

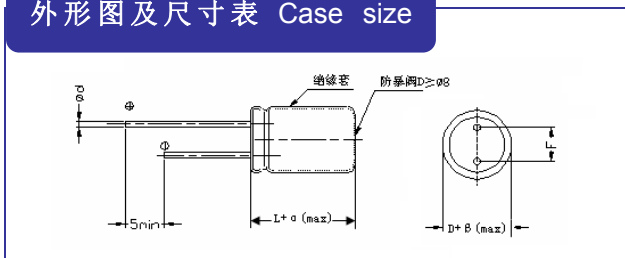
# KM 耐高温品

- 宽温度产品, 105°C, 1000 小时寿命, 体积小, 容量大  
Wide temperature range, 105°C, Load life: 1000 hours, small size, large capacity
- 适用于开关电源、适配器、DVD、背投彩电、空调等线路中。  
Used in Smmps, Adapter, DVD, color-TV, air conditioning circuits etc.
- ROHS 指令已对应完毕。 Adapted to the ROHS directive.

## 主要技术性能 Specifications

| 项目 Item  | 特性 Performance Characteristics  |                                     |                    |        |         |       |        |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
|--|---|-------------------------------------|--------------------|--------|---------|-------|--------|---------|---------|-----|----------------|---------|------|------|------|------|------|------|----------------|------|------|------|----|---|---|---|
| 使用温度范围<br>Operating temperature range                          | -40 ~ +105°C  | -25 ~ +105°C                        |                    |        |         |       |        |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| 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                           | 0.1~22000μF   | 0.47~470μF                          |                    |        |         |       |        |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| 标称电容量允许偏差<br>Capacitance tolerance                             | ± 20% (120Hz, +20°C)  |                                     |                    |        |         |       |        |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| 漏电流<br>Leakage current   | I ≤ 0.01CV 或 3(μA) 2分钟 取较大者<br>(at 20°C, after 2 minutes) (whichever is greater)  | I ≤ 0.03CV + 15 (μA) 1分钟 (1 minute) |                    |        |         |       |        |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| 损耗角正切值 (tg δ)<br>Dissipation factor<br>(+20°C, 120Hz)          | <table border="1"> <thead> <tr> <th>U<sub>R</sub> (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160~450</th> </tr> </thead> <tbody> <tr> <td>tg δ</td> <td>0.25</td> <td>0.20</td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.20</td> </tr> </tbody> </table> <p>容量大于 1000μF 者, 每增加 1000μF, 其损耗角正切值增加 0.02<br/>When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.</p> |                                     | U <sub>R</sub> (V) | 6.3    | 10      | 16    | 25     | 35      | 50      | 63  | 100            | 160~450 | tg δ | 0.25 | 0.20 | 0.17 | 0.15 | 0.12 | 0.10           | 0.09 | 0.08 | 0.20 |    |   |   |   |
| U <sub>R</sub> (V)   | 6.3   | 10                                  | 16                 | 25     | 35      | 50    | 63     | 100     | 160~450 |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| tg δ   | 0.25  | 0.20                                | 0.17               | 0.15   | 0.12    | 0.10  | 0.09   | 0.08    | 0.20    |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| 温度特性 Temperature characteristics<br>(Impedance ratio at 120Hz) | <table border="1"> <thead> <tr> <th>U<sub>R</sub> (V)</th> <th>6.3</th> <th>10</th> <th>16~50</th> <th>63~100</th> <th>160~250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z-25°C / +20°C</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>3</td> <td>6</td> <td>7</td> </tr> <tr> <td>Z-40°C / +20°C</td> <td>≤8</td> <td>≤6</td> <td>≤4</td> <td>≤3</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>  |                                     | U <sub>R</sub> (V) | 6.3    | 10      | 16~50 | 63~100 | 160~250 | 400     | 450 | Z-25°C / +20°C | -       | -    | -    | -    | 3    | 6    | 7    | Z-40°C / +20°C | ≤8   | ≤6   | ≤4   | ≤3 | - | - | - |
| U <sub>R</sub> (V)   | 6.3   | 10                                  | 16~50              | 63~100 | 160~250 | 400   | 450    |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| Z-25°C / +20°C   | -   | -                                   | -                  | -      | 3       | 6     | 7      |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| Z-40°C / +20°C   | ≤8  | ≤6                                  | ≤4                 | ≤3     | -       | -     | -      |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| 耐久性<br>Load life   | <p>+105°C加额定电压 1000 小时, 恢复 16 小时后:<br/>After applying rated voltage for 1000 hours at +105°C and then resumed for 16 hours:</p> <p>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</p>  |                                     |                    |        |         |       |        |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |
| 高温贮存<br>Shelf life   | <p>+105°C, 1000 小时贮存后, 恢复 16 小时后:<br/>After storage for 1000 hours at +105°C and then resumed 16 hours</p> <p>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</p>  |                                     |                    |        |         |       |        |         |         |     |                |         |      |      |      |      |      |      |                |      |      |      |    |   |   |   |

