

LIL Series Low Impedance, Long Life 低阻抗長壽命電容器

Features

- Low impedance for high frequency, Anti-Solvent Design.
- Long Life 7000 Hrs at 105°C depending on case size.
- Radial type for switching power supplies.



Specifications

| No | Item | Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|--|-----------------------|------------|-------|------|--------|------|----|----|------------------|----|----|----|----|-----|-----|-----|------------------|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|
| 1 | 使用溫度範圍 Operating Temperature Range | -40 to + 105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 定格電壓範圍 Rated Voltage Range | 6.3 to 63 VDC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 靜電容量範圍 Capacitance Range | 0.47 to 4700 μF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 靜電容量容許差 Capacitance Tolerance | ±20%(120Hz, +20°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 漏電電流 Leakage Current(+20°C, max) | $I \leq 0.01 CV$ or $2(\mu A)$ After 2 minutes whichever is greater measured with rate working voltage applied. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 損失角 Dissipation Factor(tanδ) | <table border="1"> <tr> <td>Working Voltage (VDC)</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>D.F. (%)Max</td> <td>22</td> <td>19</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>9</td> </tr> </table> <p>For capacitance >1000 μ F, Add 2% per another 1000 μ F. (+20°C, at 120Hz)</p> | Working Voltage (VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | D.F. (%)Max | 22 | 19 | 16 | 14 | 12 | 10 | 9 | | | | | | | | | | | | | | | | |
| Working Voltage (VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D.F. (%)Max | 22 | 19 | 16 | 14 | 12 | 10 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 溫度特性 Low Temperature Characteristics (120Hz) | <p>Impedance ratio (max)</p> <table border="1"> <tr> <td>Working Voltage(VDC)</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°C)/Z(20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>1.5</td> <td>1.5</td> <td>1.5</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-55°C)/Z(20°C)</td> <td>6</td> <td>5</td> <td>5</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> </tr> </table> <p>For Capacitance Value >1000 μ F, Add 0.5 per another 1000 μ F for -25°C/+20°C Add 1per another 1000 μ F for -40°C / +20°C</p> | Working Voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | Z(-25°C)/Z(20°C) | 4 | 3 | 2 | 2 | 1.5 | 1.5 | 1.5 | Z(-40°C)/Z(20°C) | 6 | 4 | 3 | 3 | 2 | 2 | 2 | Z(-55°C)/Z(20°C) | 6 | 5 | 5 | 4 | 4 | 4 | 4 |
| Working Voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-25°C)/Z(20°C) | 4 | 3 | 2 | 2 | 1.5 | 1.5 | 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(20°C) | 6 | 4 | 3 | 3 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-55°C)/Z(20°C) | 6 | 5 | 5 | 4 | 4 | 4 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 高溫負荷特性 Load Life | <p>Test conditions</p> <p>Duration time :7000Hrs</p> <p>Ambient temperature :+105°C</p> <p>Applied voltage :Rated DC working voltage</p> <p>After test requirements at +20°C</p> <p>Capacitance change :≤ ± 20% of the initial measured value</p> <p>Dissipation factor :≤ 200% of the initial specified value</p> <p>Leakage current :≤ The initial specified value</p> <table border="1"> <tr> <td>Dφ</td> <td>Life hours</td> </tr> <tr> <td>φ < 8</td> <td>3000</td> </tr> <tr> <td>φ ≤ 10</td> <td>5000</td> </tr> </table> | Dφ | Life hours | φ < 8 | 3000 | φ ≤ 10 | 5000 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dφ | Life hours | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| φ < 8 | 3000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| φ ≤ 10 | 5000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 高溫無負荷特性 Shelf Life | <p>Test conditions</p> <p>Duration time :1000Hrs</p> <p>Ambient temperature :+105°C</p> <p>Applied voltage :None</p> <p>After test requirements at +20°C : Same limits as Load life.</p> <p>Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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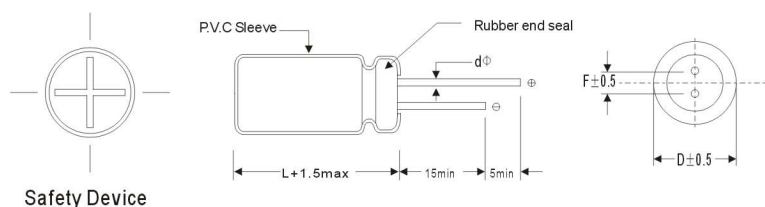
Multiplier for Ripple Current vs. Frequency

| CAP(μ F)\Hz | 50(60) | 120 | 400 | 1K | 10K | 50K-100K |
|--------------|--------|------|------|------|------|----------|
| CAP≤10 | 0.47 | 0.59 | 0.76 | 0.85 | 0.97 | 1 |
| 10<CAP≤100 | 0.52 | 0.65 | 0.80 | 0.89 | 0.97 | 1 |
| 100<CAP≤1000 | 0.58 | 0.72 | 0.84 | 0.90 | 0.98 | 1 |
| 1000<CAP | 0.63 | 0.78 | 0.87 | 0.91 | 0.98 | 1 |

Multiplier for Ripple Current vs. Temperature

| Temperature°C | 45 | 60 | 70 | 85 | 95 | 105 |
|---------------|------|------|------|------|------|------|
| Multiplier | 2.10 | 1.90 | 1.65 | 1.40 | 1.25 | 1.00 |

Outline drawing:(Unit:mm)



| Dφ | 5 | 6.3 | 8 | 10 | 13 | 16 | 18 |
|----|-----|-----|-----|-----|-----|-----|-----|
| F | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| dφ | | 0.5 | | 0.6 | | 0.8 | |