

频率修正系数 Frequency Coefficient

| Rated Voltage(V) | Freq.(Hz)<br>CAP(μF) | 50   | 120  | 300  | 1K   | 10K  | 100K |
|------------------|----------------------|------|------|------|------|------|------|
|                  |                      |      |      |      |      |      |      |
| 6.3~100          | ~47                  | 0.75 | 1.00 | 1.35 | 1.57 | 2.00 | 2.30 |
|                  | 100~470              | 0.80 | 1.00 | 1.23 | 1.34 | 1.50 | 1.65 |
|                  | ≥560                 | 0.85 | 1.00 | 1.10 | 1.13 | 1.15 | 1.40 |
| 160~450          | 0.47~4.7             | 0.65 | 1.00 | 1.35 | 1.75 | 2.30 | 2.50 |
|                  | 6.8~82               | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 1.80 |
|                  | ≥100                 | 0.80 | 1.00 | 1.15 | 1.30 | 1.40 | 1.50 |

尺寸 Dimensions

| WV<br>CAP(μF) |     | 6.3V(0J) |        | 10V(1A) |        | 16V(1C) |        | 25V(1E) |        | 35V(1V) |        | 50V(1H) |        |
|---------------|-----|----------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
|               |     | Size     | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple |
| 0.1           | 0R1 |          |        |         |        |         |        |         |        |         |        | 5×11    | 3      |
| 0.22          | R22 |          |        |         |        |         |        |         |        |         |        | 5×11    | 4      |
| 0.33          | R33 |          |        |         |        |         |        |         |        |         |        | 5×11    | 5      |
| 0.47          | R47 |          |        |         |        |         |        |         |        |         |        | 5×11    | 6      |
| 1             | 010 |          |        |         |        |         |        |         |        |         |        | 5×11    | 13     |
| 2.2           | 2R2 |          |        |         |        |         |        |         |        |         |        | 5×11    | 20     |
| 3.3           | 3R3 |          |        |         |        |         |        |         |        |         |        | 5×11    | 30     |
| 4.7           | 4R7 |          |        |         |        | 5×11    | 20     | 5×11    | 20     |         |        | 5×11    | 40     |
| 10            | 100 | 5×11     | 20     |         |        | 5×11    | 35     | 5×11    | 40     | 5×11    | 40     | 5×11    | 55     |
| 22            | 220 |          |        | 5x11    | 50     | 5×11    | 55     | 5×11    | 60     | 5×11    | 65     | 5×11    | 80     |
| 33            | 330 | 5×11     | 55     | 5x11    | 60     | 5×11    | 65     | 5×11    | 75     | 5×11    | 80     | 5×11    | 100    |
|               |     |          |        |         |        |         |        |         |        |         |        | 6.3×11  | 115    |
| 47            | 470 | 5×11     | 65     | 5×11    | 70     | 5×11    | 80     | 5×11    | 85     | 5×11    | 100    | 6.3×11  | 135    |
|               |     |          |        |         |        |         |        |         |        |         |        | 8×11.5  | 160    |
| 100           | 101 | 5×11     | 95     | 5×11    | 105    | 5×11    | 125    | 6.3×11  | 160    | 6.3×11  | 170    | 8×11.5  | 230    |
|               |     |          |        |         |        | 6.3×11  | 140    |         |        | 8×11.5  | 200    |         |        |
| 220           | 221 | 5×11     | 150    | 6.3×11  | 170    | 6.3×11  | 215    | 8×11.5  | 285    | 8×11.5  | 300    | 10×16   | 510    |
|               |     | 6.3×11   | 170    |         |        | 8×11.5  | 250    |         |        |         |        |         |        |
| 330           | 331 | 6.3×11   | 215    | 6.3×11  | 240    | 8×11.5  | 315    | 8×11.5  | 340    | 10×12.5 | 420    | 10×16   | 590    |
|               |     |          |        | 8×11.5  | 280    |         |        |         |        | 10×16   | 470    |         |        |
| 470           | 471 | 8×11.5   | 260    | 6.3×11  | 285    | 8×11.5  | 365    | 10×12.5 | 470    | 10×16   | 545    | 10×20   | 710    |
|               |     |          |        | 8×11.5  | 330    | 10×12.5 | 430    |         |        | 10×20   | 590    |         |        |
| 680           | 681 | 8×11.5   | 365    | 8×11.5  | 410    | 8×16    | 465    | 10×16   | 620    | 10×20   | 680    | 12.5×20 | 925    |
|               |     |          |        |         |        | 10×12.5 | 480    |         |        |         |        |         |        |
| 1000          | 102 | 8×11.5   | 445    | 8×16    | 550    | 10×16   | 680    | 10×20   | 820    | 12.5×20 | 1025   | 12.5×25 | 1290   |
|               |     |          |        | 10×12.5 | 570    |         |        |         |        |         |        |         |        |
| 1500          | 152 |          |        | 10×16   | 630    | 10×20   | 750    | 12.5×20 | 900    | 12.5×25 | 1125   |         |        |
| 2200          | 222 | 10×16    | 740    | 10×20   | 900    | 12.5×20 | 1110   | 12.5×25 | 1460   | 16×25   | 1500   | 16×35   | 1230   |
|               |     |          |        | 12.5×20 | 950    |         |        |         |        | 18×20   | 1460   |         |        |
| 3300          | 332 | 10×20    | 1030   | 12.5×20 | 1205   | 12.5×25 | 1390   | 16×25   | 1645   | 16×30   | 1810   | 18×35   | 2165   |
| 4700          | 472 | 12.5×20  | 1280   | 12.5×25 | 1490   | 16×25   | 1740   | 16x30   | 1840   | 18×35   | 2335   | 22×40   | 2650   |
| 6800          | 682 | 12.5×25  | 1550   | 16×25   | 1825   | 16x30   | 2080   | 16x35   | 2100   |         |        |         |        |
| 10000         | 103 | 16×25    | 1900   | 16×30   | 1980   | 16x35   | 2380   | 18x35   | 2500   |         |        |         |        |
| 15000         | 153 | 16x30    | 2190   | 16x40   | 2180   | 18x35   | 2600   |         |        |         |        |         |        |
| 22000         | 223 | 18x35    | 2400   | 18x40   | 2410   |         |        |         |        |         |        |         |        |

Size ϕD×L(mm)  
484 Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz



尺寸 Dimensions

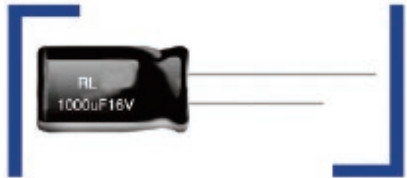
| WV<br>CAP(μF) |     | 63V(1J) |        | 100V(2A) |        | 160V(2C) |        | 200V(2D) |        | 220V(2P) |        |
|---------------|-----|---------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|               |     | Size    | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple |
| 0.1           | 0R1 |         |        | 5x11     | 3      |          |        |          |        |          |        |
| 0.22          | R22 |         |        | 5x11     | 4      |          |        |          |        |          |        |
| 0.33          | R33 |         |        | 5x11     | 5      |          |        |          |        |          |        |
| 0.47          | R47 |         |        | 5x11     | 10     |          |        |          |        |          |        |
| 1             | 010 |         |        | 5×11     | 16     |          |        |          |        |          |        |
| 2.2           | 2R2 |         |        | 5×11     | 23     |          |        | 6.3×11   | 22     | 6.3×11   | 23     |
| 3.3           | 3R3 |         |        | 5×11     | 35     |          |        | 6.3×11   | 28     | 6.3×11   | 28     |
| 4.7           | 4R7 | 5×11    | 40     | 5×11     | 40     | 6.3×11   | 40     | 6.3×11   | 42     | 8×11.5   | 45     |
| 10            | 100 | 5×11    | 60     | 6.3×11   | 60     | 8×11.5   | 73     | 8×14     | 80     | 8x16     | 84     |
|               |     |         |        | 8×11.5   | 70     |          |        |          |        |          |        |
| 22            | 220 | 5×11    | 80     | 6.3×11   | 90     | 10×12.5  | 120    | 10×16    | 132    | 10×20    | 150    |
|               |     | 6.3×11  | 90     | 8×11.5   | 100    |          |        |          |        |          |        |
| 33            | 330 | 8×11.5  | 120    | 8×11.5   | 145    | 10×16    | 165    | 10×20    | 185    | 12.5×20  | 200    |
|               |     |         |        | 10×12.5  | 170    |          |        |          |        |          |        |
| 47            | 470 | 6.3x11  | 145    | 10x12.5  | 200    | 10×20    | 210    | 12.5x20  | 230    | 12.5×25  | 250    |
|               |     | 8×11.5  | 165    | 10×16    | 250    |          |        |          |        |          |        |
| 68            | 680 |         |        |          |        | 12.5×20  | 285    | 12.5x25  | 310    | 16×20    | 320    |
| 82            | 820 |         |        |          |        | 12.5×20  | 315    | 12.5×25  | 345    | 16×25    | 390    |
| 100           | 101 | 10×12.5 | 250    | 10×20    | 350    | 12.5×25  | 385    | 16x20    | 390    | 16×30    | 460    |
| 150           | 151 |         |        |          |        | 16×25    | 515    | 16×25    | 520    | 16×35    | 620    |
| 180           | 181 |         |        |          |        | 16×25    | 590    | 16×30    | 620    | 16×40    | 700    |
| 220           | 221 | 10×20   | 500    | 12.5×25  | 660    | 16×30    | 700    | 16x35    | 730    | 18×40    | 820    |
| 270           | 271 |         |        |          |        | 16×35    | 830    | 16×40    | 860    |          |        |
| 330           | 331 | 12.5×20 | 690    | 12.5×25  | 800    | 16×40    | 980    | 18x40    | 1000   |          |        |
| 390           | 391 |         |        |          |        | 18×40    | 1100   | 18x45    | 1150   |          |        |
| 470           | 471 | 12.5×20 | 810    | 16x25    | 990    | 18x45    | 1250   |          |        |          |        |
| 560           | 561 |         |        |          |        |          |        |          |        |          |        |
| 1000          | 102 | 16×25   | 1450   | 18×40    | 2020   |          |        |          |        |          |        |
| 2200          | 222 | 18×35   | 1780   |          |        |          |        |          |        |          |        |
| 3300          | 332 | 22×40   | 2000   |          |        |          |        |          |        |          |        |

