Flyback Transformers for TI TPS23753 PoE Interface and Converter Controller

These three parts are improved versions of the HA3801-AL, HA3802-AL and HA3803-AL, which are not recommended for new designs.

- Windings optimized for hiccup overload protection
- 1500 Vrms, one minute isolation primary and bias to secondary windings

Core material: Ferrite

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

Weight: 5.0 – 5.3 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 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)

Packaging: 200 per 13” reel. Plastic tape: 44 mm wide, 0.4 mm thick, 28 mm pocket spacing, 9.6 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>L at 0 A2 (µH)</th>
<th>LatIpk3 (µH)</th>
<th>DCR max (Ohms)</th>
<th>Leakage max (µH)</th>
<th>Turns ratio</th>
<th>Ipk5 (A)</th>
<th>Output1</th>
<th>Drive output</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA3801-BL</td>
<td>166.5</td>
<td>150.0</td>
<td>0.735</td>
<td>0.0270</td>
<td>0.510</td>
<td>0.25</td>
<td>0.41</td>
<td>1:0.154</td>
</tr>
<tr>
<td>HA3802-BL</td>
<td>150.0</td>
<td>135.0</td>
<td>0.520</td>
<td>0.0275</td>
<td>0.560</td>
<td>1.90</td>
<td>0.40</td>
<td>1:0.25</td>
</tr>
<tr>
<td>HA3803-BL</td>
<td>166.5</td>
<td>150.0</td>
<td>0.760</td>
<td>0.103</td>
<td>0.475</td>
<td>1.80</td>
<td>0.25</td>
<td>1:0.50</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - HA3803-BL

   Packaging: D = 13” machine ready reel. EIA-481 embossed plastic tape (200 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.
3. Peak primary current drawn at minimum input voltage.
4. DCR for secondary is with windings connected in parallel.
5. Leakage inductance for the primary is with the secondary and drive windings shorted; leakage inductance for the drive winding is with the secondary windings shorted.
6. Turns ratio is with both secondary windings connected in parallel.
7. Output of the secondary is with the windings connected in parallel. 10 W output from 36 – 57 V PoE input or 24 V adapter; 6 W output from 12 V adapter. Bias winding output is 12 V, 20 mA.
8. Electrical specifications at 25°C.

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

---

**Recommended Land Pattern**

Dimensions are in inches/mm

---

© Coilcraft Inc. 2021
This product may not be used in medical or high risk applications without prior Coilcraft approval.
Specification subject to change without notice. Please check web site for latest information.