No-Opto Flyback Transformer

- Designed for use with Maxim 60 V No-opto isolated flyback controller MAX17690
- High efficiency, 90.6% in MAXIM reference design circuit
- Operates at 163 kHz with 18 – 38 V input
- 1500 Vrms, one minute isolation (hipot) between primary and secondary

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

Weight  2.7 – 3.0 g
Ambient temperature  –40°C to +85°C
Max part temperature  +125°C
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 refloows at +260°C, parts cooled to room temperature between cycles

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

Packaging  400 per 13” reel Plastic tape: 32 mm wide, 0.4 mm thick, 20 mm pocket spacing, 7.6 mm pocket depth

PCB washing  Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Inductance at 0 A2 ±10% (µH)</th>
<th>Inductance min at 5 A (µH)</th>
<th>DCR max (Ohms) pri</th>
<th>DCR max (Ohms) sec</th>
<th>Leakage inductance max (µH)2</th>
<th>Turns ratios pri : sec</th>
<th>Isolation5 (Vrms)</th>
<th>Power (W)</th>
<th>Output</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZB1313-CLD</td>
<td>10.5</td>
<td>9.45</td>
<td>0.0611</td>
<td>0.0647</td>
<td>0.18</td>
<td>1 : 1.27</td>
<td>1500</td>
<td>16.8</td>
<td>24 V, 0.7 A</td>
<td></td>
</tr>
</tbody>
</table>

1. Packaging:  D = 13” machine-ready reel. EIA-481 embossed plastic tape (400 parts per full reel).
2. Inductance is for the primary, measured at 150 kHz, 0.1 Vrms, 0 Adc.
3. Minimum inductance is for the primary, measured at 150 kHz, 0.1 Vrms, 5 Adc.
4. Leakage inductance is for the primary winding with the secondary winding shorted.
5. Turns ratios are with the primary and secondary windings connected in parallel.
6. 1500 Vrms, one minute isolation (hipot) between primary and secondary.
7. Electrical specifications at 25°C.

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

Connect pin 1 to 2, pin 5 to 6, pin 7 to 8 to 9, and pin 10 to 11 to 12 on PC board.
No-Opto Flyback Transformer – ZB1313-CLD

L vs Current

Inductance (μH)

Current (A)

Recommended Land Pattern

Dimensions are in inches / mm

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