| WV<br>CAP(μF) |     | 250V(2E) |        | 350V(2V) |        | 400V(2G) |        | 420V(2M) |        | 450V(2W) |        |
|---------------|-----|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|               |     | Size     | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple |
| 0.47          | R47 |          |        |          |        |          |        | 6.3×11   | 11     | 6.3×11   | 11     |
| 1             | 010 |          |        |          |        | 6.3×11   | 15     | 6.3×11   | 15     | 6.3×11   | 15     |
| 2.2           | 2R2 | 6.3×11   | 23     | 6.3x11   | 25     | 8x11.5   | 26     | 8x11.5   | 26     | 8×11.5   | 26     |
| 3.3           | 3R3 | 6.3×11   | 28     | 8x11.5   | 28     | 8x11.5   | 30     | 8x11.5   | 30     | 8×11.5   | 30     |
| 4.7           | 4R7 | 8×11.5   | 45     | 8×11.5   | 48     | 8x11.5   | 50     | 8×16     | 50     | 8×16     | 50     |
| 6.8           | 6R8 | 8×11.5   | 58     | 8x14     | 60     | 8x12     | 63     | 10×16    | 63     | 10×16    | 63     |
| 8.2           | 8R2 | 8x14     | 68     | 8x16     | 70     | 8x16     | 72     | 10×16    | 72     | 10×16    | 72     |
| 10            | 100 | 8x16     | 84     | 10×16    | 85     | 10×16    | 88     | 10×16    | 80     | 10×20    | 85     |
| 15            | 150 | 10×16    | 112    | 10×20    | 113    | 10×20    | 115    | 12.5×20  | 112    | 12.5×20  | 112    |
| 22            | 220 | 10×20    | 150    | 12.5×20  | 152    | 12.5×20  | 155    | 12.5×25  | 152    | 12.5×25  | 152    |
| 27            | 270 | 10×20    | 170    | 12.5×25  | 188    | 12.5×25  | 190    | 12.5×25  | 175    | 12.5×30  | 185    |
| 33            | 330 | 12.5×20  | 200    | 12.5×25  | 205    | 12.5×25  | 210    | 12.5×30  | 202    | 12.5×30  | 202    |
| 39            | 390 | 12.5×20  | 210    | 12.5×30  | 255    | 12.5×30  | 260    | 16×20    | 220    | 16×25    | 240    |
| 47            | 470 | 12.5×25  | 250    | 16×25    | 290    | 16×25    | 295    | 16×25    | 270    | 16×30    | 290    |
| 56            | 560 | 12.5×30  | 300    | 16×25    | 320    | 16×25    | 325    | 16×30    | 320    | 16×30    | 320    |
| 68            | 680 | 16×20    | 320    | 16×30    | 370    | 16×30    | 380    | 16x30    | 340    | 16x35    | 360    |
| 82            | 820 | 16×25    | 390    | 16×35    | 440    | 16×35    | 450    | 16x35    | 405    | 16x40    | 430    |
| 100           | 101 | 16×30    | 460    | 16×40    | 510    | 16x40    | 520    | 16x40    | 480    | 18x35    | 480    |
| 120           | 121 | 16×30    | 510    | 18×40    | 590    | 18×40    | 600    | 18×40    | 550    | 18×40    | 550    |
| 150           | 151 | 16×35    | 620    | 18×45    | 690    | 18×45    | 700    | 18×45    | 650    | 18×45    | 650    |
| 180           | 181 | 16×40    | 700    |          |        |          |        |          |        |          |        |
| 220           | 221 | 18×40    | 820    |          |        |          |        |          |        |          |        |

Size ϕD×L(mm)  
Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

# RL 长寿命，宽温度品

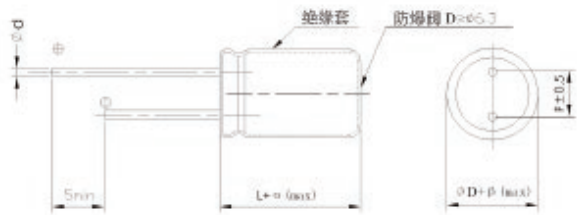
- 宽温度，105℃，2000小时长寿命，体积小。  
Wide temperature range,105℃, long life:2000 hours. Miniature.
- 适用于彩电、空调、电子电表等线路中。  
Used in color-TV, air conditioning electron meter circuits etc.
- ROHS指令已对应完毕。  
Adapted to the ROHS directive.



## 主要技术性能 Specifications

| 项目 Items                                                                                                                             | 特性 Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |      |      |      |      |                                     |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|-------------------------------------|------|------|---------|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|------|------|---------|------|------|---------------|------|------|------|------|------|---|---|---|---|---|---|---------------|---|---|---|---|---|---|---|---|---|---|--|
| 使用温度范围<br>Operating Temperature Range                                                                                                | -40℃ ~+105℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |      |      |      |      | -25 ~ +105℃                         |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 额定电压范围<br>Rated Voltage Range                                                                                                        | 6.3 ~ 100V                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |      |      | 160 ~450V                           |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 标称电容量范围<br>Nominal Capacitance Range                                                                                                 | 0.1~33000μF                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |      |      |      |      |                                     |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 标称电容量允许偏差<br>Capacitance Tolerance                                                                                                   | ± 20% (120Hz, +20℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |      |      |      |      |                                     |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 漏电流<br>Leakage Current                                                                                                               | I≤0.01CV (μA)或3μA 2分钟 取较大者<br>(at 20℃,after 2 minutes) (Whichever is greater)                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |      |      | I≤0.03CV (μA) + 40μA 2分钟(2 minutes) |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 损耗角正切值 ( tgδ )<br>Dissipation Factor (+20℃, 120Hz)                                                                                   | <table><tr><td>U<sub>R</sub> (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>                                                                                                                                                                                                        |      |      |      |      |      |                                     |      |      |         |     |     | U <sub>R</sub> (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 <sub>R</sub> (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 |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
|                                                                                                                                      | <table><tr><td>U<sub>R</sub> (V)</td><td>160</td><td>200</td><td>250</td><td>400</td><td>450</td></tr><tr><td>tgδ</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.20</td><td>0.20</td></tr></table>                                                                                                                                                                                                                                                                             |      |      |      |      |      |                                     |      |      |         |     |     | U <sub>R</sub> (V) | 160 | 200 | 250 | 400 | 450 | tgδ | 0.15 | 0.15 | 0.15    | 0.20 | 0.20 |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
|                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |      |      |      |      |                                     |      |      |         |     |     | U <sub>R</sub> (V) | 160 | 200 | 250 | 400 | 450 |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| tgδ                                                                                                                                  | 0.15                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.15 | 0.15 | 0.20 | 0.20 |      |                                     |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 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. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |      |      |      |      |                                     |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 温度特性 Temperature characteristics<br>(Impedance ratio at 120Hz)                                                                       | <table><tr><td>U<sub>R</sub> (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><td>160~250</td><td>400</td><td>450</td></tr><tr><td>Z-25℃ / Z+20℃</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>4</td><td>6</td><td>7</td></tr><tr><td>Z-40℃ / Z+20℃</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>-</td><td colspan="2">-</td></tr></table> |      |      |      |      |      |                                     |      |      |         |     |     | U <sub>R</sub> (V) | 6.3 | 10  | 16  | 25  | 35  | 50  | 63   | 100  | 160~250 | 400  | 450  | Z-25℃ / Z+20℃ | 4    | 3    | 2    | 2    | 2    | 2 | 2 | 2 | 4 | 6 | 7 | Z-40℃ / Z+20℃ | 8 | 6 | 4 | 3 | 3 | 3 | 3 | 3 | - | - |  |
|                                                                                                                                      | U <sub>R</sub> (V)                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.3  | 10   | 16   | 25   | 35   | 50                                  | 63   | 100  | 160~250 | 400 | 450 |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
|                                                                                                                                      | Z-25℃ / Z+20℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4    | 3    | 2    | 2    | 2    | 2                                   | 2    | 2    | 4       | 6   | 7   |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| Z-40℃ / Z+20℃                                                                                                                        | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 6    | 4    | 3    | 3    | 3    | 3                                   | 3    | -    | -       |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 耐久性<br>Load Life                                                                                                                     | +105℃加额定电压2000小时，恢复16小时后：<br>After applying rated voltage for 2000 hours at +105℃ and then resumed for 16 hours:<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% 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                                                                                                                                     |      |      |      |      |      |                                     |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |
| 高温贮存<br>Shelf Life                                                                                                                   | +105℃,1000小时贮存后,恢复16小时后：<br>After storage for 1000 hours at +105℃and then resumed 16 hours<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% 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                                                                                                                                               |      |      |      |      |      |                                     |      |      |         |     |     |                    |     |     |     |     |     |     |      |      |         |      |      |               |      |      |      |      |      |   |   |   |   |   |   |               |   |   |   |   |   |   |   |   |   |   |  |

