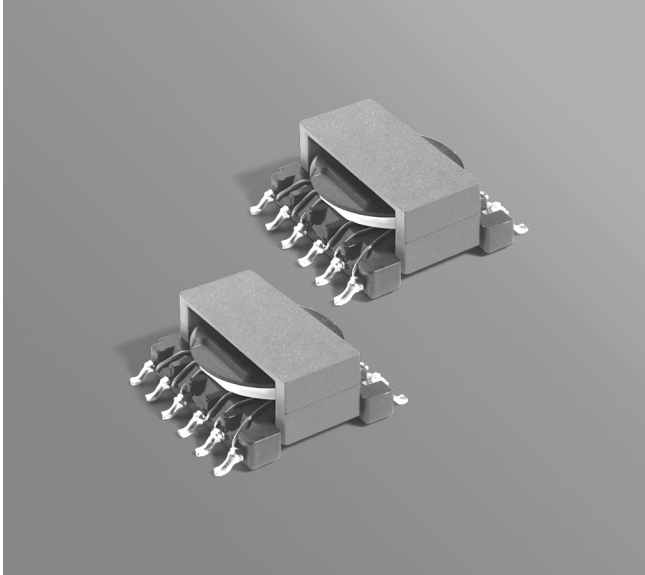




# Miniature Flyback Transformers for PoE



- Space efficient size: 16.5 mm square less than 7.5 mm tall
- Operates at 250 kHz with 36–72 Volts input
- 1500 Vrms, one minute isolation between primary and secondary

**Designer's Kit C382** contains two 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** 2.6 – 2.9 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)

**Packaging** 400 per 13" reel Plastic tape: 32 mm wide, 0.4 mm thick, 20 mm pocket spacing, 7.69 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 at 0A <sup>2</sup> ±10% (µH)	Inductance at I <sub>pk</sub> <sup>3</sup> min (µH)	DCR max (Ohms) <sup>4</sup>			Leakage inductance <sup>5</sup> max (µH)	Turns ratio <sup>6</sup>		I <sub>pk</sub> <sup>3</sup> (A)	Output <sup>7</sup>
				pri	sec	bias		pri/sec	pri/bias		
<b>Continuous mode<sup>8</sup></b>											
POE60C-18L_	6	167.0	150.3	0.303	0.017	0.570	7.8	1 : 0.063	1 : 0.344	0.62	1.8 V, 3.3 A
POE60C-25L_	6	177.0	159.3	0.353	0.027	0.660	7.0	1 : 0.083	1 : 0.333	0.60	2.5 V, 2.4 A
POE60C-33L_	6	184.0	165.6	0.286	0.026	0.515	4.0	1 : 0.100	1 : 0.333	0.57	3.3 V, 1.8 A
POE60C-50L_	6	193.0	173.7	0.344	0.043	0.660	8.0	1 : 0.143	1 : 0.343	0.55	5.0 V, 1.2 A
POE60C-12L_	6	204.0	183.6	0.293	0.083	0.545	5.8	1 : 0.333	1 : 0.333	0.52	12.0 V, 0.5 A
<b>Discontinuous mode</b>											
POE60D-18L_	6	75.0	67.5	0.311	0.018	0.575	6.7	1 : 0.063	1 : 0.344	1.0	1.8 V, 3.3 A
POE60D-25L_	6	80.0	72.0	0.219	0.018	0.388	5.0	1 : 0.083	1 : 0.333	0.95	2.5 V, 2.4 A
POE60D-33L_	6	85.0	76.5	0.285	0.026	0.530	4.0	1 : 0.100	1 : 0.333	0.90	3.3 V, 1.8 A
POE60D-50L_	6	90.0	81.0	0.271	0.033	0.529	3.1	1 : 0.143	1 : 0.357	0.85	5.0 V, 1.2 A
POE60D-12L_	6	95.0	85.5	0.265	0.074	0.484	2.4	1 : 0.333	1 : 0.333	0.80	12.0 V, 0.5 A

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

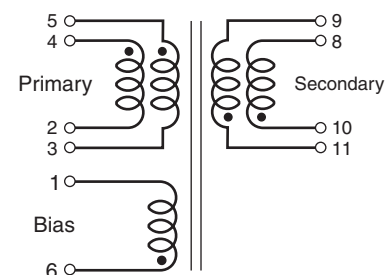
**POE60D-12LD**

**Packaging:** D = 13" machine-ready reel. EIA-481 embossed plastic tape (400 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, 0.5 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 winding with the secondary winding shorted.
- Turns ratios are with the primary and secondary windings connected in parallel.
- Output of the secondary is with the windings connected in parallel. Bias winding output is 12 V, 20 mA.
- Designed to remain in continuous mode operation at power levels of 3 Watts and above.
- 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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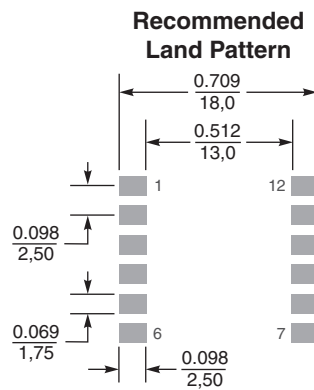
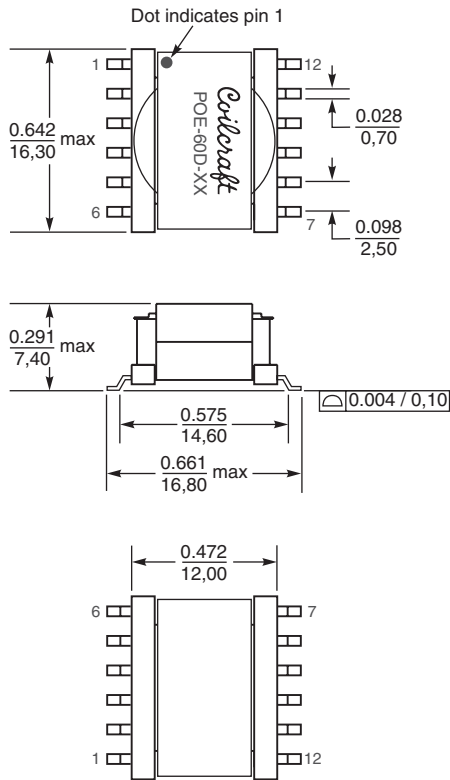
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Dimensions are in  $\frac{\text{inches}}{\text{mm}}$



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