# SL series Low Leakage Current 低洩漏電流品

1. 在常溫或高溫無負荷狀況下經長時期放置後,
尚能保持穩定之低洩漏電流特性。
After storage under normal or high temperature
with no voltage applied, the Llseries can still keep
good low-leakage current in good stability
2. 適用於電視頻道轉換或小信號輸入回路
Used in TVs frequency channel conversion
or werk signal import loop circuits

## Specifications

<table>
<tr><th>NO.</th><th>Item</th><th>Performance</th></tr>
<tr><td>1</td><td>使用溫度範圍<br>Operating Temperature Range</td><td>-40 to +105$^0$C</td></tr>
<tr><td>2</td><td>定格電壓範圍<br>Rated Working Voltage Range</td><td>6.3-63V.DC</td></tr>
<tr><td>3</td><td>靜電容量範圍<br>Capacitance Tolerance</td><td>0.1-2200μF</td></tr>
<tr><td>4</td><td>靜電容量容許差<br>Capacitance Tolerance</td><td>±20%(at+20 $^0$C,120Hz)</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">洩漏電流<br>Leakage Current</td><td>I≤0.002CV +0.4（μA）</td></tr>
<tr><td>Whichever is greater after 3 minutes . I: Leakage Current（μA）<br>C: Rated Capacitance （μF）<br>V: Working Voltage（V）</td></tr>
<tr><td>6</td><td>損失角<br>Dissipation Factor(tan δ)（120Hz\+20℃）</td><td>
<table>
<tr><td>Working Voltage（V）</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td></tr>
<tr><td>tan δ max.</td><td>0.22</td><td>.20</td><td>0.17</td><td>0.15</td><td>0.12</td><td>0.10</td><td>0.09</td></tr>
</table>
For capacitance value ＞1000μF, add 0.02 per another 1000μF
</td></tr>
<tr><td>7</td><td>低溫度特性（at 120 Hz）<br>Characteristics at low temperature<br>（Impedance ratio at 120Hz）</td><td>
<table>
<tr><td>Working Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td></tr>
<tr><td>Z-25℃/+20℃</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td></tr>
<tr><td>Z-40/℃+20℃</td><td>8</td><td>6</td><td>4</td><td>4</td><td>3</td><td>3</td><td>3</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>高溫負荷特性<br>High Temperature Loading</td><td>After 2000hrs. application of DC rated working voltage at +105℃,The capacitor shall meet the following limits:<br>Post test requirements at + 20℃
<table>
<tr><td>Leakage current</td><td>≤ the Initial specified value</td></tr>
<tr><td>Capacitance change</td><td>≤±20% of initial measured value</td></tr>
<tr><td>Dissipation Factor(tan δ)</td><td>≤200% of initial specified value</td></tr>
</table>
</td></tr>
<tr><td>9</td><td>高溫無負荷特性<br>Shelf Life</td><td>After 1000hrs. Application of DC no rated working voltage at +105℃,The capacitor shall meet the following limits: Post test requirements at + 20℃
<table>
<tr><td>Leakage current</td><td>≤200% of initial specified value</td></tr>
<tr><td>Capacitance change</td><td>≤±20% of initial measured value</td></tr>
<tr><td>Dissipation Factor(tanδ)</td><td>≤200% of initial specified value</td></tr>
</table>
</td></tr>
</table>

Multiplier for ripple current 紋波電流補正係數

Frequency Coefficient 周波數係數

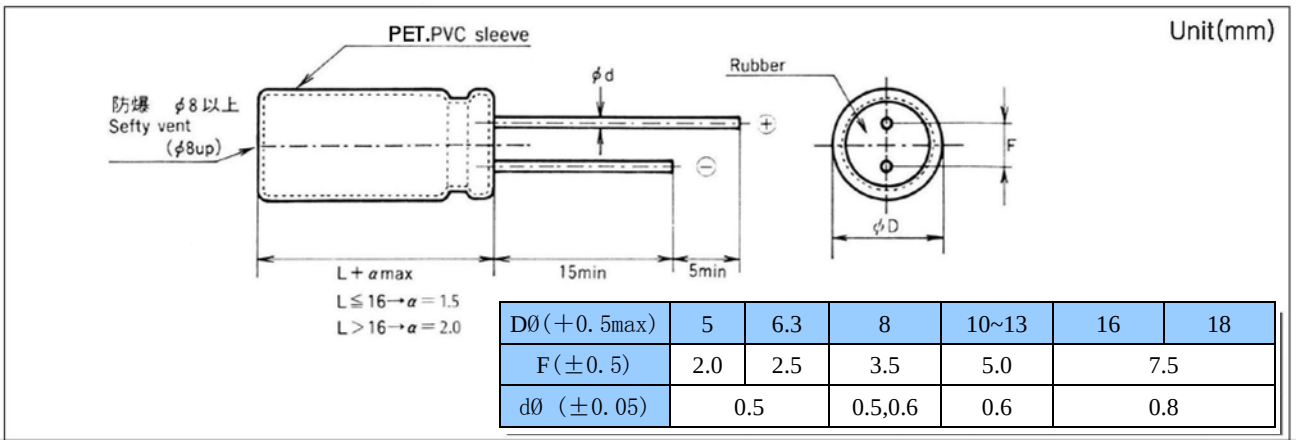
| μF \ Frequency | 60（50）Hz | 120 Hz | 400 Hz | 1K Hz | ≥10K Hz |
|---|---|---|---|---|---|
| 0.1～47 | 0.80 | 1.00 | 1.20 | 1.30 | 1.50 |
| 68～2200 | 0.80 | 1.00 | 1.10 | 1.15 | 1.20 |