## 外形图及尺寸表 Case Size Table



|            |                |     |         |                |      |       |     |
|------------|----------------|-----|---------|----------------|------|-------|-----|
| 单位Unit: mm |                |     |         |                |      |       |     |
| D          | 5              | 6.3 | 8       | 10             | 12.5 | 16~18 | 22  |
| F          | 2              | 2.5 | 3.5     | 5.0            | 5.0  | 7.5   | 10  |
| d          | 0.5            | 0.5 | 0.5、0.6 | 0.6            | 0.6  | 0.8   | 0.8 |
| αMAX       | α L < 20 > 1.5 |     |         | βMAX           |      |       |     |
|            | α L ≥ 20 > 2.0 |     |         |                |      |       |     |
|            |                |     |         | β D < 20 > 0.5 |      |       |     |
|            |                |     |         | β D ≥ 20 > 1.0 |      |       |     |



## 频率修正系数 Frequency Coefficient

| Rated Voltage(V) | Freq.(Hz)<br>CAP(µF) | 50   | 120  | 300  | 1K   | 10K  | 100K |
|------------------|----------------------|------|------|------|------|------|------|
| 6.3~100          | ~47                  | 0.75 | 1.00 | 1.35 | 1.57 | 2.00 | 2.30 |
|                  | 100~470              | 0.80 | 1.00 | 1.23 | 1.34 | 1.50 | 1.65 |
|                  | ≥560                 | 0.85 | 1.00 | 1.10 | 1.13 | 1.15 | 1.40 |
| 160~450          | 0.47~4.7             | 0.65 | 1.00 | 1.35 | 1.75 | 2.30 | 2.50 |
|                  | 6.8~82               | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 1.80 |
|                  | ≥100                 | 0.80 | 1.00 | 1.15 | 1.30 | 1.40 | 1.50 |

## 尺寸 Dimensions

| CAP(µF)<br>WV |     | 6.3V(0J) |        | 10V(1A) |        | 16V(1C) |        | 25V(1E) |        | 35V(1V) |        | 50V(1H) |        |
|---------------|-----|----------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
|               |     | Size     | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple |
| 0.1           | 0R1 |          |        |         |        |         |        |         |        |         |        | 5×11    | 1      |
| 0.22          | R22 |          |        |         |        |         |        |         |        |         |        | 5×11    | 3      |
| 0.33          | R33 |          |        |         |        |         |        |         |        |         |        | 5×11    | 4      |
| 0.47          | R47 |          |        |         |        |         |        |         |        |         |        | 5×11    | 7      |
| 1             | 010 |          |        |         |        |         |        |         |        |         |        | 5×11    | 13     |
| 2.2           | 2R2 |          |        |         |        |         |        |         |        | 5×11    | 25     | 5×11    | 20     |
| 3.3           | 3R3 |          |        |         |        |         |        |         |        |         |        | 5×11    | 35     |
| 4.7           | 4R7 |          |        |         |        | 5×11    | 40     | 5×11    | 40     | 5×11    | 30     | 5×11    | 40     |
| 10            | 100 |          |        |         |        | 5×11    | 50     | 5×11    | 50     | 5×11    | 45     | 5×11    | 55     |
| 22            | 220 |          |        | 5×11    | 50     | 5×11    | 55     | 5×11    | 65     | 5×11    | 65     | 5×11    | 80     |
| 33            | 330 | 5×11     | 55     | 5×11    | 65     | 5×11    | 65     | 5×11    | 85     | 5×11    | 85     | 5×11    | 100    |
| 47            | 470 | 5×11     | 70     | 5×11    | 75     | 5×11    | 80     | 5×11    | 100    | 6.3×11  | 105    | 6.3×11  | 135    |
| 100           | 101 | 5×11     | 100    | 5×11    | 105    | 5×11    | 125    | 6.3×11  | 160    | 6.3×11  | 170    | 8×11.5  | 230    |
| 220           | 221 | 5×11     | 155    | 6.3×11  | 170    | 6.3×11  | 215    | 8×11.5  | 285    | 8×11.5  | 295    | 10×16   | 510    |
| 330           | 331 | 6.3×11   | 215    | 6.3×11  | 240    | 8×11.5  | 315    | 8×11.5  | 340    | 10×12.5 | 420    | 10×16   | 590    |
| 470           | 471 | 6.3×11   | 260    | 6.3×11  | 285    | 8×11.5  | 365    | 10×12.5 | 470    | 10×16   | 545    | 10×20   | 705    |
| 680           | 681 | 8×11.5   | 365    | 8×11.5  | 410    | 10×12.5 | 480    | 10×16   | 620    | 10×20   | 680    | 12.5×20 | 925    |
| 1000          | 102 | 8×11.5   | 445    | 10×12.5 | 570    | 10×16   | 680    | 10×20   | 820    | 12.5×20 | 1025   | 12.5×25 | 1285   |
| 2200          | 222 |          |        | 10×16   | 620    | 10×20   | 720    | 12.5×20 | 920    | 12.5×25 | 1150   |         |        |
| 3300          | 332 | 10×20    | 1030   | 12.5×20 | 1205   | 12.5×25 | 1390   | 16×25   | 1645   | 18×25   | 1820   | 18×35   | 2165   |
| 4700          | 472 | 12.5×20  | 1280   | 12.5×25 | 1490   | 16×25   | 1740   | 16×30   | 2010   | 18×35   | 2335   |         |        |
| 6800          | 682 | 12.5×25  | 1555   | 16×25   | 1825   | 16×30   | 2080   | 16×35   | 2308   | 18×40   | 2400   |         |        |
| 10000         | 103 | 16×25    | 1900   | 16×30   | 1980   | 16×35   | 2380   | 18×35   | 2500   |         |        |         |        |
| 22000         | 223 | 18×35    | 2400   | 18×40   | 2410   |         |        |         |        |         |        |         |        |
| 33000         | 333 | 18×40    | 2555   |         |        |         |        |         |        |         |        |         |        |

Size φD×L(mm)  
Maximum Allowable Ripple Current (mA rms) at 105℃ 120Hz

尺寸 Dimensions

| CAP(μF) \ WV |     | 63V(1J) |        | 100V(2A) |        | 160V(2C) |        | 200V(2D) |        | 220V(2P) |        |
|--------------|-----|---------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|              |     | Size    | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple |
| 0.1          | 0R1 | 5×11    | 2      |          |        |          |        |          |        |          |        |
| 1            | 010 | 5×11    | 15     | 5×11     | 15     |          |        |          |        |          |        |
| 2.2          | 2R2 |         |        | 5×11     | 25     |          |        |          |        |          |        |
| 3.3          | 3R3 |         |        | 5×11     | 35     |          |        | 6.3×11   | 35     | 6.3×11   | 35     |
| 4.7          | 4R7 | 5×11    | 40     | 5×11     | 40     | 6.3×11   | 51     | 6.3×11   | 53     | 6.3×11   | 53     |
| 10           | 100 | 5×11    | 60     | 6.3×11   | 85     | 8×11.5   | 91     | 8×11.5   | 91     | 8×11.5   | 91     |
| 22           | 220 | 5×11    | 80     | 6.3×11   | 95     | 10×12.5  | 150    | 10×16    | 165    | 10×16    | 165    |
|              |     | 6.3×11  | 90     | 8×11.5   | 150    |          |        |          |        |          |        |
| 33           | 330 | 6.3×11  | 120    | 8×11.5   | 145    | 10×16    | 205    | 10×20    | 225    | 10×20    | 225    |
|              |     |         |        | 10×12.5  | 260    |          |        |          |        |          |        |
| 47           | 470 | 6.3×11  | 145    | 10×12.5  | 280    | 10×20    | 270    | 10×25    | 300    | 12.5×20  | 300    |
|              |     | 8×11.5  | 155    | 10×16    | 280    |          |        |          |        |          |        |
| 68           | 680 | 8×11.5  | 155    | 10×16    | 300    | 12.5×20  | 350    | 12.5×20  | 350    | 12.5×25  | 380    |
| 82           | 820 |         |        |          |        | 12.5×20  | 390    | 12.5×25  | 420    | 16×20    | 440    |
| 100          | 101 | 10×12.5 | 260    | 10×20    | 350    | 12.5×25  | 470    | 16×20    | 490    | 16×25    | 530    |
|              |     |         |        | 12.5×20  | 470    |          |        |          |        |          |        |
| 150          | 151 |         |        |          |        | 16×20    | 600    | 16×25    | 660    | 16×30    | 690    |
| 180          | 181 |         |        |          |        | 16×25    | 720    | 16×30    | 780    | 16×35    | 820    |
| 220          | 221 | 10×20   | 505    | 12.5×25  | 660    | 16×30    | 860    | 16×35    | 920    | 16×40    | 950    |
|              |     |         |        | 16×25    | 960    |          |        |          |        |          |        |
| 270          | 271 |         |        |          |        | 16×35    | 1020   | 16×40    | 1080   | 18×35    | 1100   |
| 330          | 331 | 12.5×20 | 690    | 12.5×25  | 800    | 16×40    | 1200   | 18×35    | 1200   | 18×40    | 1250   |
|              |     |         |        | 16×25    | 1030   |          |        |          |        |          |        |
| 390          | 391 |         |        |          |        | 18×35    | 1280   | 18×40    | 1350   | 18×45    | 1400   |
| 470          | 471 | 12.5×20 | 810    | 16×25    | 1050   | 18×40    | 1490   | 18×45    | 1570   |          |        |
|              |     |         |        | 16×30    | 1250   |          |        |          |        |          |        |
| 560          | 561 |         |        |          |        | 18×45    | 1700   |          |        |          |        |
| 680          | 681 | 12.5×25 | 1160   | 16×30    | 1290   |          |        |          |        |          |        |
|              |     |         |        | 16×35    | 1470   |          |        |          |        |          |        |
| 1000         | 102 | 16×25   | 1450   | 18×40    | 2020   |          |        |          |        |          |        |
| 2200         | 222 | 18×35   | 1785   |          |        |          |        |          |        |          |        |

