**SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS**

**BLA Series**

* 105°C 5,000 Hrs. assured.
* Vertical SMD type.
* Long Life.
* For LED MT, AVN.
* RoHS compliant.
* Halogen-free capacitors are also available.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Characteristics</th>
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</thead>
<tbody>
<tr>
<td><strong>Rated Voltage Range</strong></td>
<td>4 ~ 400 Vdc</td>
</tr>
<tr>
<td><strong>Operating Temperature Range</strong></td>
<td>-40 ~ +105°C</td>
</tr>
<tr>
<td><strong>Capacitance Tolerance</strong></td>
<td>±20% (at 20°C, 120Hz)</td>
</tr>
<tr>
<td><strong>Leakage Current</strong></td>
<td>0.01 CV (µA) or 3 µA, whichever is greater. (at 20°C, 2 minutes)</td>
</tr>
<tr>
<td><strong>Dissipation Factor (Tanδ)</strong></td>
<td>0.04 CV + 100 (µA) (at 20°C, 1 minute)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rated Voltage (Vdc)</th>
<th>4~100</th>
<th>160~400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Leakage current (µA)</td>
<td>0.24</td>
<td>0.12</td>
</tr>
<tr>
<td><strong>Temperature Characteristics</strong></td>
<td>(Max. Impedance ratio)</td>
<td></td>
</tr>
<tr>
<td>Rated voltage (Vdc)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Z(-25°C)/Z(+20°C)</td>
<td>4</td>
<td>6.3</td>
</tr>
<tr>
<td>Z(-40°C)/Z(+20°C)</td>
<td>14</td>
<td>10</td>
</tr>
</tbody>
</table>

**Load Life**

The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 5,000 hours at 105°C.

- Capacitance change: ±30% of the initial value
- Tanδ: 300% of the initial specified value
- Leakage current: The initial specified value

**Shelf Life**

The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.

- Capacitance change: ±30% of the initial value
- Tanδ: 300% of the initial specified value
- Leakage current: The initial specified value

**Others**

Satisfied characteristics KS C IEC 60384-4

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**PART NUMBERING SYSTEM**

- **BLA**
- **VC**
- **100**
- **M**
- **F60**
- **TP**

With tape
Case code
Nominal capacitance code
(ex. 0.1µF, 1.0µF, 4.7µF)
Load type
Rated voltage
Series name

---

**RATED RIPPLE CURRENT MULTIPLIERS**

Frequency Multipliers

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<thead>
<tr>
<th>Freq. (Hz)</th>
<th>120</th>
<th>1K</th>
<th>10K</th>
<th>100K</th>
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<tr>
<td>Factor</td>
<td>1.00</td>
<td>1.05</td>
<td>1.08</td>
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SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

DIMENSIONS OF BLA Series

**DIMENSIONS**

![Diagram of capacitance and soldering positions on a PCB board]

- **Notation**:
  - D: Diameter
  - W: Width
  - A: Thickness
- **Safety Vent** (≥ 0.1)
- **L: ±0.3 (Note 1)**
- **B: ±0.2**

**MARKING**

- **Lot No.**
- **Symbol mark**
- **Capacitance**
- **Rated Voltage**

**Recommended solder land on PC board**

- **Solder land on PC board**

**Note 1**: L ±0.5 for 8 x 10 (H10) – 12.5 x 13.5 (K14)
**Note 2**: 4 x 5.2 (OSB), 5 x 5.2 (ES5) is excluded symbol mark.
**Note 3**: 6.3W is marked by 6V.

<table>
<thead>
<tr>
<th>Case code</th>
<th>D</th>
<th>L</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>W</th>
<th>P</th>
<th>a</th>
<th>b</th>
<th>c</th>
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<td>4</td>
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<td>4.3</td>
<td>4.3</td>
<td>5.1</td>
<td>0.5−0.8</td>
<td>1.0</td>
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**RATINGS OF BLA Series**

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**Rated Ripple Current (mArms/105°C, 120Hz)**

<table>
<thead>
<tr>
<th>Vdc</th>
<th>160</th>
<th>200</th>
<th>250</th>
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