



# Flyback Transformers for PoE



- Flyback transformers for 6 W and 13 W PoE applications
- Designed to operate with 36 – 72 V input at 250 kHz
- 1500Vrms. one minute isolation primary and bias to secondary

**Designer's Kit C372** contains two samples of parts shown in bold

**Core material** Ferrite

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

**Weight** 5.0 – 5.6 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** 200 per 13" reel Plastic tape: 44 mm wide, 0.4 mm thick, 28 mm pocket spacing, 9.6 mm pocket depth

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

Part number <sup>1</sup>	Power (W)	Inductance		DCR max (Ohms) <sup>4</sup>			Leakage inductance <sup>5</sup> max (μH)	Turns ratios <sup>6</sup>		Ipk <sup>3</sup> (A)	Output <sup>7</sup>
		at 0A <sup>2</sup> ±10% (μH)	at Ipk <sup>3</sup> min (μH)	pri	sec	bias		pri:sec	pri:bias		
<b>POE60F-18L</b>	6	75.0	67.5	0.195	0.005	0.195	8.0	1:0.07	1:0.36	1.3	1.8V, 3.3A
<b>POE60F-25L</b>	6	55.0	49.5	0.095	0.005	0.150	4.6	1:0.08	1:0.33	1.2	2.5V, 2.4A
<b>POE60F-33L</b>	6	65.0	58.5	0.138	0.007	0.180	3.9	1:0.11	1:0.36	1.2	3.3V, 1.8A
<b>POE60F-50L</b>	6	60.0	54.0	0.130	0.009	0.165	2.3	1:0.15	1:0.35	1.1	5.0V, 1.2A
<b>POE60F-12L</b>	6	55.0	49.5	0.095	0.017	0.150	0.7	1:0.35	1:0.35	1.1	12V, 0.5A
<b>POE13F-18L</b>	13	45.0	40.5	0.195	0.005	0.195	7.9	1:0.07	1:0.36	2.3	1.8V, 7.2A
<b>POE13F-25L</b>	13	35.0	31.5	0.095	0.005	0.150	4.2	1:0.08	1:0.33	2.2	2.5V, 5.2A
<b>POE13F-33L</b>	13	40.0	36.0	0.138	0.007	0.180	3.4	1:0.11	1:0.36	2.2	3.3V, 3.9A
<b>POE13F-50L</b>	13	40.0	36.0	0.130	0.009	0.165	1.9	1:0.15	1:0.35	2.1	5.0V, 2.6A
<b>POE13F-12L</b>	13	35.0	31.5	0.095	0.017	0.150	0.6	1:0.35	1:0.35	2.0	12V, 1.1A
<b>POE13F-19L</b>	13	37.0	33.3	0.085	0.025	0.150	0.4	1:0.57	1:0.35	2.0	19.5V, 0.67A
<b>POE13F-24L</b>	13	37.0	33.3	0.086	0.049	0.150	0.4	1:0.67	1:0.33	2.0	24V, 0.54A

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

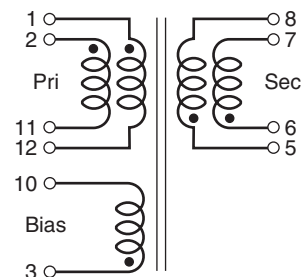
**POE13F-12LD**

**Packaging:** **D** = 13" machine-ready reel. EIA-481 embossed plastic tape (200 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, 0.3 Vrms.
- Peak primary current drawn at minimum input voltage.
- DCR for the primary and for the secondary are with the windings connected in parallel.
- Leakage inductance is for the primary windings with the secondary windings shorted.
- Turns ratios are with the primary the secondary windings connected in parallel.
- Output of the secondary is with the windings connected in parallel. Bias winding output is 12 V, 20 mA.
- Electrical specifications at 25°C.

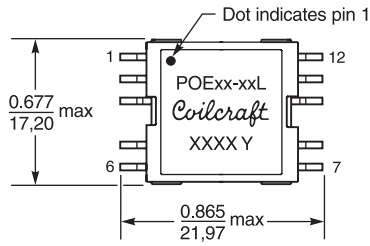
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



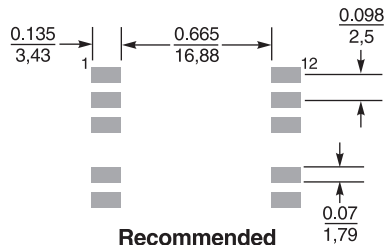
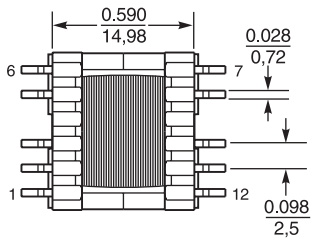
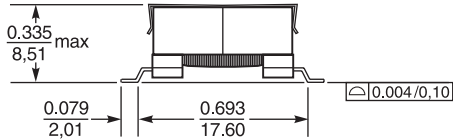
Primary windings and secondary windings to be connected in parallel on PCB board.



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Parts manufactured prior to November, 2011 may be marked differently.



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



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