Size φD×L(mm)  
Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz



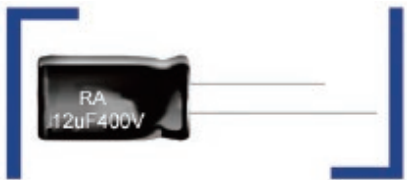
尺寸 Dimensions

| CAP(μF) \ WV |     | 250V(2E) |        | 350V(2V) |        | 400V(2G) |        | 420V(2M) |        | 450V(2W) |        |
|--------------|-----|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|              |     | Size     | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple |
| 1            | 010 | 6.3×11   | 16     | 6.3×11   | 18     | 6.3×11   | 19     | 6.3×11   | 19     | 6.3×11   | 18     |
| 2.2          | 2R2 | 6.3×11   | 29     | 6.3×11   | 30     | 6.3×11   | 32     | 8×11.5   | 32     | 8×11.5   | 30     |
| 3.3          | 3R3 | 6.3×11   | 37     | 6.3×11   | 40     | 8×11.5   | 42     | 8×11.5   | 42     | 8×11.5   | 40     |
| 4.7          | 4R7 | 8×11.5   | 53     | 8×11.5   | 55     | 8×11.5   | 56     | 8×16     | 60     | 8×16     | 58     |
|              |     |          |        |          |        | 10x8     | 52     |          |        |          |        |
| 5.6          | 5R6 |          |        |          |        | 10x8     | 57     |          |        |          |        |
| 6.8          | 6R8 | 8×11.5   | 73     | 8×12     | 75     | 8×12     | 75     | 8×16     | 80     | 10×16    | 90     |
|              |     |          |        |          |        | 10x8.5   | 70     |          |        |          |        |
| 8.2          | 8R2 | 8×11.5   | 80     | 8×16     | 82     | 8×16     | 82     | 10×16    | 98     | 10×16    | 98     |
| 10           | 100 | 8×16     | 102    | 10×12.5  | 105    | 10×12.5  | 105    | 10×16    | 115    | 10×20    | 120    |
| 15           | 150 | 10×16    | 135    | 10×20    | 150    | 10×20    | 150    | 10×25    | 165    | 10×25    | 165    |
| 22           | 220 | 10×20    | 180    | 10×25    | 200    | 10×25    | 200    | 12.5×20  | 205    | 12.5×25  | 215    |
| 33           | 330 | 10×25    | 245    | 12.5×25  | 270    | 12.5×25  | 270    | 16×20    | 270    | 16×20    | 270    |
| 39           | 390 | 12.5×20  | 260    | 16×20    | 300    | 16×20    | 300    | 16×20    | 300    | 16×25    | 330    |
| 47           | 470 | 12.5×25  | 320    | 16×20    | 330    | 16×25    | 360    | 16×25    | 360    | 16×30    | 395    |
| 56           | 560 | 12.5×25  | 350    | 16×25    | 400    | 16×25    | 400    | 16×30    | 430    | 16×30    | 430    |
| 68           | 680 | 16×20    | 400    | 16×30    | 475    | 16×30    | 475    | 16×30    | 475    | 16×35    | 510    |
| 82           | 820 | 16×25    | 480    | 16×30    | 520    | 16×35    | 580    | 16×35    | 580    | 16×40    | 590    |
| 100          | 101 | 16×25    | 530    | 16×35    | 620    | 16×35    | 650    | 16×40    | 650    | 18×35    | 650    |
| 120          | 121 | 16×30    | 620    | 16×40    | 720    | 18×35    | 720    | 18×40    | 750    | 18×40    | 750    |
| 150          | 151 | 16×35    | 750    | 18×40    | 840    | 18×40    | 780    | 18×45    | 880    | 18×45    | 880    |
| 180          | 181 | 16×40    | 880    | 18×45    | 960    | 18×50    | 1000   | 22×40    | 1000   | 22×40    | 1000   |
| 220          | 221 | 18×40    | 1010   | 22×40    | 1100   | 22×45    | 1120   |          |        |          |        |

Size φD×L(mm)  
Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

# RA 抗雷击，高纹波品

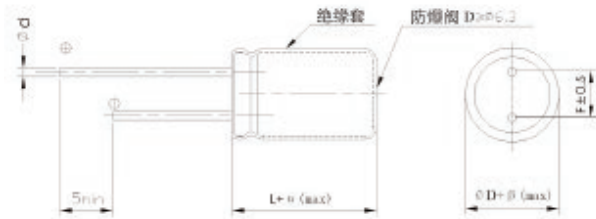
- 特殊的抗雷击及耐大纹波设计，特别适合网络通信类电源适配器使用。  
The design of the special can withstand the surge of lightning,  
Very suitable for network communication power supply use
- 体积缩小品，105℃ 2000 小时寿命保证。  
Downsized, 2000 hours at 105℃
- ROHS 指令已对应完毕。  
Adapted to the ROHS directive.



## 主要技术性能 Specifications

| 项目 Items                                                       | 特性 Characteristics                                                                                                                                                                                                                                                                                                                      |      |      |      |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|
| 使用温度范围<br>Operating Temperature Range                          | -25 ~ +105℃                                                                                                                                                                                                                                                                                                                             |      |      |      |
| 额定电压范围<br>Rated Voltage Range                                  | 400 ~ 500V                                                                                                                                                                                                                                                                                                                              |      |      |      |
| 标称容量范围<br>Nominal Capacitance Range                            | 2.2~ 47μF                                                                                                                                                                                                                                                                                                                               |      |      |      |
| 标称容量允许偏差<br>Capacitance Tolerance                              | ±20% ( 120Hz , +20℃ )                                                                                                                                                                                                                                                                                                                   |      |      |      |
| 漏电流<br>Leakage Current                                         | I ≤0.03CV (μA)+20μA 2分钟 ( 2 minutes ) ( +20℃ )                                                                                                                                                                                                                                                                                          |      |      |      |
| 损耗角正切值 ( tgδ )<br>Dissipation Factor ( +20℃, 120Hz)            | U <sub>R</sub> (V)                                                                                                                                                                                                                                                                                                                      | 400  | 450  | 500  |
|                                                                | tgδ                                                                                                                                                                                                                                                                                                                                     | 0.15 | 0.15 | 0.20 |
|                                                                | ( 120Hz , +20℃ )                                                                                                                                                                                                                                                                                                                        |      |      |      |
| 温度特性 Temperature Characteristics<br>(Impedance ratio at 120Hz) | U <sub>R</sub> (V)                                                                                                                                                                                                                                                                                                                      | 400  | 450  | 500  |
|                                                                | Z-25℃ / Z+20℃                                                                                                                                                                                                                                                                                                                           | 6    | 6    | 8    |
| 耐久性<br>Load Life                                               | +105℃,加额定电压2000小时,恢复16小时后：<br>After applying rated voltage for 2000hours at +105℃ and then resumed 16 hours<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% 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 |      |      |      |
| 高温贮存<br>Shelf Life                                             | +105℃,1000小时贮存后,恢复16小时后：<br>After storage for 1000 hours at +105℃ and then resumed 16 hours<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% 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     |      |      |      |

## 外形图及尺寸表 Case Size Table



| 单位Unit:mm |                                  |         |         |       |
|-----------|----------------------------------|---------|---------|-------|
| D         | 6.3                              | 8       | 10~12.5 | 16~18 |
| F         | 2.5                              | 3.5     | 5.0     | 7.5   |
| d         | 0.5                              | 0.5、0.6 | 0.6     | 0.8   |
| αMAX      | α L < 20 > 1.5<br>α L ≥ 20 > 2.0 |         | βMAX    | 0.5   |