## 外形图及尺寸表 Case size



|   |     |     |         |         |       |    |
|---|-----|-----|---------|---------|-------|----|
| D | 5   | 6.3 | 8       | 10~12.5 | 16~18 | 22 |
| F | 2.0 | 2.5 | 3.5     | 5.0     | 7.5   | 10 |
| d | 0.5 |     | 0.5、0.6 | 0.6     | 0.8   |    |

|       |                |
|-------|----------------|
| α MAX | ( L < 20 ) 1.5 |
|       | ( L ≥ 20 ) 2.0 |

|       |                |
|-------|----------------|
| β MAX | ( D < 20 ) 0.5 |
|       | ( D ≥ 20 ) 1.0 |

## 频率修正系数 Frequency coefficient

| Rated Voltage(V) | Freq.(Hz) |  | 50   | 120  | 300  | 1K   | 10K  | 100K |
|------------------|-----------|--|------|------|------|------|------|------|
|                  | CAP(μF)   |  |      |      |      |      |      |      |
| 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 |
|                  | 100~1000  |  | 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 |          |        | 5×11    | 50     | 5×11    | 55     | 5×11    | 60     | 5×11    | 65     | 5×11    | 80     |
| 33            | 330 | 5×11     | 55     | 5×11    | 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 | 16×30 | 1840 | 18×35 | 2335 | 22×40 | 2650 |
| 6800  | 682 | 12.5×25 | 1550 | 16×25   | 1825 | 16×30   | 2080 | 16×35 | 2100 |       |      |       |      |
| 10000 | 103 | 16×25   | 1900 | 16×30   | 1980 | 16×35   | 2380 | 18×35 | 2500 |       |      |       |      |
| 15000 | 153 | 16×30   | 2190 | 16×40   | 2180 | 18×35   | 2600 |       |      |       |      |       |      |
| 22000 | 223 | 18X35   | 2400 | 18X40   | 2410 |         |      |       |      |       |      |       |      |

