



# Flyback Transformer

For Linear Technology  
LTC4267 PoE PD Interface

The D1766-AL multiple-output transformer was developed for use with Linear Technology LTC4267 Power over Ethernet IEEE 802.3af PD Interface with Integrated Switching Regulator. It is ideal for use in telecommunications isolated converters and isolated power supplies.

This low-profile transformer is designed for an input volt-

age of 36 – 72 Volts. It features interleaved primary and secondary windings to minimize leakage inductance and 1500 Vrms isolation between windings.

Coilcraft can also custom engineer a transformer to meet your specific requirements. For free evaluation samples, contact Coilcraft or visit [www.coilcraft.com](http://www.coilcraft.com).

Part number <sup>1</sup>	Inductance at 0 Adc <sup>2</sup> ±10% (µH)	Inductance at Ipk <sup>3</sup> min (µH)	DCR max (Ohms)	Leakage Inductance <sup>4</sup> max (µH)	Turns ratio		Ipk <sup>3</sup> (A)	Outputs <sup>5</sup>
					pri : S1	pri : S2,S3		
D1766-AL_	221	200	0.420 (pins 1 – 3) 0.013 (pins 8–5) 0.013 (pins 7–6) 0.015 (pins 10–9) 0.030 (pins 12–11)	5.1	9.6 : 1	24 : 1	1.5	3.3 V, 0.5 A (S3) 2.5 V, 1.5 A (S2) 1.8 V, 2.5 A (S1)

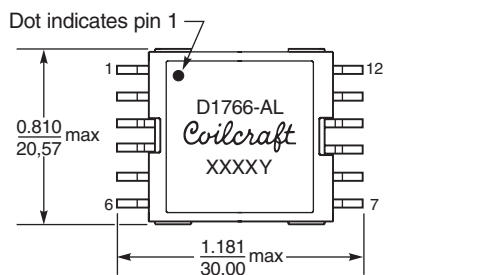
1. When ordering, please specify **packaging** code:

**D1766-ALD**

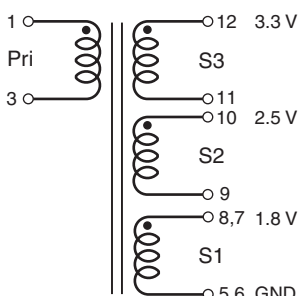
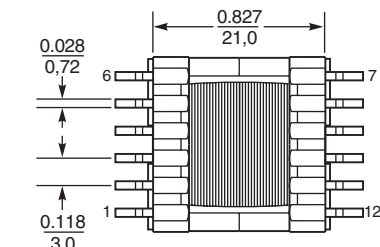
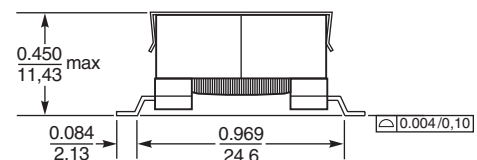
**Packaging:** D = 13" machine-ready reel. EIA-481 embossed plastic tape (175 parts per full reel).

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.

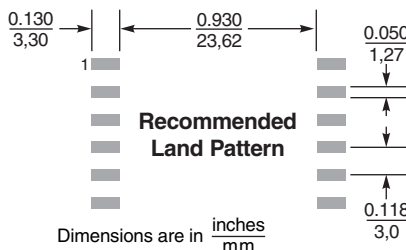
- Inductance is for the primary, measured at 200 kHz, 1.1 Vrms, 0 Adc.
  - Peak primary current drawn at minimum input voltage.
  - Leakage inductance is for the primary and is measured with secondary windings shorted.
  - All outputs are referenced to ground.
  - Operating temperature range –40°C to +125°C.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



Parts manufactured prior to December 2011 may be marked differently.



The secondary windings are to be connected in series on the board by connecting pins 9, 8 and 7 together and pins 11 and 10 together. Outputs at pins 12, 11, 10 and 8, 7 are referenced to ground (pins 5, 6).



**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** 12.7 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)** 38 per billion hours  
**Mean Time Between Failures (MTBF)** 26,315,789 hours, calculated per Telcordia SR-332  
**Packaging** 175 per 13" reel Plastic tape: 44 mm wide, 0.4 mm thick, 32 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.



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