## 频率修正系数 Frequency Coefficient

| Rated Voltage(V) | Freq.(Hz) |  | 50   | 120  | 300  | 1K   | 10K  | 100K |
|------------------|-----------|--|------|------|------|------|------|------|
|                  | CAP(μF)   |  |      |      |      |      |      |      |
| 400~500          | 2.2~5.6   |  | 0.65 | 1.00 | 1.35 | 1.75 | 2.30 | 2.50 |
|                  | 6.8~47    |  | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 1.80 |

## 尺寸 Dimensions

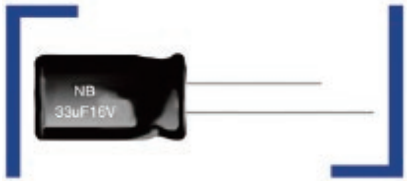
| WV<br>CAP(μF) |     | 400V(2G) |        | 450(2W) |        | 500(2H) |        |
|---------------|-----|----------|--------|---------|--------|---------|--------|
|               |     | Size     | Ripple | Size    | Ripple | Size    | Ripple |
| 2.2           | 2R2 | 6.3×11   | 35     | 8×11.5  | 35     | 8×11.5  | 36     |
| 3.3           | 3R3 | 8×11.5   | 45     | 8×11.5  | 45     | 8×11.5  | 47     |
| 4.7           | 4R7 | 8×11.5   | 60     | 8×12    | 63     | 8×16    | 65     |
| 5.6           | 5R6 | 8×11.5   | 65     | 8×12    | 69     | 10×14   | 72     |
| 6.8           | 6R8 | 8×12     | 80     | 8×16    | 90     | 10×16   | 93     |
| 8.2           | 8R2 | 8×16     | 95     | 10×14   | 105    | 10×16   | 109    |
| 10            | 100 | 10×16    | 115    | 10×16   | 120    | 12.5×15 | 122    |
| 12            | 120 | 10×16    | 125    | 12.5×15 | 135    | 12.5×20 | 138    |
| 15            | 150 | 12.5×15  | 165    | 12.5×20 | 180    | 12.5×20 | 182    |
| 22            | 220 | 12.5×20  | 220    | 12.5×20 | 220    | 16×17   | 225    |
| 27            | 270 | 12.5×20  | 240    | 16×17   | 280    | 16×20   | 283    |
| 33            | 330 | 12.5×20  | 270    | 16×20   | 290    | 18×20   | 295    |
| 39            | 390 | 16×17    | 295    | 16×20   | 320    | 18×25   | 322    |
| 47            | 470 | 16×20    | 360    | 18×20   | 430    | 18×25   | 435    |

注：表格中的尺寸为标准尺寸，当需要其他特殊尺寸时请与我们的销售部门联络。  
Above size is the standard size for our product,If you need special size please contact our salesman  
Size φD×L(mm)  
Maximum Allowable Ripple Current (mA rms) at 105℃ 120Hz



# NB 双极性标准品

- 双极性，标准品，用于极性翻转或极性变换的电路中。  
Bi-polarized Standard series, used in polarity reverse and change circuits.
- ROHS指令已对应完毕。  
Adapted to the ROHS directive.



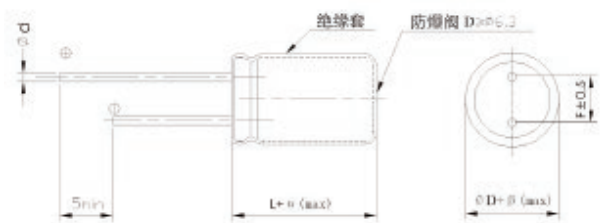
## 主要技术性能 Specifications

| 项目 Items                                                       | 特性 Characteristics                                                                                                                                                                                                                                                                                                                                                                             |      |      |      |      |      |            |      |      |      |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------------|------|------|------|
| 使用温度范围<br>Operating Temperature Range                          | -40 ~ +85℃                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      | -25 ~ +85℃ |      |      |      |
| 额定电压范围<br>Rated Voltage Range                                  | 6.3 ~ 100V                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      | 160V       |      |      |      |
| 标称电容量范围<br>Nominal Capacitance Range                           | 0.47~ 6800μF                                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |      |      |            |      |      |      |
| 标称电容量允许偏差<br>Capacitance Tolerance                             | ±20% ( +20℃ , 120Hz )                                                                                                                                                                                                                                                                                                                                                                          |      |      |      |      |      |            |      |      |      |
| 漏电流<br>Leakage Current                                         | I ≤0.03CV +3(μA) 2分钟 ( at 20℃, after 2 minutes )                                                                                                                                                                                                                                                                                                                                               |      |      |      |      |      |            |      |      |      |
| 损耗角正切值 ( tgδ )<br>Dissipation Factor (+20℃, 120Hz)             | UR (V)                                                                                                                                                                                                                                                                                                                                                                                         | 6.3  | 10   | 16   | 25   | 35   | 50         | 63   | 100  | 160  |
|                                                                | tgδ                                                                                                                                                                                                                                                                                                                                                                                            | 0.28 | 0.24 | 0.22 | 0.20 | 0.15 | 0.14       | 0.13 | 0.13 | 0.15 |
| 温度特性 Temperature Characteristics<br>(Impedance ratio at 120Hz) | UR (V)                                                                                                                                                                                                                                                                                                                                                                                         | 6.3  | 10   | 16   | 25   | 35   | 50         | 63   | 100  | 160  |
|                                                                | Z-25℃ / Z+20℃                                                                                                                                                                                                                                                                                                                                                                                  | 4    | 3    | 2    | 2    | 2    | 2          | 2    | 2    | 4    |
|                                                                | Z-40℃ / Z+20℃                                                                                                                                                                                                                                                                                                                                                                                  | 10   | 8    | 6    | 5    | 4    | 4          | 3    | 3    |      |
| 耐久性<br>Load Life                                               | +85℃加额定电压2000小时 ( 每250小时反转极性一次 ) 恢复16小时后：<br>After applying rated voltage for2000 hours at +85℃( with the polarity inverted every 250 hours ) and then resumed 16 hours:<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value<br>漏 电 流 Leakage current : ≤初始规定值 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 |      |      |      |      |      |            |      |      |      |
| 高温贮存<br>Shelf Life                                             | +85℃,1000小时贮存后,恢复16小时后：<br>After storage for 1000 hours at +85℃ and then resumed 16 hours<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% 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                                                                |      |      |      |      |      |            |      |      |      |

## 频率修正系数 Frequency Coefficient

| F(Hz)      | 60  | 120 | 1K   | ≥10k |
|------------|-----|-----|------|------|
| CAP(μF)    |     |     |      |      |
| 0.47 ~ 68  | 0.8 | 1   | 1.45 | 1.7  |
| 100 ~ 470  | 0.8 | 1   | 1.35 | 1.5  |
| 680 ~ 6800 | 0.8 | 1   | 1.2  | 1.3  |

## 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              | 2.5 | 3.5     | 5.0            | 5.0  | 7.5 | 7.5 |
| d         | 0.5            | 0.5 | 0.5、0.6 | 0.6            | 0.6  | 0.8 | 0.8 |
| αMAX      | α L < 20 > 1.5 |     | βMAX    | α D < 20 > 0.5 |      |     |     |
|           | α L ≥ 20 > 2.0 |     |         | α D ≥ 20 > 1.0 |      |     |     |

## 尺寸 Dimensions

| WV<br>CAP(μF) |     | 6.3V(0J) |        | 10V(1A) |        | 16V(1C) |        | 25V(1E) |        | 35V(1V) |        |
|---------------|-----|----------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
|               |     | Size     | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple |
| 4.7           | 4R7 |          |        |         |        |         |        |         |        | 5×11    | 34     |
| 10            | 100 |          |        |         |        | 5×11    | 47     | 5×11    | 42     | 5×11    | 43     |
| 22            | 220 |          |        | 5×11    | 57     | 5×11    | 57     | 6.3×11  | 65     | 6.3×11  | 73     |
|               |     |          |        |         |        |         |        | 5×11    | 42     |         |        |
| 33            | 330 | 5×11     | 64     | 5×11    | 64     | 5×11    | 68     | 6.3×11  | 80     | 8×11.5  | 100    |
| 47            | 470 | 5×11     | 76     | 5×11    | 76     | 6.3×11  | 95     | 6.3×11  | 95     | 8×11.5  | 120    |
|               |     |          |        |         |        |         |        | 5×11    | 76     |         |        |
| 100           | 101 | 6.3×11   | 125    | 6.3×11  | 125    | 8×11.5  | 160    | 8×11.5  | 160    | 10×16   | 230    |
| 220           | 221 | 8×11.5   | 215    | 8×11.5  | 215    | 10×12.5 | 275    | 10×16   | 305    | 12.5×20 | 410    |
| 330           | 331 | 8×11.5   | 265    | 10×16   | 345    | 10×16   | 375    | 12.5×20 | 450    | 12.5×20 | 505    |
| 470           | 471 | 10×12.5  | 370    | 10×16   | 410    | 10×20   | 485    | 12.5×20 | 540    | 12.5×25 | 655    |
| 1000          | 102 | 10×20    | 650    | 12.5×20 | 720    | 16×25   | 855    | 16×25   | 950    | 16×30   | 1140   |
| 2200          | 222 | 12.5×25  | 1160   | 16×25   | 1280   | 16×30   | 1510   | 18×35   | 1620   | 18×40   | 1650   |
| 3300          | 332 | 16×25    | 1570   | 16×30   | 1690   | 18×35   | 1980   |         |        |         |        |
| 4700          | 472 | 16×30    | 2020   | 18×35   | 2160   |         |        |         |        |         |        |
| 6800          | 682 | 18×35    | 2600   |         |        |         |        |         |        |         |        |

