Flyback Transformers

For TI TPS23753A PoE Interface and Converter Controller

• For TI TPS23753A IEEE802.3 PoE Interface and Converter Controller
• Developed for TI PMP9068 Class 1 Isolated Synchronous Flyback Converter for PoE PD Application Reference Design
• 1500 Vrms, one minute isolation primary and bias to secondary and drive windings

Core material Ferrite
Terminals RoHS tin-silver-copper over tin over nickel over phosphor bronze.
Weight 2.1 g
Ambient temperature –40°C to +125°C
Maximum part temperature +135°C
Storage temperature Component: –40°C to +135°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 350 per 13” reel Plastic tape: 32 mm wide, 0.45 mm thick, 20 mm pocket spacing, 9.35 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 number</th>
<th>L at 0 A² (µH)</th>
<th>Lat pk (µH)</th>
<th>DCR max (Ohms)</th>
<th>Leakage L₄ (µH)</th>
<th>Turns ratio</th>
<th>Ipk³ (A)</th>
<th>Output⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA6595-AL_</td>
<td>310</td>
<td>279.0</td>
<td>1.14</td>
<td>1.040</td>
<td>1:0.14</td>
<td>1:0.21</td>
<td>1:0.465</td>
</tr>
<tr>
<td></td>
<td>±10%</td>
<td>min</td>
<td>pri</td>
<td>0.098</td>
<td>0.098</td>
<td>0.3</td>
<td>3.3 V</td>
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<td></td>
<td></td>
<td></td>
<td>sec</td>
<td>0.104</td>
<td>0.370</td>
<td></td>
<td>0.9 A</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>drive</td>
<td>2.65</td>
<td>9.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>bias</td>
<td>0.098</td>
<td>2.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   • PA6595-ALD
     - Packaging: D = 13” machine ready reel. EIA-481 embossed plastic tape (350 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 is for the primary, measured at 250 kHz, 0.1 Vrms.
3. Peak primary current drawn at minimum input voltage.
4. Leakage inductance is for the primary with the secondary and drive windings shorted; leakage inductance for the drive winding is with the secondary windings shorted.
5. Output is of the secondary winding. Output of the bias winding is 12 V, 20 mA. Output of the drive winding is 5 V, 50 mA

Dimensions are in inches/mm