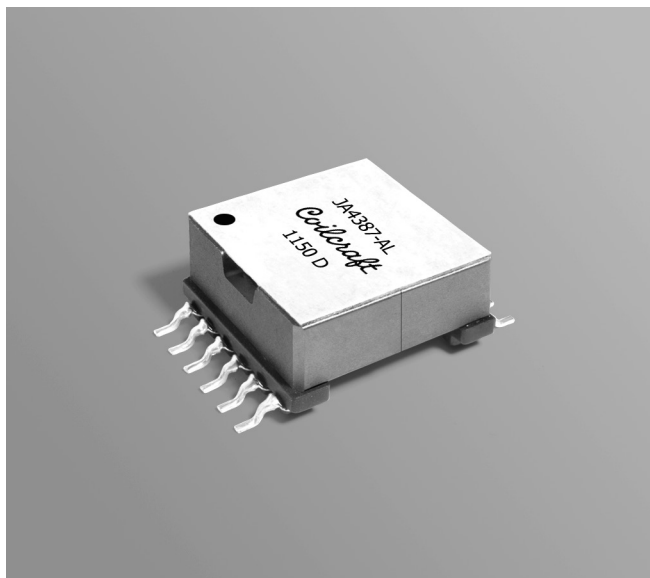




# Flyback Transformers

For TI TPS23754  
PoE Interface



- Developed for Texas Instruments TPS23754 High Power, High Efficiency PoE Interface and DC/DC Controller
- Input: 33 – 57 V
- 1500 Vrms 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.

**Weight** 12.0 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** 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

| Part number <sup>1</sup> | L at 0 A <sup>2</sup><br>±10%<br>(μH) | L at I <sub>pk</sub> <sup>3</sup><br>min<br>(μH) | DCR max (Ohms) <sup>4</sup> |        |       |       | Leakage L <sup>5</sup><br>max (μH) | Turns ratio <sup>6</sup> |          |           | I <sub>pk</sub> <sup>3</sup><br>(A) | Output <sup>7</sup> |
|--------------------------|---------------------------------------|--------------------------------------------------|-----------------------------|--------|-------|-------|------------------------------------|--------------------------|----------|-----------|-------------------------------------|---------------------|
|                          |                                       |                                                  | pri                         | sec    | bias  | drive |                                    | pri:sec                  | pri:bias | pri:drive |                                     |                     |
| JA4372-AL                | 75                                    | 67.5                                             | 0.143                       | 0.0045 | 0.122 | 0.072 | 3.0                                | 1:0.08                   | 1:0.28   | 1:0.16    | 2.2                                 | 3.3 V, 7.6 A        |
| JA4387-AL                | 75                                    | 66.0                                             | 0.077                       | 0.0098 | 0.096 | 0.070 | 0.756                              | 1:0.25                   | 1:0.25   | 1:0.15    | 2.2                                 | 12 V, 2.08 A        |

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

**JA4387-ALD**

**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.

4. DCR for the primary and the secondary is measured with windings connected in parallel.

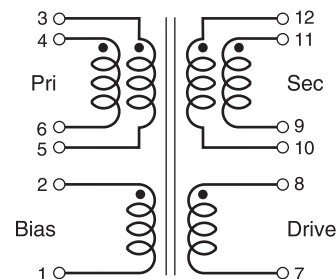
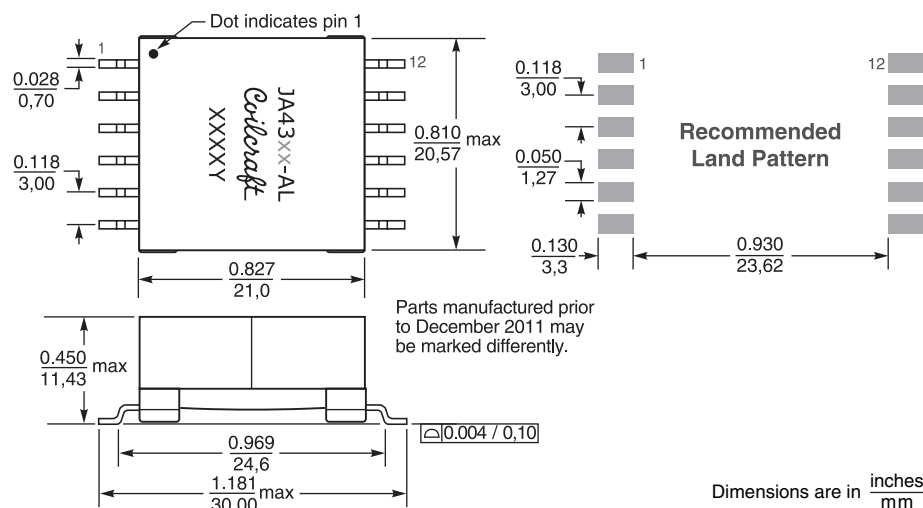
5. Leakage inductance is for the primary, measured with the windings connected in parallel and the secondary windings shorted.

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 6 V, 10 mA. Output of the bias winding is 11.2 V, 20 mA.

8. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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

Dimensions are in  $\frac{\text{inches}}{\text{mm}}$



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