| WV<br>CAP(μF) |     | 50V(1H) |        | 63V(1J) |        | 100V(2A) |        | 160V(2C) |        |
|---------------|-----|---------|--------|---------|--------|----------|--------|----------|--------|
|               |     | Size    | Ripple | Size    | Ripple | Size     | Ripple | Size     | Ripple |
| 0.47          | R47 | 5×11    | 11     |         |        | 5×11     | 14     |          |        |
| 1             | 010 | 5×11    | 17     |         |        | 5×11     | 21     |          |        |
| 2.2           | 2R2 | 5×11    | 25     |         |        | 6.3×11   | 34     |          |        |
|               |     |         |        |         |        | 8×11.5   | 36     |          |        |
| 3.3           | 3R3 | 5×11    | 27     | 5×11    | 28     | 6.3×11   | 39     | 10×16    | 49     |
|               |     |         |        |         |        | 8×11.5   | 45     |          |        |
| 4.7           | 4R7 | 5×11    | 34     | 6.3×11  | 34     | 6.3×11   | 47     | 10×16    | 59     |
|               |     |         |        |         |        | 8×11.5   | 65     |          |        |
| 6.8           | 6R8 | 5×11    | 38     | 6.3×11  | 42     | 6.3×11   | 48     |          |        |
|               |     |         |        |         |        | 8×11.5   | 75     |          |        |
| 10            | 100 | 5×11    | 40     | 6.3×11  | 57     | 8×11.5   | 71     | 12.5×20  | 109    |
|               |     | 6.3×11  | 52     |         |        |          |        |          |        |
| 22            | 220 | 8×11.5  | 89     | 8×11.5  | 95     | 10×16    | 135    | 12.5×25  | 177    |
| 33            | 330 | 6.3×11  | 54     | 10×12.5 | 135    | 12.5×20  | 220    | 16×25    | 240    |
|               |     | 8×11.5  | 105    |         |        |          |        |          |        |
| 47            | 470 | 8×11.5  | 110    | 10×16   | 180    | 12.5×20  | 240    | 16×35    | 329    |
|               |     | 10×12.5 | 150    |         |        |          |        |          |        |
| 100           | 101 | 10×20   | 265    | 12.5×20 | 320    | 16×25    | 425    | 18×35    | 425    |
| 220           | 221 | 12.5×25 | 480    | 16×25   | 575    | 18×35    | 720    |          |        |
| 330           | 331 | 16×25   | 650    | 16×30   | 655    |          |        |          |        |
| 470           | 471 | 16×30   | 835    | 18×35   | 965    |          |        |          |        |

Size φD×L(mm)  
Maximum Allowable Ripple Current (mA rms) at 85°C 120Hz



# FB 105℃ 双极性标准品

- 双极性，标准品，用于极性翻转或极性变换的电路中。  
Bi-polar Standard series, used in polarity reverse and change circuits.
- ROHS指令已对应完毕。  
Adapted to the ROHS directive.



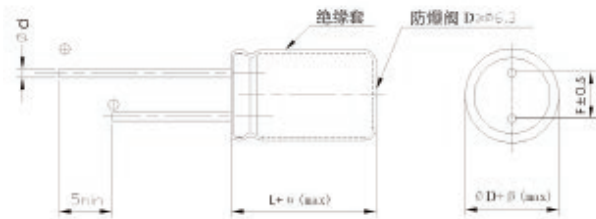
## 主要技术性能 Specifications

| 项目 Items                                                          | 特性 Characteristics                                                                                                                                                                                                                                                                                                                                                                             |      |      |      |      |      |      |      |      |  |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|--|
| 使用温度范围<br>Operating Temperature Range                             | -40 ~ +105℃                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |      |      |      |      |      |  |
| 额定电压范围<br>Rated Voltage Range                                     | 6.3 ~ 100V                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |      |      |      |  |
| 标称电容量范围<br>Nominal Capacitance Range                              | 0.47~ 4700μF                                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |      |      |      |      |      |  |
| 标称电容量允许偏差<br>Capacitance Tolerance                                | ±20% ( 120Hz , +20℃ )                                                                                                                                                                                                                                                                                                                                                                          |      |      |      |      |      |      |      |      |  |
| 正反向漏电流<br>Leakage Current                                         | I ≤0.03CV +3(μA) 2分钟 ( at 20℃, after 2 minutes )                                                                                                                                                                                                                                                                                                                                               |      |      |      |      |      |      |      |      |  |
| 损耗角正切值 ( tgδ )<br>Dissipation Factor ( +20℃, 120Hz)               | UR (V)                                                                                                                                                                                                                                                                                                                                                                                         | 6.3  | 10   | 16   | 25   | 35   | 50   | 63   | 100  |  |
|                                                                   | tgδ                                                                                                                                                                                                                                                                                                                                                                                            | 0.28 | 0.24 | 0.22 | 0.20 | 0.15 | 0.14 | 0.13 | 0.13 |  |
| 温度特性<br>Temperature Characteristics<br>(Impedance ratio at 120Hz) | UR (V)                                                                                                                                                                                                                                                                                                                                                                                         | 6.3  | 10   | 16   | 25   | 35   | 50   | 63   | 100  |  |
|                                                                   | Z-25℃ / Z+20℃                                                                                                                                                                                                                                                                                                                                                                                  | 4    | 3    | 2    | 2    | 2    | 2    | 2    | 2    |  |
|                                                                   | Z-40℃ / Z+20℃                                                                                                                                                                                                                                                                                                                                                                                  | 10   | 8    | 6    | 5    | 4    | 4    | 3    | 3    |  |
| 耐久性<br>Load Life                                                  | 105℃加额定电压2000小时 ( 每250小时反转极性一次 ) 恢复16小时后：<br>After applying rated voltage for2000 hours at 105℃( with the polarity inverted every 250 hours ) and then resumed 16 hours:<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value<br>漏 电 流 Leakage current : ≤初始规定值 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 |      |      |      |      |      |      |      |      |  |
| 高温贮存<br>Shelf Life                                                | +105℃,1000小时贮存后,恢复16小时后：<br>After storage for 1000 hours at +105℃and then resumed 16 hours<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% 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                                                               |      |      |      |      |      |      |      |      |  |

## 频率修正系数 Frequency Coefficient

| F(Hz)    | 60  | 120 | 1K   | ≥10k |
|----------|-----|-----|------|------|
| CAP(μF)  |     |     |      |      |
| 0.47~ 68 | 0.8 | 1   | 1.45 | 1.7  |
| 100~470  | 0.8 | 1   | 1.35 | 1.5  |
| 680~4700 | 0.8 | 1   | 1.2  | 1.3  |

## 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              | 2.5 | 3.5     | 5.0            | 5.0  | 7.5 | 7.5 |
| d         | 0.5            | 0.5 | 0.5、0.6 | 0.6            | 0.6  | 0.8 | 0.8 |
| αMAX      | α L < 20 > 1.5 |     | βMAX    | α D < 20 > 0.5 |      |     |     |
|           | α L ≥ 20 > 2.0 |     |         | α D ≥ 20 > 1.0 |      |     |     |

## 尺寸 Dimensions

| WV<br>CAP(μF) |     | 6.3V(0J) |        | 10V(1A) |        | 16V(1C) |        | 25V(1E) |        | 35V(1V) |        |
|---------------|-----|----------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
|               |     | Size     | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple | Size    | Ripple |
| 4.7           | 4R7 |          |        |         |        |         |        |         |        | 5×11    | 34     |
| 10            | 100 |          |        |         |        | 5×11    | 38     | 5×11    | 42     | 5×11    | 43     |
| 22            | 220 |          |        | 5×11    | 48     | 5×11    | 55     | 6.3×11  | 65     | 6.3×11  | 73     |
| 33            | 330 | 5×11     | 58     | 5×11    | 60     | 5×11    | 64     | 6.3×11  | 80     | 8×11.5  | 100    |
| 47            | 470 | 5×11     | 76     | 5×11    | 76     | 6.3×11  | 95     | 6.3×11  | 95     | 8×11.5  | 120    |
| 100           | 101 | 5×11     | 100    | 6.3×11  | 125    | 6.3×11  | 130    | 8×11.5  | 160    | 10×12.5 | 200    |
| 220           | 221 | 8×11.5   | 155    | 8×11.5  | 160    | 8×11.5  | 205    | 10×12.5 | 255    | 10×20   | 325    |
| 330           | 331 | 8×11.5   | 205    | 8×11.5  | 215    | 10×12.5 | 260    | 10×16   | 320    | 12.5×20 | 380    |
| 470           | 471 | 10×12.5  | 280    | 10×12.5 | 310    | 10×16   | 365    | 12.5×20 | 435    | 12.5×25 | 520    |
| 1000          | 102 | 10×16    | 360    | 10×20   | 445    | 12.5×20 | 535    | 12.5×25 | 580    | 16×25   | 780    |
| 2200          | 222 | 12.5×20  | 680    | 16×25   | 885    | 16×30   | 1050   |         |        |         |        |
| 3300          | 332 | 16×25    | 1050   | 16×30   | 1150   |         |        |         |        |         |        |
| 4700          | 472 | 16×30    | 1250   |         |        |         |        |         |        |         |        |

