Flyback Transformers

For MPS MP8007 Flyback Reference Design

- Designed for Monolithic Power Systems MP8007 Flyback Reference Design for IEEE802.3af compliant PoE applications.
- Operates in continuous conduction mode with 36 – 57 V input.
- 1500 Vrms, 5 mA, one minute isolation (hipot) between primary and auxiliary to secondary.

Core material: Ferrite
Terminations: RoHS tin-silver-copper over tin over nickel over phosphor bronze.

Weight: 6.0 – 6.2 g
Ambient temperature: –40°C to +85°C
Max part temperature: +125°C (ambient + temp rise)
Storage temperature: Component: –40°C to +125°C
Tape and reel packaging: –40°C to +80°C
Resistance to soldering heat: Max three 40 second reflows 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
Packaging: 175 per 13″ reel. Plastic tape: 32 mm wide, 0.6 mm thick, 28 mm pocket spacing, 12.93 mm pocket depth

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Power (W)</th>
<th>Inductance at 0 A2 ±10% (µH)</th>
<th>DCR max (Ohms)3</th>
<th>Leakage inductance4 max (µH)</th>
<th>Turns ratio5</th>
<th>Ipk6</th>
<th>Output7</th>
</tr>
</thead>
<tbody>
<tr>
<td>CX9628-AL_</td>
<td>12</td>
<td>43.7</td>
<td>0.095 0.094 0.009</td>
<td>1.00</td>
<td>1 : 0.25 : 0.20</td>
<td>2.0</td>
<td>5 V, 2.5 A</td>
</tr>
<tr>
<td>CX9629-AL</td>
<td>12</td>
<td>42.9</td>
<td>0.10 0.10 0.02</td>
<td>1.00</td>
<td>1 : 0.25 : 0.45</td>
<td>2.0</td>
<td>12 V, 1.0 A</td>
</tr>
<tr>
<td>CX9649-AL</td>
<td>12</td>
<td>45.3</td>
<td>0.10 0.10 0.09</td>
<td>1.00</td>
<td>1 : 0.25 : 0.90</td>
<td>2.0</td>
<td>24 V, 0.5 A</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - CX9629-ALD
     Packaging: D = 13″ machine-ready reel. EIA-481 embossed plastic tape (175 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
     B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

2. Inductance is for the primary, measured at 100 kHz, 0.1 Vrms, 0 Adc.
3. DCR for the secondary is with both windings connected in parallel.
4. Leakage inductance measured between pins 1 and 3 with all other pins shorted.
5. Turns ratio is with the secondary windings connected in parallel.
6. Peak primary current drawn at minimum input voltage.
7. Output is with the secondary windings connected in parallel.
8. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Dimensions are in inches

Secondary windings to be connected in parallel on PC board

Dot indicates pin 1

Recommended Land Pattern

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