



### RJA 系列

特长 / 用途

- 105℃, 广温度范围
- 适用于高信赖性产品
- 符合RoHS指令

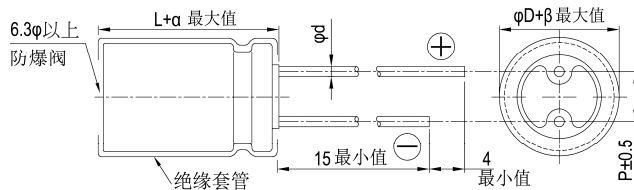


套管与标示颜色: 深紫色 / 白色

#### 规格表

| 项 目                 | 性 能   |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
|---------------------|---|----------------------|--------|----------|---------|--------------|--------|---------------|--------------------|---------|------|-------------|------|---------|--------------------|------|------|------|------|------|---------|------|----------|---------|------|------|---|---|---|---|---|-------------|---------|---|---|---|---|---|---|---|----------|---------|----|---|---|---|---|---|---|
| 工作温度范围              | 6.3 ~ 63V<br>-55℃ ~ +105℃   | 100V<br>-40℃ ~ +105℃ |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 额定静电容量容许误差值         | ± 20% (120Hz, 20℃)  |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 漏电流(20℃)            | I = 0.01CV 或 3(μA/微安)中的任一个较大值以下(2分钟后)<br>I = 漏电流(μA/微安)、C = 额定静电容量(μF/微法拉)、V = 额定直流工作电压(V/伏特)   |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 损失角正切值(120 Hz, 20℃) | <table border="1"> <tr> <th>额定电压</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> <tr> <td>损失角正切值(最大值)</td> <td>0.23</td> <td>0.20</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>当额定静电容量大于 1,000 微法拉时, 每增加 1,000 微法拉需加 0.02。</p>   |                      | 额定电压   | 6.3      | 10      | 16           | 25     | 35            | 50                 | 63      | 100  | 损失角正切值(最大值) | 0.23 | 0.20    | 0.16               | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 额定电压                | 6.3   | 10                   | 16     | 25       | 35      | 50           | 63     | 100           |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 损失角正切值(最大值)         | 0.23  | 0.20                 | 0.16   | 0.14     | 0.12    | 0.10         | 0.09   | 0.08          |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 温度特性(120Hz)         | <p>阻抗比不可大于下表所列数值</p> <table border="1"> <tr> <th colspan="2">额定电压</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> <tr> <td rowspan="4">阻抗比</td> <td>Z(-25℃)</td> <td>φD &lt; 16</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>/Z(+20℃)</td> <td>φD ≥ 16</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> </tr> <tr> <td>Z(-40/-55℃)</td> <td>φD &lt; 16</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> <tr> <td>/Z(+20℃)</td> <td>φD ≥ 16</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>6</td> </tr> </table> |                      | 额定电压   |          | 6.3     | 10           | 16     | 25            | 35                 | 50      | 63   | 100         | 阻抗比  | Z(-25℃) | φD < 16            | 4    | 3    | 3    | 2    | 2    | 2       | 2    | /Z(+20℃) | φD ≥ 16 | 5    | 4    | 3 | 2 | 2 | 2 | 3 | Z(-40/-55℃) | φD < 16 | 8 | 6 | 4 | 4 | 4 | 3 | 3 | /Z(+20℃) | φD ≥ 16 | 12 | 8 | 6 | 4 | 3 | 3 | 6 |
| 额定电压                |   | 6.3                  | 10     | 16       | 25      | 35           | 50     | 63            | 100                |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 阻抗比                 | Z(-25℃)   | φD < 16              | 4      | 3        | 3       | 2            | 2      | 2             | 2                  |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
|                     | /Z(+20℃)  | φD ≥ 16              | 5      | 4        | 3       | 2            | 2      | 2             | 3                  |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
|                     | Z(-40/-55℃)   | φD < 16              | 8      | 6        | 4       | 4            | 4      | 3             | 3                  |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
