



# Flyback Transformers

## For 30 Watt PoE Applications



- Designed to meet 30 W PoE IEEE 802.3at-2009 standard.
- Operates at 250 kHz with 36–72 Volts input.
- Isolation: 1500 Vrms, one minute pri to sec; 500 Vrms pri to aux
- UL Certified per File E219588

**Designer's Kit C398** contains three samples of each part.

**Core material** Ferrite

**Terminations** RoHS tin-silver over tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 11.9 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

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance at 0A <sup>2</sup> ±10% (μH)	Inductance at Ipk <sup>3</sup> min (μH)	DCR max (Ohms)			Leakage inductance <sup>5</sup> max (μH)	Turns ratio <sup>6</sup>		Ipk <sup>3</sup> (A)	Output <sup>7</sup>
			pri <sup>4</sup>	sec <sup>4</sup>	aux		pri:sec	pri:aux		
POE300F-33L_	42.0	37.8	0.070	0.0023	0.220	3.00	1:0.09	1:0.33	2.6	3.3 V, 9 A
POE300F-50L_	42.0	37.8	0.069	0.0050	0.225	1.60	1:0.14	1:0.33	2.6	5 V, 6 A
POE300F-12L_	42.0	37.8	0.061	0.015	0.195	0.545	1:0.33	1:0.33	2.6	12 V, 2.5 A
POE300F-19L_	42.0	37.8	0.060	0.037	0.195	0.430	1:0.56	1:0.33	2.6	19.5 V, 1.5 A
POE300F-24L_	42.0	37.8	0.060	0.055	0.195	0.310	1:0.67	1:0.33	2.6	24 V, 1.25 A

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

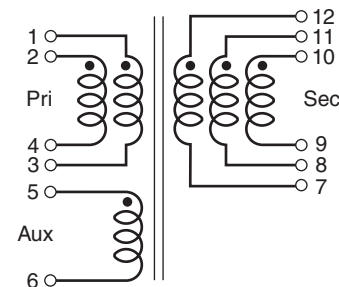
**POE300F-50LD**

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

- Inductance is for the primary, measured at 250 kHz, 0.7 Vrms, 0 Adc.
- Peak primary current drawn at minimum input voltage.
- DCR is with the windings connected in parallel.
- Leakage inductance is for the primary winding with the secondary windings shorted.
- Turns ratio is with the primary and the secondary windings connected in parallel.
- Output is with the secondary windings connected in parallel. Output of the auxiliary winding is 12 V
- Electrical specifications at 25°C.

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



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



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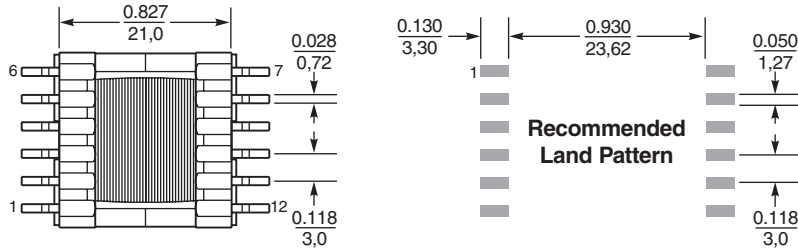
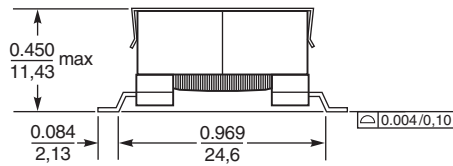
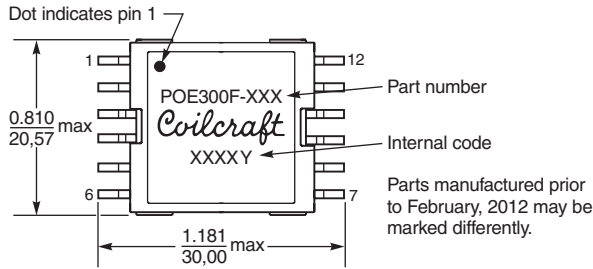
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# Flyback Transformers for PoE Plus – POE300F



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

**Packaging** 175 per 13" reel Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 11.9 mm pocket depth



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