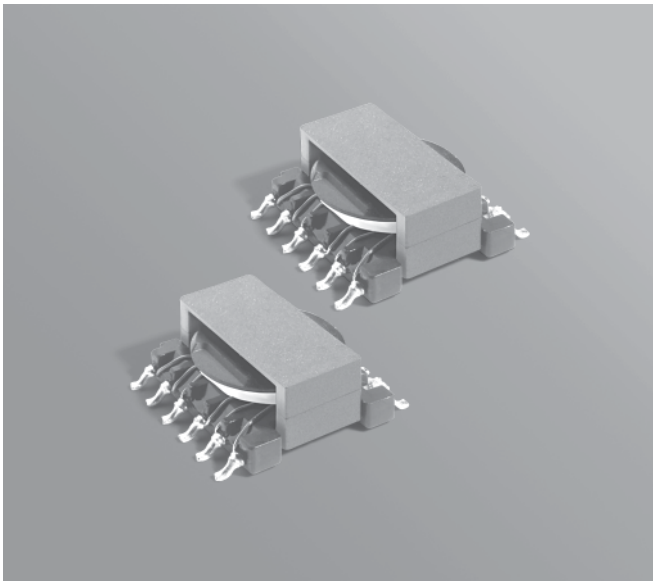
Miniature Flyback Transformers for PoE



- Space efficient size: 16.5 mm square less than 7.5 mm tall
- Operates at 250 kHz with 36 – 72 Volts input
- 1500 Vrms isolation between the primary and the 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. Packaging: –55°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)

Mean Time Between Failures (MTBF) 26,315,789 hours

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 Only pure water or alcohol recommended

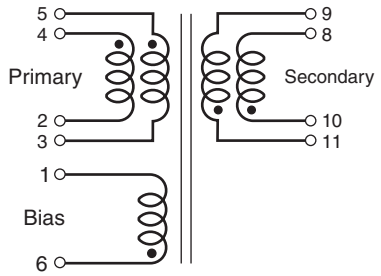
Part number[1]	Power (W)	Inductance at 0 A[2] ±10% (µH)	Inductance at Ipk[3] min (µH)	DCR max (Ohms)[4] pri	sec	bias	Leakage inductance[5] max (µH)	Turns ratio[6] pri/sec	pri/bias	Ipk[3] (A)	Output[7]
Continuous mode[8]											
POE60C-18L_	6	167.0	150.3	0.303	0.017	0.570	7.8	1 : 0.063	1 : 0.344	0.62	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	0.017	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-12L D

   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.
2. Inductance is for the primary, measured at 250 kHz, 0.5 Vrms.
3. Peak primary current drawn at minimum input voltage.
4. DCR for the primary and for the secondary are with the windings connected in parallel.
5. Leakage inductance is for the primary winding with the secondary winding shorted.
6. Turns ratios are with the primary and secondary windings connected in parallel.
7. Output of the secondary is with the windings connected in parallel. Bias winding output is 12 V, 20 mA.
8. Designed to remain in continuous mode operation at power levels of 3 Watts and above.
9. 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 PC board.

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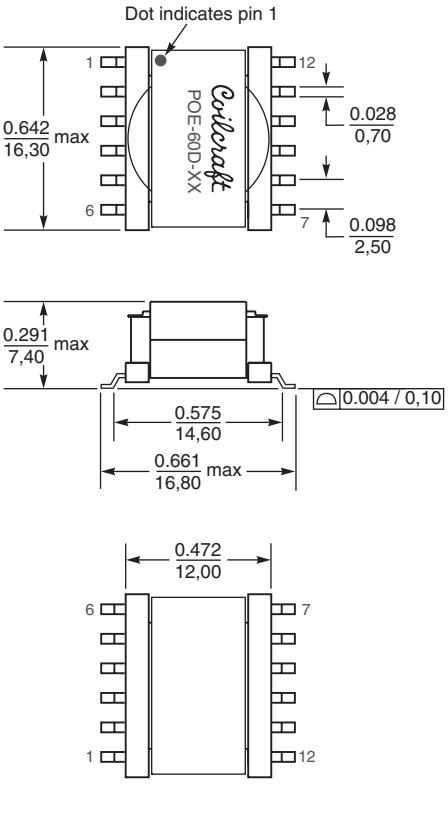
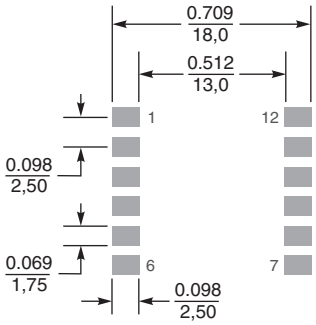


Recommended Land Pattern



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