|                     | /Z(+20℃)  | φD ≥ 16              | 12     | 8        | 6       | 4            | 3      | 3             | 6                  |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 耐久性                 | <table border="1"> <tr> <td>保证寿命时间</td> <td>2,000 小时</td> </tr> <tr> <td>静电容量变化率</td> <td>≦ 初始值的 ± 20%</td> </tr> <tr> <td>损失角正切值</td> <td>≦ 初始规格值的 200%</td> </tr> <tr> <td>漏电流</td> <td>≦ 初始规格值</td> </tr> </table> <p>* 于 105℃ 环境中供给容许纹波电流值与额定电压 2,000 小时后, 待制品回复至 20℃ 的环境中进行量测时, 需满足上列要求。</p>   |                      | 保证寿命时间 | 2,000 小时 | 静电容量变化率 | ≦ 初始值的 ± 20% | 损失角正切值 | ≦ 初始规格值的 200% | 漏电流                | ≦ 初始规格值 |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 保证寿命时间              | 2,000 小时  |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 静电容量变化率             | ≦ 初始值的 ± 20%  |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 损失角正切值              | ≦ 初始规格值的 200%   |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 漏电流                 | ≦ 初始规格值   |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 高温无负荷特性             | <table border="1"> <tr> <td>保证寿命时间</td> <td>1,000 小时</td> </tr> <tr> <td>静电容量变化率</td> <td>≦ 初始值的 ± 20%</td> </tr> <tr> <td>损失角正切值</td> <td>≦ 初始规格值的 200%</td> </tr> <tr> <td>漏电流</td> <td>≦ 初始规格值</td> </tr> </table> <p>* 于 105℃ 环境中不供给额定电压 1,000 小时后, 待制品回复至 20℃ 的环境中进行量测时, 需满足上列要求。</p>  |                      | 保证寿命时间 | 1,000 小时 | 静电容量变化率 | ≦ 初始值的 ± 20% | 损失角正切值 | ≦ 初始规格值的 200% | 漏电流                | ≦ 初始规格值 |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 保证寿命时间              | 1,000 小时  |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 静电容量变化率             | ≦ 初始值的 ± 20%  |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 损失角正切值              | ≦ 初始规格值的 200%   |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 漏电流                 | ≦ 初始规格值   |                      |        |          |         |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 纹波电流与频率修正系数         | <table border="1"> <tr> <th>频率(Hz)</th> <th>60(50)</th> <th>120</th> <th>500</th> <th>1k</th> <th>10k ≤</th> </tr> <tr> <td>静电容量(μF/微法拉) ≤ 100</td> <td>0.70</td> <td>1.00</td> <td>1.30</td> <td>1.40</td> <td>1.50</td> </tr> <tr> <td>100 &lt; 静电容量 ≤ 1,000</td> <td>0.75</td> <td>1.00</td> <td>1.20</td> <td>1.30</td> <td>1.35</td> </tr> <tr> <td>1,000 &lt;</td> <td>0.80</td> <td>1.00</td> <td>1.10</td> <td>1.12</td> <td>1.15</td> </tr> </table>   |                      | 频率(Hz) | 60(50)   | 120     | 500          | 1k     | 10k ≤         | 静电容量(μF/微法拉) ≤ 100 | 0.70    | 1.00 | 1.30        | 1.40 | 1.50    | 100 < 静电容量 ≤ 1,000 | 0.75 | 1.00 | 1.20 | 1.30 | 1.35 | 1,000 < | 0.80 | 1.00     | 1.10    | 1.12 | 1.15 |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 频率(Hz)              | 60(50)  | 120                  | 500    | 1k       | 10k ≤   |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 静电容量(μF/微法拉) ≤ 100  | 0.70  | 1.00                 | 1.30   | 1.40     | 1.50    |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 100 < 静电容量 ≤ 1,000  | 0.75  | 1.00                 | 1.20   | 1.30     | 1.35    |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |
| 1,000 <             | 0.80  | 1.00                 | 1.10   | 1.12     | 1.15    |              |        |               |                    |         |      |             |      |         |                    |      |      |      |      |      |         |      |          |         |      |      |   |   |   |   |   |             |         |   |   |   |   |   |   |   |          |         |    |   |   |   |   |   |   |

