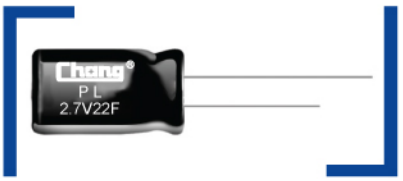
# PL 功率型超级电容器

# PL high power Super Capacitors

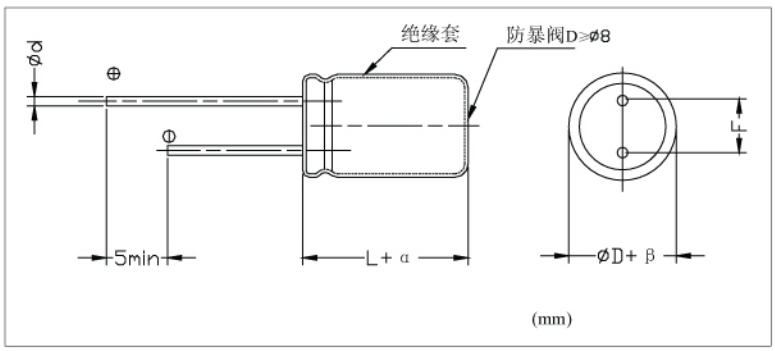



◎ 产品直径 Case diameter：Φ 8mm – Φ 22mm，产品容量 capacitance：0.5 ~ 100F.
◎ 超低内阻长寿命。Ultralow resistance and long life time.
◎ 适用于消费电子、高功率场合。Available for high power density situation and consumer electronics.
◎ RoHS指令已对应完毕。Adapted to the RoHS directive。

## ■ 主要技术性能 Specifications

| 项目 Items | 特性 Characteristics | |
|---|---|---|
| 工作温度范围<br>Operating Temperature Range | –40℃ ~+60℃ | |
| 储存温度范围<br>Storage Temperature Range | –40~+70℃ | |
| 额定电压范围<br>Rated Voltage Range | 2.7V | |
| 标称电容量范围<br>Nominal Capacitance Range | 0.5 ~ 100 F | |
| 标称电容量允许偏差<br>Npminal Capacitance Tolerance | ±20%（25℃，恒流充放电） | |
| 漏电流<br>Leakage Current | I≤0.5$C_R$（mA），（30min） $C_R$：标称电容量（F） $U_R$：额定电压（V）<br>I≤0.5$C_R$ (mA) ( at 25℃, after30 minutes)<br>$C_R$: Nominal Capacitance (F) $U_R$: Rated voltages (V) | |
| 耐久性<br>Load Life | +60℃施加额定电压1000小时后，电容器应满足以下要求：<br>After 1000 hours' application of rated voltage at 60℃, the capacitor shall meet the following requirement: | |
| | 电容量变化率<br>Capacitance Change | ≤30%初始值<br>No more than 30% capacitance range of the initial value |
| | 等效串联内阻<br>ESR(1KHz) | ≤ 300%初始规定值<br>Not more than 300% of the initial specified ESR value |
| | 漏电流<br>Leakage Current | ≤ 初始规定值<br>Not more than the initial specified value |
| 高温贮存<br>Shelf Life | +70℃贮存1000小时后，电容器应满足以上耐久性要求<br>After storage for 1000 hours at +70℃, the capacitors shall meet the requirement of load life above | |
| 循环寿命<br>Cycles life | 在25℃的条件下，电容器在额定电压和一半额定电压之间恒流充放电循环500000次，电容器应满足以下要求：<br>The capacitors shall be charged/discharged with constant current between the Ur and 1/2Ur maintained at 25℃ for 500000cycles. After removing the current at room temperature, they meet the following requirement: | |
| | 电容量变化率<br>Capacitance Change | ±30%初始值以内<br>Within ±30% of the initial value |
| | 等效串联内阻<br>ESR | ≤3倍初始规定值<br>Not more than three times of the initial specified value |
| | 漏电流<br>Leakage Current | ≤ 初始规定值<br>Not more than the initial specified value |

## ■ 外形图及尺寸表 Case size table




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

| | | | | |
|---|---|---|---|---|
| α MAX | (L<20) 1.5 | | β MAX | (D<20) 0.5 |
| | (L≥20) 2.0 | | | (D≥20) 1.0 |

## ■ 尺寸 Dimensions

| 电压UR / DxL / 容量 CR(F) | 2.7V | | | | | |
|---|---|---|---|---|---|---|
| | DXL mm | ESR mΩ 1KHz | Lc mA 30min | DXL mm | ESR mΩ 1KHz | Lc mA 30min |
| 0.5 | 8×12 | 600 | 0.25 | | | |
| 1 | | | | 8×12 | 300 | 0.5 |
| 2 | 10×16 | 200 | 1 | 8×20 | 200 | 1 |
| 4.7 | 12×20 | 80 | 2.3 | 10×20 | 100 | 2.3 |
| 10 | 10×30 | 60 | 5 | 12.5×25 | 50 | 5 |
| 15 | 12.5×30 | 40 | 7.5 | | | |
| 22 | 16×30 | 35 | 11 | | | |
| 30 | | | | 18×30 | 30 | 15 |
| 50 | 18×40 | 20 | 25 | | | |
| 70 | | | | 18×45 | 20 | 35 |
| 90 | 22×45 | 18 | 45 | | | |
| 100 | | | | 22×45 | 16 | 50 |