 × 13.5) 12.5 × 13.5 | (395) 530 | 16 × 16.5 | 750 | | | Case size 尺寸 | Ripple current 纹波电流 |
| 1000 | 102 | (12.5 × 16) 16 × 16.5 | (600) 750 | | | | | | |

•Case size ∅D×L(mm), ripple current (mA rms) at 105°C 120Hz •尺寸∅D×L(mm) 纹波电流 (mA rms)於 105°C 120Hz

V-Chip

■ 纹波电流的相关参数 Multiplier For Ripple Current

| Frequency 频率 | | 50Hz | 120Hz | 300Hz | 1KHz | 10KHz- | |
|-------------------|-----------|-------------|-------|-------|------|--------|------|
| Coefficient 系数 | Φ4-Φ10 | 0.1-68uF | 0.70 | 1.00 | 1.17 | 1.36 | 1.50 |
| | | 100-300uF | 0.85 | 1.00 | 1.08 | 1.20 | 1.30 |
| | Φ12.5-Φ16 | -68uF | 0.75 | 1.00 | 1.35 | 1.57 | 2.00 |
| | | 100-680uF | 0.80 | 1.00 | 1.23 | 1.34 | 1.50 |
| | | 1000-6800uF | 0.85 | 1.00 | 1.10 | 1.13 | 1.15 |