#### 寸法图



制品各项寸法 单位: 毫米

|    |                          |     |     |     |      |     |     |
|----|--------------------------|-----|-----|-----|------|-----|-----|
| φD | 5                        | 6.3 | 8   | 10  | 12.5 | 16  | 18  |
| P  | 2.0                      | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 | 7.5 |
| φd | 0.5                      |     | 0.6 |     | 0.8  |     |     |
| α  | L < 20: 1.5, L ≥ 20: 2.0 |     |     |     |      |     |     |
| β  | 0.5                      |     |     |     |      |     |     |

引线型



尺寸: 直径( $\phi$ D) $\times$ 长度(L), (毫米/mm)

容许纹波电流: 毫安/均方根值(mA/rms), 120 赫兹(Hz), 105 $^{\circ}$ C

制品尺寸与容许纹波电流一览表

| 额定电压 Vdc<br>内容<br>额定静电容量<br>( $\mu$ F/微法拉) |     | 6.3V(0J)            |       | 10V(1A)                            |            | 16V(1C)             |       | 25V(1E)             |       | 35V(1V)             |       | 50V(1H)                          |            | 63V(1J)                              |            | 100V(2A)                            |            |
|--|-----|---------------------|-------|------------------------------------|------------|---------------------|-------|---------------------|-------|---------------------|-------|----------------------------------|------------|--------------------------------------|------------|-------------------------------------|------------|
|  |     | $\phi$ D $\times$ L | mA    | $\phi$ D $\times$ L                | mA         | $\phi$ D $\times$ L | mA    | $\phi$ D $\times$ L | mA    | $\phi$ D $\times$ L | mA    | $\phi$ D $\times$ L              | mA         | $\phi$ D $\times$ L                  | mA         | $\phi$ D $\times$ L                 | mA         |
| 2.2  | 2R2 |                     |       |                                    |            |                     |       |                     |       |                     |       | 5 $\times$ 11                    | 20         |                                      |            | 5 $\times$ 11                       | 26         |
| 3.3  | 3R3 |                     |       |                                    |            |                     |       |                     |       |                     |       | 5 $\times$ 11                    | 30         |                                      |            | 5 $\times$ 11                       | 31         |
| 4.7  | 4R7 |                     |       |                                    |            |                     |       |                     |       |                     |       | 5 $\times$ 11                    | 33         | 5 $\times$ 11                        | 36         | 6.3 $\times$ 11                     | 40         |
| 10   | 100 |                     |       |                                    |            |                     |       |                     |       |                     |       | 5 $\times$ 11                    | 50         | 5 $\times$ 11                        | 54         | 6.3 $\times$ 11                     | 54         |
| 22   | 220 |                     |       |                                    |            |                     |       |                     |       |                     |       | 5 $\times$ 11                    | 78         | 6.3 $\times$ 11                      | 86         | 6.3 $\times$ 11<br>8 $\times$ 11.5  | 93<br>111  |
| 33   | 330 |                     |       |                                    |            |                     |       |                     |       | 5 $\times$ 11       | 85    | 5 $\times$ 11                    | 90         | 6.3 $\times$ 11                      | 100        | 8 $\times$ 11.5<br>10 $\times$ 12.5 | 144<br>183 |
| 47   | 470 |                     |       |                                    |            |                     |       | 5 $\times$ 11       | 97    | 5 $\times$ 11       | 90    | 6.3 $\times$ 11                  | 117        | 6.3 $\times$ 11                      | 129        | 10 $\times$ 12.5                    | 204        |
