



# Flyback Transformers

For Texas Instruments TPS23750  
PoE Powered Device Controller



- Isolated synchronous flyback transformers developed for Texas Instruments PMP929 reference design.
- Operates up to 500 kHz with 18 – 72 V input
- 1500 Vrms 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.  
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, 0.35 mm thick, 28 mm pocket spacing, 9.6 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

Part number <sup>1</sup>	L at 0 A <sup>2</sup> ±10% (µH)	L at I <sub>pk</sub> <sup>3</sup> min (µH)	DCR max (Ohms)				Leakage L <sup>5</sup> max (µH)		Turns ratio			I <sub>pk</sub> <sup>3</sup> (A)	Output <sup>7</sup>	Drive output
			pri	sec <sup>4</sup>	drive	bias	pri	drive	pri:sec <sup>6</sup>	pri:drive	pri:bias			
C1173-AL_	166.5	150.0	0.770	0.020	0.523	1.12	2.50	0.400	6.5:1	3.7:1	2.0:1	1.2	3.3 V, 3 A	5.6 V, 10 mA
C1174-AL_	150.0	135.0	0.515	0.023	0.570	0.88	2.00	0.400	5.0:1	3.2:1	2.25:1	1.2	5.0 V, 2 A	7.5 V, 10 mA

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

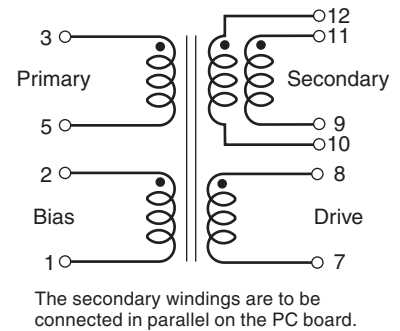
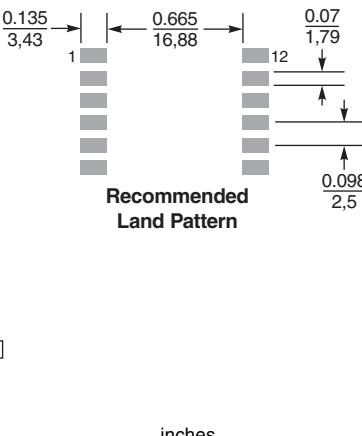
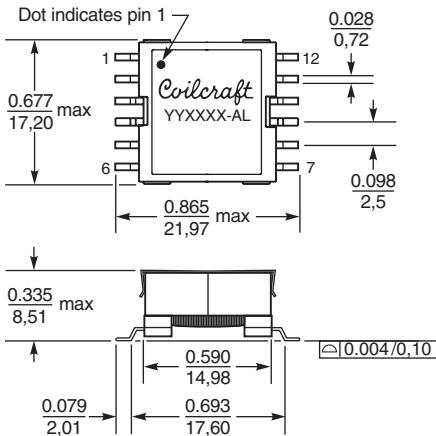
**C1174-AL D**

**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.  
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. Bias winding output is 10 V, 20 mA.  
8. Electrical specifications at 25°C.  
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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



Specifications subject to change without notice.  
Please check our website for latest information.

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