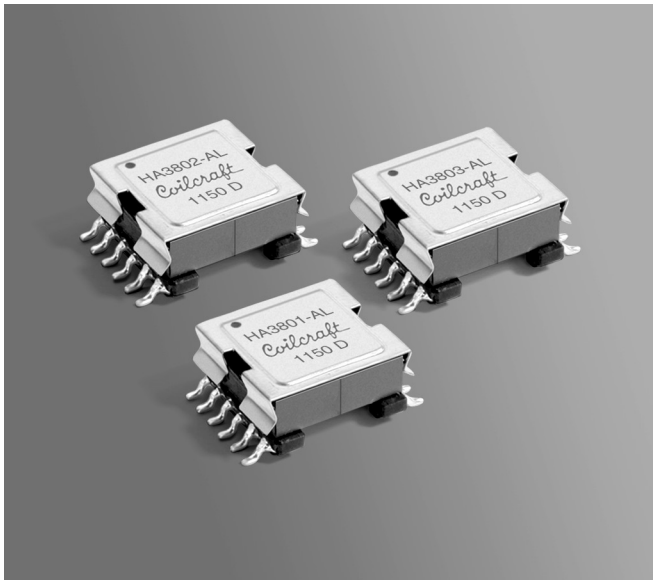
Flyback Transformers

For TI TPS23753 PoE Interface and Converter Controller



- Isolated synchronous flyback transformers developed for Texas Instruments TPS23753 for use at 125 kHz.
- Windings optimized for hiccup overload protection
- 1500 Vrms, one minute isolation primary and bias to secondary windings

Core material Ferrite

Terminations RoHS tin-silver over tin over nickel over phos 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)

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, 0.4 mm thick, 28 mm pocket spacing, 9.6 mm pocket depth

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

Part number[1]	L at 0 A[2] ±10% (µH)	L at Ipk[3] min (µH)	DCR max (Ohms) pri	sec[4]	drive	bias	Leakage L[5] max (µH) pri	drive	Turns ratio pri:sec[6]	pri:drive	pri:bias	Ipk[3] (A)	Output[7]	Drive output
HA3801-AL_166.5		150.0	0.735	0.0225	0.510	0.985	2.50	0.45	6.5:1	3.7:1	2.0:1	1.2	3.3 V, 3 A	5.6 V, 10 mA
* HA3802-AL_150.0		135.0	0.520	0.0275	0.525	0.770	2.00	0.40	5.0:1	3.2:1	2.25:1	1.2	5.0 V, 2 A	7.5 V, 10 mA
* HA3803-AL_166.5		150.0	0.760	0.101	0.500	1.10	2.05	0.245	2.0:1	4.0:1	2.0:1	1.2	12 V, 0.83 A	6.0 V, 10 mA

1. When ordering, please specify **packaging** code:

HA3803-ALD

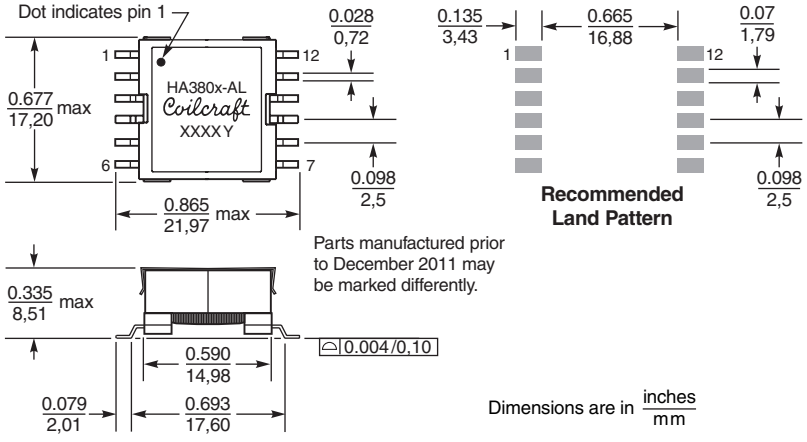
Packaging: D = 13″ machine ready reel. EIA-481 embossed plastic tape (200 per full reel).
B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter D instead.

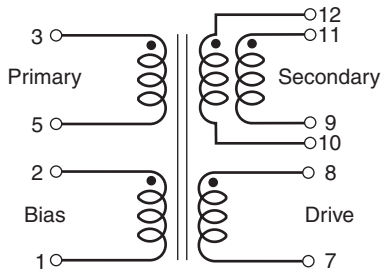
2. Inductance is for the primary, measured at 100 kHz, 0.1 Vrms.

*HA3802-**AL** and HA3803-**AL** ar not available for new designs. See HA3802-**BL** and HA3803-**BL** for improved versions of these parts

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 10 V, 20 mA.
8. Electrical specifications at 25°C.

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





The secondary windings are to be connected in parallel on the PC board.

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