| 100  | 101 |                     |       |                                    |            | 5 $\times$ 11       | 110   | 6.3 $\times$ 11     | 142   | 6.3 $\times$ 11     | 150   | 8 $\times$ 11.5                  | 188        | 10 $\times$ 12.5                     | 235        | 10 $\times$ 20                      | 285        |
| 220  | 221 |                     |       | 5 $\times$ 11                      | 150        | 6.3 $\times$ 11     | 180   | 8 $\times$ 11.5     | 236   | 8 $\times$ 11.5     | 270   | 10 $\times$ 16                   | 335        | 10 $\times$ 20                       | 400        | 12.5 $\times$ 25                    | 440        |
| 330  | 331 |                     |       | 6.3 $\times$ 11                    | 200        | 8 $\times$ 11.5     | 260   | 8 $\times$ 11.5     | 330   | 10 $\times$ 12.5    | 350   | 10 $\times$ 16<br>10 $\times$ 20 | 410<br>460 | 10 $\times$ 20<br>12.5 $\times$ 20   | 490<br>520 | 16 $\times$ 25                      | 478        |
| 470  | 471 | 6.3 $\times$ 11     | 230   | 6.3 $\times$ 11<br>8 $\times$ 11.5 | 250<br>290 | 8 $\times$ 11.5     | 310   | 10 $\times$ 12.5    | 380   | 10 $\times$ 16      | 460   | 12.5 $\times$ 20                 | 590        | 12.5 $\times$ 20<br>12.5 $\times$ 25 | 665<br>720 | 16 $\times$ 31.5                    | 688        |
| 1,000                                      | 102 | 8 $\times$ 11.5     | 380   | 10 $\times$ 12.5                   | 460        | 10 $\times$ 16      | 560   | 10 $\times$ 20      | 680   | 12.5 $\times$ 20    | 830   | 16 $\times$ 25                   | 1,080      | 16 $\times$ 25                       | 1,190      |                                     |            |
| 2,200                                      | 222 | 10 $\times$ 16      | 690   | 10 $\times$ 20                     | 760        | 12.5 $\times$ 20    | 920   | 12.5 $\times$ 25    | 1,090 | 16 $\times$ 25      | 1,260 | 16 $\times$ 35.5                 | 1,470      |                                      |            |                                     |            |
| 3,300                                      | 332 | 10 $\times$ 20      | 840   | 12.5 $\times$ 20                   | 1,100      | 12.5 $\times$ 25    | 1,170 | 16 $\times$ 25      | 1,400 | 16 $\times$ 35.5    | 1,610 | 18 $\times$ 35.5                 | 1,650      |                                      |            |                                     |            |
| 4,700                                      | 472 | 12.5 $\times$ 20    | 1,090 | 12.5 $\times$ 25                   | 1,260      | 16 $\times$ 25      | 1,480 | 16 $\times$ 31.5    | 1,710 | 18 $\times$ 35.5    | 1,900 |                                  |            |                                      |            |                                     |            |
| 6,800                                      | 682 | 12.5 $\times$ 25    | 1,460 | 16 $\times$ 25                     | 1,690      | 16 $\times$ 31.5    | 1,930 | 18 $\times$ 35.5    | 2,160 |                     |       |                                  |            |                                      |            |                                     |            |
| 10,000                                     | 103 | 16 $\times$ 25      | 1,990 | 16 $\times$ 31.5                   | 2,220      | 18 $\times$ 31.5    | 2,330 |                     |       |                     |       |                                  |            |                                      |            |                                     |            |
| 22,000                                     | 223 | 18 $\times$ 35.5    | 2,930 | 18 $\times$ 40                     | 3,230      |                     |       |                     |       |                     |       |                                  |            |                                      |            |                                     |            |

产品编码说明

RJA系列    470微法拉     $\pm$  20%    6.3V    长脚    透气式    6.3 $\phi$   $\times$  11L    无铅引线与PET套管

**RJA**    **471**    **M**    **0J**    **BK**    -    **0611**

系列    额定静电容量    额定静电容量容许误差值    额定电压    引线加工 / 包装型式    胶盖型式    制品尺寸    制品引线与套管材质

注: 如需了解更详细介绍, 请参阅目录第 13 页"引线型产品编码说明"。