Temperature Coefficient 周圍溫度係數

| Coefficient \ temperature（℃） | 105 | 85 | ≤65 |
|---|---|---|---|
| coefficient | 1.0 | 1.7 | 2.1 |

# SL Series

## Diagram of Dimensions




| DØ(+0.5max) | 5 | 6.3 | 8 | 10~13 | 16 | 18 |
|---|---|---|---|---|---|---|
| F(±0.5) | 2.0 | 2.5 | 3.5 | 5.0 | 7.5 | |
| dØ (±0.05) | 0.5 | | 0.5,0.6 | 0.6 | 0.8 | |

DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT 規格尺寸及最大允許紋波電流

| W.V.(SV) / μF | 6.3(8) | | 10(13) | | 16(20) | | 25(32) | | 35(44) | | 50(63) | | 63(79) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SIZE | R.C. | SIZE | R.C. | SIZE | R.C. | SIZE | R.C. | SIZE | R.C. | SIZE | R.C. | SIZE | R.C. |
| 0.1 | | | | | | | | | | | 5×11 | 1 | 5×11 | 1 |
| 0.22 | | | | | | | | | | | 5×11 | 2 | 5×11 | 2 |
| 0.33 | | | | | | | | | | | 5×11 | 3 | 5×11 | 3 |
| 0.47 | | | | | | | | | | | 5×11 | 5 | 5×11 | 5 |
| 1.0 | | | | | | | | | | | 5×11 | 10 | 5×11 | 10 |
| 2.2 | | | | | | | | | | | 5×11 | 20 | 5×11 | 20 |
| 3.3 | | | | | | | | | | | 5×11 | 35 | 5×11 | 35 |
| 4.7 | | | | | | | 5×11 | 30 | 5×11 | 35 | 5×11 | 40 | 5×11 | 40 |
| 10 | | | | | 5×11 | 40 | 5×11 | 35 | 5×11 | 55 | 5×11 | 60 | 6.3×11 | 75 |
| 22 | 5×11 | 45 | 5×11 | 50 | 5×11 | 70 | 5×11 | 85 | 5×11 | 90 | 6.3×11 | 100 | 8×12 | 110 |
| 33 | 5×11 | 55 | 5×11 | 70 | 5×11 | 90 | 5×11 | 100 | 6.3×11 | 120 | 6.3×11 | 130 | 8×12 | 160 |
| 47 | 5×11 | 75 | 5×11 | 90 | 5×11 | 110 | 6.3×11 | 130 | 6.3×11 | 140 | 8×12 | 180 | 10×13 | 200 |
| 100 | 5×11 | 100 | 6.3×11 | 140 | 6.3×11 | 180 | 8×12 | 210 | 8×12 | 240 | 10×13 | 290 | 10×20 | 330 |
| 220 | 6.3×11 | 220 | 8×12 | 280 | 8×12 | 300 | 10×13 | 360 | 10×16 | 410 | 10×20 | 480 | 13×20 | 540 |
| 330 | 8×12 | 310 | 8×12 | 360 | 10×13 | 400 | 10×16 | 470 | 10×20 | 530 | 13×20 | 600 | 13×25 | 700 |
| 470 | 8×12 | 380 | 10×13 | 460 | 10×16 | 520 | 10×20 | 600 | 13×25 | 670 | 16×26 | 750 | 16×26 | 840 |
| 680 | 10×16 | 480 | 10×20 | 590 | 13×20 | 720 | 13×25 | 800 | 16×26 | 830 | 16×26 | 900 | 16×32 | 1050 |
| 1000 | 10×16 | 650 | 10×20 | 750 | 13×20 | 900 | 13×25 | 1000 | 16×26 | 1100 | 16×32 | 1140 | 18×36 | 1320 |
| 1500 | 13×20 | 900 | 13×25 | 1020 | 16×26 | 1150 | 16×32 | 1260 | 16×36 | 1380 | 18×36 | 1480 | | |
| 2200 | 13×20 | 1050 | 13×25 | 1180 | 16×26 | 1300 | 18×36 | 1430 | 18×36 | 1580 | | | | |

Case size ØD×L (mm); Ripple current (mA rms) at105℃,120Hz