| WV<br>CAP(μF) |     | 50V(1H) |        | 63V(1J) |        | 100V(2A) |        |
|---------------|-----|---------|--------|---------|--------|----------|--------|
|               |     | Size    | Ripple | Size    | Ripple | Size     | Ripple |
| 0.47          | R47 | 5×11    | 8      | 5×11    | 9      | 5×11     | 10     |
| 1             | 010 | 5×11    | 12     | 5×11    | 15     | 5×11     | 16     |
| 2.2           | 2R2 | 5×11    | 18     | 5×11    | 22     | 6.3×11   | 24     |
| 3.3           | 3R3 | 5×11    | 27     | 5×11    | 28     | 6.3×11   | 30     |
| 4.7           | 4R7 | 5×11    | 34     | 6.3×11  | 34     | 6.3×11   | 35     |
| 10            | 100 | 5×11    | 34     | 6.3×11  | 57     | 8×11.5   | 71     |
|               |     | 6.3×11  | 52     |         |        |          |        |
| 22            | 220 | 8×11.5  | 89     | 8×11.5  | 95     | 10×16    | 135    |
| 33            | 330 | 8×11.5  | 105    | 10×12.5 | 135    | 10×20    | 185    |
| 47            | 470 | 10×12.5 | 150    | 10×16   | 180    | 12.5×20  | 200    |
| 100           | 101 | 10×16   | 205    | 12.5×20 | 320    | 16×25    | 425    |
| 220           | 221 | 12.5×20 | 360    | 12.5×25 | 430    | 16×35    | 520    |
| 330           | 331 | 16×25   | 550    | 16×30   | 580    |          |        |
| 470           | 471 | 16×30   | 580    | 18×35   | 760    |          |        |

Size φD×L(mm)  
Maximum Allowable Ripple Current (mA rms) at 105℃ 120Hz

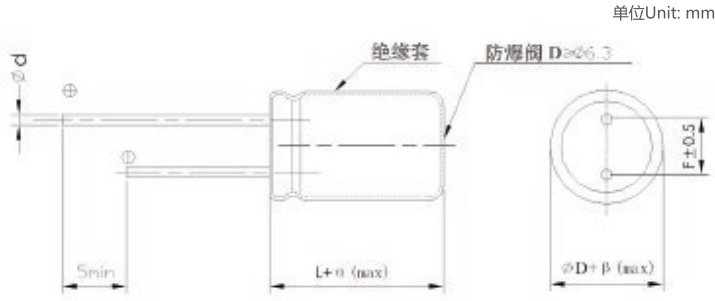
GF

- 高频率，超低ESR，寿命2000~4000小时，105℃  
Super Low ESR at high frequency, Life time:2000~4000 hours at 105℃
- 适用于LED照明驱动电源，电脑主机板、开关电源、高保真音响，高分辨数码彩电等电子线路中  
Used in LED Lighting , main board ,switching power supply, hi-fi acoustics, numeral color-TV circuits etc.
- ROHS指令已对应完毕。Adapted 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℃                                                                                                                                                                                                                                                                                                                               |       |      |      |       |      | -25 ~ +105℃                                                                                                                                 |       |      |         |         |     |
| 额定电压范围<br>Rated Voltage Range                                 | 6.3 ~ 100V                                                                                                                                                                                                                                                                                                                                |       |      |      |       |      | 160 ~ 450V                                                                                                                                  |       |      |         |         |     |
| 标称电容容量范围<br>Nominal Capacitance Range                         | 1 ~ 18000μF                                                                                                                                                                                                                                                                                                                               |       |      |      |       |      |                                                                                                                                             |       |      |         |         |     |
| 标称电容量允许偏差<br>Capacitance Tolerance                            | ±20% (120Hz, +20℃)                                                                                                                                                                                                                                                                                                                        |       |      |      |       |      |                                                                                                                                             |       |      |         |         |     |
| 漏电流<br>Leakage Current                                        | I≤0.01CV (μA)或3μA 2分钟 取较大者<br>(at 20℃,after 2 minutes) (Whichever is greater)                                                                                                                                                                                                                                                             |       |      |      |       |      | CV≤1000 : I=0.01CV+40(μA) max<br>CV > 1000 : I=0.04CV+100(μA) max<br>20℃ 1分钟额定电压下的漏电流<br>After 1 minute application of rated voltage at 20℃ |       |      |         |         |     |
| 损耗角正切值 ( tgδ )<br>Dissipation Factor (+20℃, 120Hz)            |                                                                                                                                                                                                                                                                                                                                           |       |      |      |       |      |                                                                                                                                             |       |      |         |         |     |
|                                                               | U <sub>R</sub> (V)                                                                                                                                                                                                                                                                                                                        | 6.3   | 10   | 16   | 25    | 35   | 50                                                                                                                                          | 63    | 100  | 160~250 | 400~450 |     |
|                                                               | tgδ                                                                                                                                                                                                                                                                                                                                       | 0.22  | 0.19 | 0.16 | 0.14  | 0.12 | 0.10                                                                                                                                        | 0.09  | 0.08 | 0.20    | 0.24    |     |
|                                                               | 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.                                                                                                                                                                                                     |       |      |      |       |      |                                                                                                                                             |       |      |         |         |     |
| 温度特性Temperature Characteristics<br>(Impedance ratio at 120Hz) |                                                                                                                                                                                                                                                                                                                                           |       |      |      |       |      |                                                                                                                                             |       |      |         |         |     |
|                                                               | U <sub>R</sub> (V)                                                                                                                                                                                                                                                                                                                        | 6.3   | 10   | 16   | 25    | 35   | 50                                                                                                                                          | 63    | 100  | 160~250 | 400     | 450 |
|                                                               | Z-25℃ / Z+20℃                                                                                                                                                                                                                                                                                                                             | 4     | 3    | 2    | 2     | 2    | 2                                                                                                                                           | 2     | 2    | 3       | 5       | 6   |
|                                                               | Z-40℃ / Z+20℃                                                                                                                                                                                                                                                                                                                             | 8     | 6    | 6    | 4     | 3    | 3                                                                                                                                           | 3     | 3    |         |         |     |
| 耐久性<br>Load Life                                              | 试验条件Test conditions 持续时间 Duration :                                                                                                                                                                                                                                                                                                       |       |      |      |       |      |                                                                                                                                             |       |      |         |         |     |
|                                                               | ΦD                                                                                                                                                                                                                                                                                                                                        | 5~6.3 |      |      | 8~10  |      |                                                                                                                                             | 12.5~ |      |         |         |     |
|                                                               | Load life                                                                                                                                                                                                                                                                                                                                 | 2000h |      |      | 3000h |      |                                                                                                                                             | 4000h |      |         |         |     |
|                                                               | +105℃加额定电压，恢复16小时后：<br>After applying rated voltage at +105℃ and then resumed for 16 hours :<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% 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                  |       |      |      |       |      |                                                                                                                                             |       |      |         |         |     |
| 高温贮存<br>Shelf Life                                            | +105℃,1000小时贮存后,恢复16小时后：<br>After storage for 1000 hours at +105℃ and then resumed for 16 hours :<br>电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% 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 |       |      |      |       |      |                                                                                                                                             |       |      |         |         |     |

外形图及尺寸表 Case Size Table



|      |                |     |         |      |                |       |
|------|----------------|-----|---------|------|----------------|-------|
| D    | 5              | 6.3 | 8       | 10   | 12.5           | 16~18 |
| F    | 2.0            | 2.5 | 3.5     | 5.0  | 5.0            | 7.5   |
| d    | 0.5            | 0.5 | 0.5、0.6 | 0.6  | 0.6            | 0.8   |
| αMAX | ϕ L < 20 > 1.5 |     |         | βMAX | ϕ D < 20 > 0.5 |       |
|      | ϕ L ≥ 20 > 2.0 |     |         |      | ϕ 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 |
| 4700~18000 | 0.85 | 0.95 | 0.98 | 1.00 |



