



# 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

**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

**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.

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	3.3V, 9A
POE300F-50L_	42.0	37.8	0.069	0.0050	0.225	1.60	1:0.14	1:0.33	2.6	5V, 6A
POE300F-12L_	42.0	37.8	0.061	0.015	0.195	0.545	1:0.33	1:0.33	2.6	12V, 2.5A
POE300F-19L_	42.0	37.8	0.060	0.037	0.195	0.430	1:0.56	1:0.33	2.6	19.5V, 1.5A
POE300F-24L_	42.0	37.8	0.060	0.055	0.195	0.310	1:0.67	1:0.33	2.6	24V, 1.25A

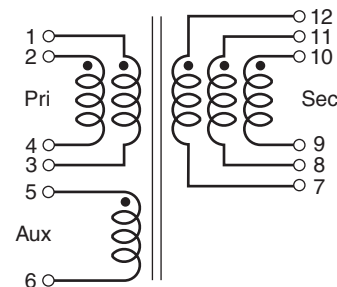
1. When ordering, please specify **packaging** code:

**POE300F-50LD**

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

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 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 PCB.



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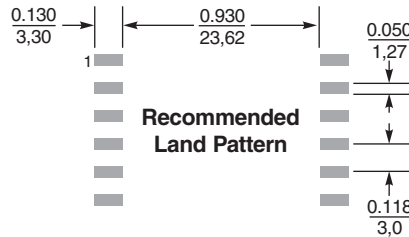
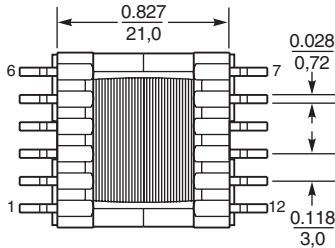
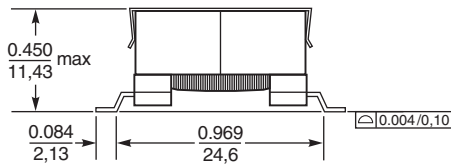
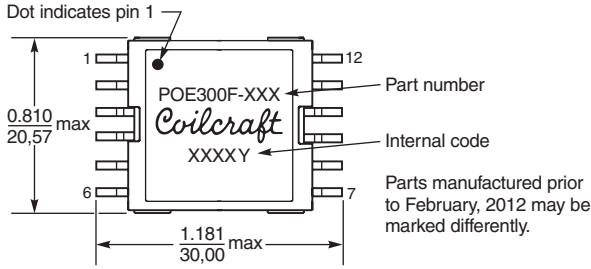
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# Flyback Transformers for PoE Plus – POE300F



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



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