Flyback Transformer

For TI TPS23756

15 W PoE Converter

- Flyback for Texas Instruments TPS23756 Wide Input Range 15 W PoE Converter; shown on PMP6659 schematic and BOM
- Input: 10.8 – 57 V
- 1500 Vrms, one minute isolation from primary and bias to secondary

Core material Ferrite

Terminations RoHS tin-silver (96.5/3.5) over tin over nickel over phos bronze. Other terminations available at additional cost.

Weight 11.3 g

Ambient temperature -40°C to +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)

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: 44 mm wide, 0.4 mm thick, 28 mm pocket spacing, 11.9 mm pocket depth

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

1. When ordering, please specify a packaging code:

   MA5281-BL

   Packaging: D = 13" machine ready reel. EIA-481 embossed plastic tape (175 parts 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 measured at 250 kHz, 0.1 Vrms, 0 Adc.
3. Peak primary current drawn at minimum input voltage.

   L at 0 A^2 \pm 10% (µH)  LatIpk (µH)  DCR max (Ohms)  Leakage L^0 (µH)  Turns ratio^6  Ipk^3 (A)  Output^7

<table>
<thead>
<tr>
<th>Part number</th>
<th>pri</th>
<th>sec</th>
<th>bias</th>
<th>drive</th>
<th>max</th>
<th>pri:sec</th>
<th>pri:bias</th>
<th>pri:drive</th>
<th>1</th>
<th>0.57</th>
<th>0.57</th>
<th>0.52</th>
<th>2.8</th>
<th>12 V, 1.25 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA5281-BL___</td>
<td>45</td>
<td>40.5</td>
<td>0.060</td>
<td>0.058</td>
<td>0.370</td>
<td>0.323</td>
<td>0.550</td>
<td>1:0.57</td>
<td>1:0.57</td>
<td>1:0.52</td>
<td>2.8</td>
<td>12 V, 1.25 A</td>
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4. DCR for the primary and the secondary is measured with windings connected in parallel.
5. Leakage inductance is for the primary, measured with the windings connected in parallel and the secondary windings shorted.
6. Turns ratio is with the primary windings and secondary windings connected in parallel.
7. Output is with the secondary windings connected in parallel. Output of the drive winding is 11 V, 15 mA. Output of the bias winding is 11.5 V, 15 mA.
8. Electrical specifications at 25°C.

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

Dimensions are in inches mm

Primary windings and secondary windings to be connected in parallel on PC board

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