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 |
| 2.2     | 2R2 |          |       |        |         |       |        |         |       |        | 5×11    | 1.500 | 80     |
| 4.7     | 4R7 |          |       |        |         |       |        |         |       |        | 5×11    | 1.200 | 90     |
| 10      | 100 |          |       |        |         |       |        | 5×11    | 1.300 | 90     | 5×11    | 0.650 | 95     |
| 22      | 220 |          |       |        |         |       |        | 5×11    | 0.650 | 120    | 5×11    | 1.950 | 125    |
| 47      | 470 |          |       |        |         |       |        | 5×11    | 0.450 | 130    |         |       |        |
| 82      | 820 |          |       |        |         |       |        |         |       |        | 6.3×11  | 0.200 | 345    |
| 100     | 101 | 5×11     | 0.300 | 220    | 5×11    | 0.280 | 280    | 5×11    | 0.260 | 200    | 6.3×11  | 0.190 | 345    |
|         |     |          |       |        | 6.3×11  | 0.250 | 340    | 6.3×11  | 0.230 | 345    |         |       |        |
| 120     | 121 |          |       |        |         |       |        | 6.3×11  | 0.225 | 345    | 8×11.5  | 0.117 | 645    |
| 150     | 151 |          |       |        | 6.3×11  | 0.198 | 345    | 6.3×11  | 0.220 | 345    | 8×11.5  | 0.117 | 645    |
|         |     |          |       |        |         |       |        | 8×11.5  | 0.117 | 645    |         |       |        |
| 180     | 181 | 6.3×11   | 0.198 | 345    | 6.3×11  | 0.198 | 345    | 6.3×11  | 0.220 | 345    | 8×11.5  | 0.117 | 645    |
|         |     |          |       |        |         |       |        | 8×11.5  | 0.117 | 645    |         |       |        |
| 220     | 221 | 6.3×11   | 0.198 | 345    | 6.3×11  | 0.198 | 345    | 6.3×11  | 0.198 | 420    | 8×11.5  | 0.117 | 645    |
|         |     |          |       |        |         |       |        | 8×11.5  | 0.117 | 645    | 8×16    | 0.100 | 820    |
| 270     | 271 | 6.3×11   | 0.198 | 345    | 6.3×11  | 0.220 | 345    | 8×11.5  | 0.117 | 645    | 8×11.5  | 0.130 | 645    |
|         |     |          |       |        | 8×11.5  | 0.117 | 645    |         |       |        | 10×12.5 | 0.072 | 870    |
| 330     | 331 | 6.3×11   | 0.198 | 345    | 6.3×11  | 0.198 | 345    | 8×11.5  | 0.117 | 645    | 8×11.5  | 0.078 | 645    |
|         |     | 8×11.5   | 0.117 | 645    | 8×11.5  | 0.117 | 645    |         |       |        | 10×12.5 | 0.072 | 870    |
| 390     | 391 | 8×11.5   | 0.117 | 645    | 8×11.5  | 0.117 | 645    | 8×11.5  | 0.117 | 645    | 8×16    | 0.068 | 980    |
|         |     |          |       |        |         |       |        | 10×12.5 | 0.072 | 870    | 10×12.5 | 0.070 | 880    |
| 470     | 471 | 6.3×11   | 0.198 | 345    | 6.3×11  | 0.105 | 380    | 8×11.5  | 0.093 | 720    | 8×16    | 0.068 | 840    |
|         |     | 8×11.5   | 0.117 | 645    | 8×11.5  | 0.090 | 500    | 10×12.5 | 0.072 | 870    | 10×12.5 | 0.068 | 990    |
| 560     | 561 | 8×11.5   | 0.117 | 645    | 8×11.5  | 0.090 | 645    | 8×14    | 0.080 | 800    | 8×20    | 0.065 | 1160   |
|         |     |          |       |        | 10×12.5 | 0.072 | 870    | 10×12.5 | 0.072 | 870    | 10×16   | 0.060 | 1210   |
| 680     | 681 | 8×11.5   | 0.117 | 645    | 8×11.5  | 0.085 | 645    | 8×16    | 0.078 | 845    | 10×16   | 0.060 | 1210   |
|         |     |          |       |        | 10×12.5 | 0.072 | 870    | 10×12.5 | 0.080 | 865    | 10×20   | 0.041 | 1405   |
| 820     | 821 | 8×11.5   | 0.105 | 645    | 8×16    | 0.078 | 845    | 8×16    | 0.060 | 880    | 10×20   | 0.041 | 1405   |
|         |     | 10×12.5  | 0.072 | 870    |         |       |        | 10×16   | 0.060 | 1210   |         |       |        |
| 1000    | 102 | 8×11.5   | 0.072 | 780    | 8×16    | 0.075 | 840    | 8×16    | 0.065 | 955    | 10×20   | 0.032 | 1820   |
|         |     | 10×12.5  | 0.072 | 870    | 10×12.5 | 0.070 | 845    | 10×16   | 0.060 | 1210   | 12.5×20 | 0.032 | 1905   |
| 1200    | 122 |          |       |        | 10×16   | 0.054 | 1215   | 8×20    | 0.062 | 1055   |         |       |        |
|         |     | 8×14     | 0.078 | 845    | 10×16   | 0.030 | 1300   | 10×20   | 0.046 | 1400   | 10×20   | 0.046 | 1850   |
| 1500    | 152 | 10×12.5  | 0.072 | 870    | 10×20   | 0.041 | 1405   | 10×25   | 0.038 | 1820   | 12.5×20 | 0.032 | 1920   |
|         |     | 8×16     | 0.069 | 845    | 10×16   | 0.054 | 1215   | 10×20   | 0.046 | 1400   | 10×25   | 0.042 | 1850   |
| 1800    | 182 | 10×16    | 0.054 | 1225   | 10×20   | 0.041 | 1405   | 12.5×20 | 0.032 | 1905   | 12.5×20 | 0.032 | 2010   |
|         |     | 10×20    | 0.046 | 1400   | 10×20   | 0.041 | 1405   | 10×25   | 0.038 | 1655   | 12.5×25 | 0.030 | 2125   |
| 2200    | 222 |          |       |        | 12.5×20 | 0.032 | 1905   | 12.5×20 | 0.035 | 1910   | 16×20   | 0.032 | 2220   |
|         |     | 10×20    | 0.046 | 1400   | 10×20   | 0.046 | 1400   | 12.5×20 | 0.035 | 1910   | 12.5×25 | 0.030 | 2125   |
| 2700    | 272 | 10×25    | 0.043 | 1600   | 12.5×20 | 0.032 | 1905   | 12.5×25 | 0.027 | 2130   | 18×20   | 0.027 | 2503   |
|         |     | 10×25    | 0.042 | 1650   | 10×25   | 0.042 | 1650   | 12.5×25 | 0.030 | 2150   | 16×25   | 0.025 | 2410   |
| 3300    | 332 | 12.5×20  | 0.032 | 1906   | 12.5×20 | 0.035 | 1910   | 16×20   | 0.027 | 2480   | 16×30   | 0.021 | 2430   |
|         |     | 10×25    | 0.035 | 1820   | 12.5×25 | 0.030 | 2125   | 12.5×30 | 0.023 | 2430   | 16×30   | 0.020 | 3035   |
| 3900    | 392 | 12.5×20  | 0.032 | 1905   | 16×20   | 0.032 | 2220   | 18×20   | 0.024 | 2505   | 18×25   | 0.022 | 3050   |
|         |     | 12.5×20  | 0.032 | 1905   | 12.5×35 | 0.020 | 2750   | 16×25   | 0.025 | 2560   | 16×35   | 0.018 | 3130   |
| 4700    | 472 |          |       |        | 16×20   | 0.032 | 2220   | 18×20   | 0.025 | 2505   | 18×30   | 0.018 | 3610   |
|         |     | 12.5×25  | 0.027 | 2130   | 12.5×25 | 0.027 | 2130   | 16×30   | 0.020 | 3035   | 18×35   | 0.017 | 3645   |
| 5600    | 562 | 16×20    | 0.032 | 2215   |         |       |        | 18×25   | 0.022 | 2780   |         |       |        |
|         |     | 12.5×30  | 0.023 | 2530   | 16×25   | 0.025 | 2560   | 16×35   | 0.018 | 3130   | 18×40   | 0.014 | 3790   |
| 6800    | 682 | 16×20    | 0.032 | 2220   | 18×20   | 0.031 | 2505   | 18×30   | 0.018 | 3610   |         |       |        |
|         |     | 12.5×40  | 0.017 | 2650   | 16×30   | 0.020 | 3035   | 16×40   | 0.018 | 3620   |         |       |        |
| 8200    | 822 | 16×25    | 0.025 | 2560   | 18×25   | 0.022 | 2780   |         |       |        |         |       |        |
|         |     | 18×20    | 0.031 | 2505   |         |       |        |         |       |        |         |       |        |
| 10000   | 103 | 16×30    | 0.020 | 3035   | 16×35   | 0.018 | 3130   | 18×35   | 0.017 | 3645   |         |       |        |
|         |     |          |       |        | 18×30   | 0.018 | 3610   |         |       |        |         |       |        |
| 12000   | 123 | 16×35    | 0.018 | 3130   | 18×35   | 0.017 | 3645   | 18×40   | 0.014 | 3790   |         |       |        |
|         |     | 18×25    | 0.022 | 2780   |         |       |        |         |       |        |         |       |        |
| 15000   | 153 | 16×40    | 0.015 | 3895   | 18×40   | 0.014 | 3790   |         |       |        |         |       |        |
|         |     | 18×30    | 0.018 | 3610   |         |       |        |         |       |        |         |       |        |
| 18000   | 183 | 18×35    | 0.017 | 3645   |         |       |        |         |       |        |         |       |        |
|         |     | 18×40    | 0.014 | 3790   |         |       |        |         |       |        |         |       |        |

Size ϕD×L(mm)  
Maximum Allowable Ripple Current (mA rms) at 105℃ 100KHz  
Maximum ESR (Ω) at 20℃ 100KHz