Planar Transformer

For National Semiconductor
LM5032 PWM Controller

- Developed for the NSC LM5032 dual interleaved current mode PWM controller for applications up to 100 Watts.
- Can be used in a dual forward converter or in both interleaved power stages of a high-current converter.
- Low leakage inductance, excellent DCR
- Interwinding isolation: 1500 Vdc.

Core material  Ferrite
Terminations  RoHS Matte tin over nickel over brass
Weight 10.2 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 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  200 per 13″ reel Plastic tape: 44 mm wide, 0.37 mm thick, 32 mm pocket spacing, 9.35 mm pocket depth
PCB washing  Only pure water or alcohol recommended

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Output power (W)</th>
<th>Output voltage nom (V)</th>
<th>Output current (A rms)</th>
<th>Primary inductance min (µH)</th>
<th>Leakage inductance max (µH)</th>
<th>DCR max (mOhms)</th>
<th>Turns ratio</th>
<th>Pri/sec Isolation (Vdc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1539-AL_</td>
<td>100</td>
<td>12</td>
<td>8.33</td>
<td>320.0</td>
<td>0.25</td>
<td>63.0</td>
<td>2:1</td>
<td>1500</td>
</tr>
</tbody>
</table>

1. When ordering, please specify a packaging code:
   - C1539-ALD
   - Packaging: D = 13″ machine ready reel. EIA-481 embossed plastic tape (200 per full reel).
   - 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.

2. Inductance measured on an Agilent/HP 4284 between pins 2 and 4 at 250 kHz, 0.1 Vrms, 0 Adc.
3. Leakage inductance measured between pins 2 and 4 at 100 kHz, 0.1 Vrms, 0 Adc with pins 7 and 9 shorted.
4. Storage and ambient operating temperature range: −40°C to +85°C.
5. Electrical specifications at 25°C.

Recommended Land Pattern

Dot indicates pin 1

Parts manufactured prior to December 2011 may be marked differently.

Dimensions are in inches mm

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