



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
- 1500Vrms, 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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

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 with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

Part number ¹	Power (W)	Inductance at 0A ² ±10% (µH)	Inductance at I _{pk} ³ min (µH)	DCR max (Ohms) ⁴			Leakage inductance ⁵ max (µH)	Turns ratio ⁶		I _{pk} ³ (A)	Output ⁷
				pri	sec	bias		pri/sec	pri/bias		
Continuous mode⁸											
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
Discontinuous mode											
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).

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, 0.5 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.



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 402-1 Revised 12/09/10

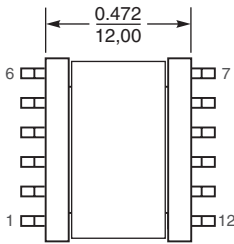
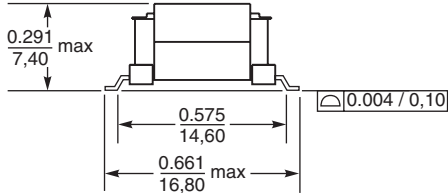
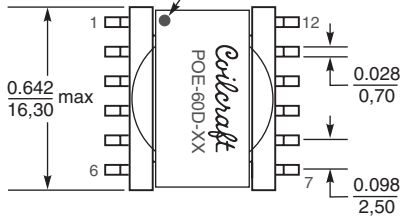
© Coilcraft Inc. 2013

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

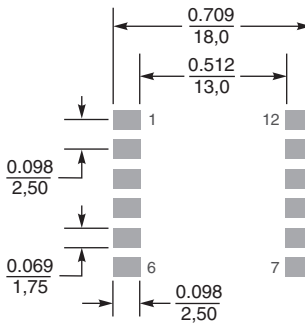


Miniature Flyback Transformers for PoE

Dot indicates pin 1



Recommended Land Pattern



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



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 402-2 Revised 12/09/10

© Coilcraft Inc. 2013

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.