Flyback Transformers For National Semiconductor
LM5070 PoE Interface – 7 Watt

- Flyback transformers for 7 W PoE applications
- Designed to operate in continuous mode at 250 kHz with an input of 36–72 Vdc
- 1500 Vrms isolation from primary and bias to secondary

**Core material** Ferrite
**Terminations** RoHS tin-silver over tin over nickel over phosph bronze. Other terminations available at additional cost.

**Weight** 3.85 g

**Ambient temperature** −40°C to +85°C

**Storage temperature** Component: −40°C to +85°C.
Tape and reel packaging: −40°C to +80°C

**Resistance to soldering heat** Max three 40 second refractions at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)** 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

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<table>
<thead>
<tr>
<th>Part number1</th>
<th>Inductance at 0 A2 ±10% (µH)</th>
<th>Inductance at Ipk2 min (µH)</th>
<th>DCR max (Ohms)4</th>
<th>Leakage inductance max (µH)5</th>
<th>Turns ratio6</th>
<th>Ipk3 (A)</th>
<th>Output7</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1587-AL_</td>
<td>155</td>
<td>139.5</td>
<td>0.414 0.822 0.036</td>
<td>4.00</td>
<td>1 0.19</td>
<td>1 0.677</td>
<td>0.65 3.3 V, 2.12 A</td>
</tr>
<tr>
<td>C1588-AL_</td>
<td>155</td>
<td>139.5</td>
<td>0.414 0.822 0.060</td>
<td>3.60</td>
<td>1 0.262</td>
<td>1 0.677</td>
<td>0.65 5.0 V, 1.4 A</td>
</tr>
<tr>
<td>C1589-AL_</td>
<td>155</td>
<td>139.5</td>
<td>0.414 0.822 0.343</td>
<td>3.25</td>
<td>1 0.667</td>
<td>1 0.677</td>
<td>0.65 12 V, 0.6 A</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

Packaging:  
**D** = 13” machine-ready reel. EIA-481 embossed plastic tape.

**B** = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter D instead.

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**Recommended Land Pattern**

Secondary windings to be connected in parallel on the PC board

**Packaging:**

C1587-AL 250 per 13” reel Plastic tape: 32 mm wide, 0.5 mm thick, 20 mm pocket spacing, 11.2 mm pocket depth

C1588/C1589-AL 200 per 13” reel Plastic tape: 32 mm wide, 0.5 mm thick, 24 mm pocket spacing, 11.2 mm pocket depth

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Dimensions are in inches mm

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