| 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 |         |        | 5x11     | 3      |          |        |          |        |          |        |
| 0.22         | R22 |         |        | 5x11     | 4      |          |        |          |        |          |        |
| 0.33         | R33 |         |        | 5x11     | 5      |          |        |          |        |          |        |
| 0.47         | R47 |         |        | 5x11     | 10     |          |        |          |        |          |        |
| 1            | 010 |         |        | 5x11     | 16     |          |        |          |        |          |        |
| 2.2          | 2R2 |         |        | 5x11     | 23     |          |        | 6.3x11   | 22     | 6.3x11   | 23     |
| 3.3          | 3R3 |         |        | 5x11     | 35     |          |        | 6.3x11   | 28     | 6.3x11   | 28     |
| 4.7          | 4R7 | 5x11    | 40     | 5x11     | 40     | 6.3x11   | 40     | 6.3x11   | 42     | 8x11.5   | 45     |
| 10           | 100 | 5x11    | 60     | 6.3x11   | 60     | 8x11.5   | 73     | 8x14     | 80     | 8x16     | 84     |
|              |     |         |        | 8x11.5   | 70     |          |        |          |        |          |        |
| 22           | 220 | 5x11    | 80     | 6.3x11   | 90     | 10x12.5  | 120    | 10x16    | 132    | 10x20    | 150    |
|              |     | 6.3x11  | 90     | 8x11.5   | 100    |          |        |          |        |          |        |
| 33           | 330 | 8x11.5  | 120    | 8x11.5   | 145    | 10x16    | 165    | 10x20    | 185    | 12.5x20  | 200    |
|              |     |         |        | 10x12.5  | 170    |          |        |          |        |          |        |
| 47           | 470 | 6.3x11  | 145    | 10x12.5  | 200    | 10x20    | 210    | 12.5x20  | 230    | 12.5x25  | 250    |
|              |     | 8x11.5  | 165    | 10x16    | 250    |          |        |          |        |          |        |
| 68           | 680 |         |        |          |        | 12.5x20  | 285    | 12.5x25  | 310    | 16x20    | 320    |
| 82           | 820 |         |        |          |        | 12.5x20  | 315    | 12.5x25  | 345    | 16x25    | 390    |
| 100          | 101 | 10x12.5 | 250    | 10x20    | 350    | 12.5x25  | 385    | 16x20    | 390    | 16x30    | 460    |
| 150          | 151 |         |        |          |        | 16x25    | 515    | 16x25    | 520    | 16x35    | 620    |
| 180          | 181 |         |        |          |        | 16x25    | 590    | 16x30    | 620    | 16x40    | 700    |
| 220          | 221 | 10x20   | 500    | 12.5x25  | 660    | 16x30    | 700    | 16x35    | 730    | 18x40    | 820    |
| 270          | 271 |         |        |          |        | 16x35    | 830    | 16x40    | 860    |          |        |
| 330          | 331 | 12.5x20 | 690    | 12.5x25  | 800    | 16x40    | 980    | 18x40    | 1000   |          |        |
| 390          | 391 |         |        |          |        | 18x40    | 1100   | 18x45    | 1150   |          |        |
| 470          | 471 | 12.5x20 | 810    | 16x25    | 990    | 18x45    | 1250   |          |        |          |        |
| 560          | 561 |         |        |          |        |          |        |          |        |          |        |
| 1000         | 102 | 16x25   | 1450   | 18x40    | 2020   |          |        |          |        |          |        |
| 2200         | 222 | 18x35   | 1780   |          |        |          |        |          |        |          |        |
| 3300         | 332 | 22x40   | 2000   |          |        |          |        |          |        |          |        |

| CAP(μF) \ WV |     | 250V(2E) |        | 350V(2V) |        | 400V(2G) |        | 420V(2M) |        | 450V(2W) |        |
|--------------|-----|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|              |     | Size     | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple | Size     | Ripple |
| 0.47         | R47 |          |        |          |        |          |        | 6.3x11   | 11     | 6.3x11   | 11     |
| 1            | 010 |          |        |          |        | 6.3x11   | 15     | 6.3x11   | 15     | 6.3x11   | 15     |
| 2.2          | 2R2 | 6.3x11   | 23     | 6.3x11   | 25     | 8x11.5   | 26     | 8x11.5   | 26     | 8x11.5   | 26     |

|     |     |         |     |         |     |         |     |         |     |         |     |
|-----|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|
| 3.3 | 3R3 | 6.3×11  | 28  | 8×11.5  | 28  | 8×11.5  | 30  | 8×11.5  | 30  | 8×11.5  | 30  |
| 4.7 | 4R7 | 8×11.5  | 45  | 8×11.5  | 48  | 8×11.5  | 50  | 8×16    | 50  | 8×16    | 50  |
| 6.8 | 6R8 | 8×11.5  | 58  | 8×14    | 60  | 8×12    | 63  | 10×16   | 63  | 10×16   | 63  |
| 8.2 | 8R2 | 8×14    | 68  | 8×16    | 70  | 8×16    | 72  | 10×16   | 72  | 10×16   | 72  |
| 10  | 100 | 8×16    | 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 | 16×30   | 340 | 16×35   | 360 |
| 82  | 820 | 16×25   | 390 | 16×35   | 440 | 16×35   | 450 | 16×35   | 405 | 16×40   | 430 |
| 100 | 101 | 16×30   | 460 | 16×40   | 510 | 16×40   | 520 | 16×40   | 480 | 18×35   | 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  $\phi D \times L$ (mm)

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz