



# LK7

- ◆ 7mm高 超小型产品 高端电源专用
- ◆ 105℃环境下5000小时~6000小时
- ◆ 符合AEC-Q200 RoHS指令对应

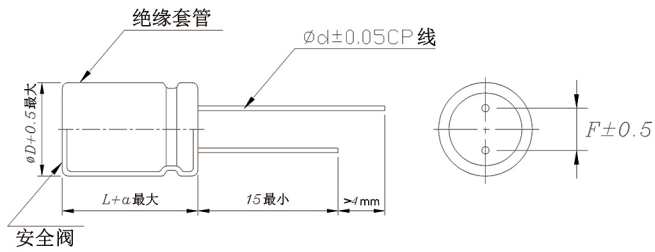


## ■ 主要技术参数

| 项目                                      | 特性  |             |      |      |      |        |        |      |
|---|---|-------------|------|------|------|--------|--------|------|
| 使用温度范围                                  | -40℃ ~ +105℃  |             |      |      |      |        |        |      |
| 标称电压范围                                  | 6.3 ~ 400V.DC   |             |      |      |      |        |        |      |
| 容量允许偏差                                  | ±20% (25±2℃ 120Hz)  |             |      |      |      |        |        |      |
| 漏电流(μA)                                 | 6.3 ~ 100V $I \leq 0.01CV$ or $3\mu A$ 取大者 C:标称容量(μF) V:额定电压(V) 2分钟读数 |             |      |      |      |        |        |      |
|   | 160 ~ 400V $I \leq 0.02CV+10$ (μA) C:标称容量(μF) V:额定电压(V) 2分钟读数         |             |      |      |      |        |        |      |
| 损耗角正切值<br>(25±2℃ 120Hz)                 | 额定电压(V)   | 6.3         | 10   | 16   | 25   | 35     | 50     | 63   |
|   | tg δ  | 0.32        | 0.28 | 0.24 | 0.20 | 0.16   | 0.14   | 0.14 |
|   | 额定电压(V)   | 80          | 100  | 160  | 200  | 250    | 350    | 400  |
|   | tg δ  | 0.12        | 0.12 | 0.15 | 0.15 | 0.15   | 0.15   | 0.15 |
| 标称容量超过1000μF者, 则每增加1000μF, 损耗角正切值增加0.02 |   |             |      |      |      |        |        |      |
| 温度特性<br>(120Hz)                         | 额定电压(V)   | 6.3         | 10   | 16   | 25   | 35     | 50     | 63   |
|   | 阻抗比Z(-40℃)/Z(20℃)   | 12          | 10   | 8    | 6    | 4      | 4      | 4    |
|   | 额定电压(V)   | 80          | 100  | 160  | 200  | 250    | 350    | 400  |
|   | 阻抗比Z(-40℃)/Z(20℃)   | 4           | 4    | 4    | 5    | 5      | 7      | 7    |
| 耐久性                                     | 在105℃烘箱中,施加含额定纹波电流的额定电压持续规定时间后,置于常温16小时后测试,测试温度25±2℃,电容器的性能应满足如下要求    |             |      |      |      |        |        |      |
|   | 容量变化率   | 在初始值的±30%以内 |      |      |      |        |        |      |
|   | 损耗角正切值  | 在规定值的300%以下 |      |      |      |        |        |      |
|   | 漏电流   | 在规定值以下      |      |      |      |        |        |      |
|   | 负荷寿命  | φ5、φ6.3     |      |      |      |        | 5000小时 |      |
|   | φ8、φ10  |             |      |      |      | 6000小时 |        |      |
| 高温储存                                    | 在105℃下,储存1000小时,置于常温16小时后测试,测试温度25±2℃,电容器的性能应满足如下要求                   |             |      |      |      |        |        |      |
|   | 容量变化率   | 在初始值的±30%以内 |      |      |      |        |        |      |
|   | 损耗角正切值  | 在规定值的300%以下 |      |      |      |        |        |      |
|   | 漏电流   | 在规定值的200%以下 |      |      |      |        |        |      |



■ 产品尺寸图 (单位: mm)



备注:  $\geq \phi 6.3$ 产品有安全阀

|   |      |     |                   |                   |     |
|---|------|-----|-------------------|-------------------|-----|
| D | 5    | 6.3 | 8 ( $\leq 100V$ ) | 8 ( $\geq 160V$ ) | 10  |
| d | 0.45 | 0.5 | 0.5               | 0.6               | 0.6 |
| F | 2.0  | 2.5 | 3.5               |                   | 5.0 |
| a | 1.0  |     |                   | 1.5               |     |

■ 纹波电流补偿系数

① 频率修正因子

|        |      |      |      |            |
|--------|------|------|------|------------|
| 频率(Hz) | 50   | 120  | 1K   | $\geq 10K$ |
| 修正因子   | 0.65 | 1.00 | 1.37 | 1.50       |

② 温度修正系数

|                     |                |                |                |                 |
|---------------------|----------------|----------------|----------------|-----------------|
| 环境温度( $^{\circ}C$ ) | 50 $^{\circ}C$ | 70 $^{\circ}C$ | 85 $^{\circ}C$ | 105 $^{\circ}C$ |
| 修正因子                | 2.1            | 1.8            | 1.4            | 1.0             |



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## ■ 标准品一览表

| 电压(V)                   | 6.3           |                                    | 10            |                                    | 16            |                                    | 25            |                                    | 35            |                                    | 50            |                                    |
|-------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|
| 项目<br>容量<br>( $\mu F$ ) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) |
| 2.2                     |               |                                    |               |                                    |               |                                    |               |                                    |               |                                    | 5×7           | 31                                 |
| 2.7                     |               |                                    |               |                                    |               |                                    |               |                                    |               |                                    | 5×7           | 31                                 |
| 3.3                     |               |                                    |               |                                    |               |                                    |               |                                    |               |                                    | 5×7           | 31                                 |
| 3.9                     |               |                                    |               |                                    |               |                                    |               |                                    |               |                                    | 5×7           | 31                                 |
| 4.7                     |               |                                    |               |                                    |               |                                    | 5×7           | 50                                 | 5×7           | 50                                 | 5×7           | 31                                 |
| 5.6                     |               |                                    |               |                                    |               |                                    | 5×7           | 50                                 | 5×7           | 50                                 | 5×7           | 31                                 |
| 6.8                     |               |                                    |               |                                    |               |                                    | 5×7           | 55                                 | 5×7           | 50                                 | 5×7           | 31                                 |
| 8.2                     |               |                                    |               |                                    |               |                                    | 5×7           | 55                                 | 5×7           | 50                                 | 5×7           | 31                                 |
| 10                      | 5×7           | 55                                 | 5×7           | 55                                 | 5×7           | 55                                 | 5×7           | 60                                 | 5×7           | 50                                 | 5×7           | 31                                 |
| 12                      | 5×7           | 55                                 | 5×7           | 55                                 | 5×7           | 55                                 | 5×7           | 60                                 | 5×7           | 60                                 | 5×7           | 37                                 |
| 15                      | 5×7           | 60                                 | 5×7           | 60                                 | 5×7           | 60                                 | 5×7           | 60                                 | 5×7           | 60                                 | 5×7           | 44                                 |
| 18                      | 5×7           | 60                                 | 5×7           | 60                                 | 5×7           | 60                                 | 5×7           | 60                                 | 5×7           | 60                                 | 6.3×7         | 55                                 |
| 22                      | 5×7           | 60                                 | 5×7           | 70                                 | 5×7           | 70                                 | 5×7           | 60                                 | 5×7           | 70                                 | 6.3×7         | 65                                 |
| 27                      | 5×7           | 70                                 | 5×7           | 70                                 | 5×7           | 70                                 | 5×7           | 70                                 | 6.3×7         | 80                                 | 6.3×7         | 78                                 |
| 33                      | 5×7           | 80                                 | 5×7           | 80                                 | 5×7           | 80                                 | 5×7           | 85                                 | 6.3×7         | 90                                 | 8×7           | 85                                 |
| 39                      | 5×7           | 80                                 | 5×7           | 80                                 | 5×7           | 80                                 | 5×7           | 85                                 | 6.3×7         | 98                                 | 8×7           | 100                                |
| 47                      | 5×7           | 90                                 | 5×7           | 90                                 | 5×7           | 90                                 | 5×7           | 90                                 | 6.3×7         | 105                                | 8×7           | 120                                |
| 56                      | 5×7           | 90                                 | 5×7           | 90                                 | 5×7           | 90                                 | 6.3×7         | 98                                 | 8×7           | 115                                | 8×7           | 125                                |
| 68                      | 5×7           | 90                                 | 5×7           | 90                                 | 5×7           | 90                                 | 6.3×7         | 105                                | 8×7           | 125                                | 10×7          | 140                                |
| 82                      | 5×7           | 100                                | 5×7           | 98                                 | 6.3×7         | 105                                | 6.3×7         | 115                                | 8×7           | 140                                | 10×7          | 160                                |
| 100                     | 5×7           | 105                                | 6.3×7         | 115                                | 6.3×7         | 115                                | 8×7           | 125                                | 8×7           | 170                                | 10×7          | 180                                |
| 120                     | 5×7           | 110                                | 6.3×7         | 115                                | 6.3×7         | 128                                | 8×7           | 140                                | 10×7          | 180                                |               |                                    |
| 150                     | 6.3×7         | 115                                | 6.3×7         | 135                                | 8×7           | 140                                | 8×7           | 170                                | 10×7          | 210                                |               |                                    |
| 180                     | 6.3×7         | 135                                | 8×7           | 160                                | 8×7           | 170                                | 10×7          | 190                                |               |                                    |               |                                    |
| 220                     | 6.3×7         | 160                                | 8×7           | 170                                | 8×7           | 190                                | 10×7          | 220                                |               |                                    |               |                                    |
| 270                     | 8×7           | 170                                | 8×7           | 190                                | 10×7          | 220                                |               |                                    |               |                                    |               |                                    |
| 330                     | 8×7           | 180                                | 10×7          | 220                                | 10×7          | 240                                |               |                                    |               |                                    |               |                                    |
| 390                     | 8×7           | 190                                | 10×7          | 240                                | 10×7          | 260                                |               |                                    |               |                                    |               |                                    |
| 470                     | 8×7           | 200                                | 10×7          | 260                                |               |                                    |               |                                    |               |                                    |               |                                    |
| 560                     | 10×7          | 240                                |               |                                    |               |                                    |               |                                    |               |                                    |               |                                    |
| 680                     | 10×7          | 280                                |               |                                    |               |                                    |               |                                    |               |                                    |               |                                    |



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## ■ 标准品一览表

| 电压(V)                   | 63            |                                    | 80            |                                    | 100           |                                    | 160           |                                    | 200           |                                    | 250           |                                    |
|-------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|
| 项目<br>容量<br>( $\mu F$ ) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) |
| 1.0                     |               |                                    |               |                                    |               |                                    |               |                                    | 5×7           | 20                                 | 5×7           | 20                                 |
| 1.2                     |               |                                    |               |                                    |               |                                    |               |                                    | 5×7           | 20                                 | 5×7           | 20                                 |
| 1.5                     |               |                                    |               |                                    |               |                                    |               |                                    | 5×7           | 22                                 | 5×7           | 22                                 |
| 1.8                     |               |                                    |               |                                    |               |                                    |               |                                    | 5×7           | 22                                 | 5×7           | 22                                 |
| 2.2                     | 5×7           | 30                                 | 5×7           | 30                                 | 5×7           | 28                                 | 5×7           | 20                                 | 6.3×7         | 25                                 | 6.3×7         | 25                                 |
| 2.7                     | 5×7           | 30                                 | 5×7           | 30                                 | 5×7           | 28                                 | 5×7           | 20                                 | 6.3×7         | 35                                 | 6.3×7         | 35                                 |
| 3.3                     | 5×7           | 30                                 | 5×7           | 30                                 | 5×7           | 28                                 | 6.3×7         | 22                                 | 6.3×7         | 40                                 | 6.3×7         | 40                                 |
| 3.9                     | 5×7           | 30                                 | 5×7           | 30                                 | 5×7           | 28                                 | 6.3×7         | 22                                 | 8×7           | 50                                 | 8×7           | 50                                 |
| 4.7                     | 5×7           | 30                                 | 5×7           | 30                                 | 5×7           | 28                                 | 6.3×7         | 22                                 | 8×7           | 55                                 | 8×7           | 55                                 |
| 5.6                     | 5×7           | 30                                 | 5×7           | 30                                 | 5×7           | 28                                 | 8×7           | 50                                 | 8×7           | 65                                 | 8×7           | 65                                 |
| 6.8                     | 5×7           | 30                                 | 5×7           | 30                                 | 6.3×7         | 30                                 | 8×7           | 55                                 | 8×7           | 72                                 | 10×7          | 80                                 |
| 8.2                     | 5×7           | 30                                 | 5×7           | 30                                 | 6.3×7         | 40                                 | 8×7           | 60                                 | 10×7          | 95                                 | 10×7          | 95                                 |
| 10                      | 5×7           | 30                                 | 6.3×7         | 50                                 | 6.3×7         | 50                                 | 8×7           | 65                                 | 10×7          | 108                                | 10×7          | 108                                |
| 12                      | 6.3×7         | 50                                 | 6.3×7         | 55                                 | 8×7           | 75                                 | 10×7          | 95                                 |               |                                    |               |                                    |
| 15                      | 6.3×7         | 56                                 | 6.3×7         | 70                                 | 8×7           | 85                                 | 10×7          | 115                                |               |                                    |               |                                    |
| 18                      | 6.3×7         | 70                                 | 6.3×7         | 75                                 | 8×7           | 100                                |               |                                    |               |                                    |               |                                    |
| 22                      | 8×7           | 75                                 | 8×7           | 85                                 | 8×7           | 120                                |               |                                    |               |                                    |               |                                    |
| 27                      | 8×7           | 85                                 | 8×7           | 100                                | 10×7          | 130                                |               |                                    |               |                                    |               |                                    |
| 33                      | 8×7           | 100                                | 8×7           | 120                                | 10×7          | 150                                |               |                                    |               |                                    |               |                                    |
| 39                      | 8×7           | 120                                | 10×7          | 130                                |               |                                    |               |                                    |               |                                    |               |                                    |
| 47                      | 10×7          | 130                                | 10×7          | 150                                |               |                                    |               |                                    |               |                                    |               |                                    |
| 56                      | 10×7          | 150                                | 10×7          | 160                                |               |                                    |               |                                    |               |                                    |               |                                    |
| 68                      | 10×7          | 160                                |               |                                    |               |                                    |               |                                    |               |                                    |               |                                    |

| 电压(V)                   | 350           |                                    | 400           |                                    |
|-------------------------|---------------|------------------------------------|---------------|------------------------------------|
| 项目<br>容量<br>( $\mu F$ ) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) | 尺寸<br>D×L(mm) | 纹波电流<br>(mA r.m.s/<br>105°C 120Hz) |
| 1.0                     | 6.3×7         | 25                                 | 6.3×7         | 25                                 |
| 1.2                     | 6.3×7         | 30                                 | 6.3×7         | 30                                 |
| 1.5                     | 6.3×7         | 35                                 | 6.3×7         | 35                                 |
| 1.8                     | 6.3×7         | 40                                 | 6.3×7         | 40                                 |
| 2.2                     | 8×7           | 50                                 | 8×7           | 50                                 |
| 2.7                     | 8×7           | 55                                 | 8×7           | 55                                 |
| 3.3                     | 8×7           | 70                                 | 8×7           | 70                                 |
| 3.9                     | 10×7          | 80                                 | 10×7          | 80                                 |
| 4.7                     | 10×7          | 95                                 | 10×7          | 95                                 |
| 5.6                     | 10×7          | 108                                |               |                                    |