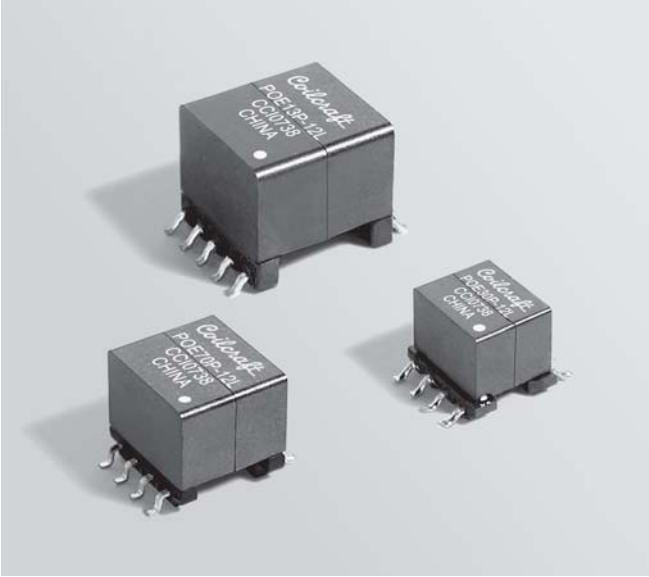
Flyback Transformers

For 3 Watt, 7 Watt and 13 Watt PoE Applications



- Flyback transformers for PoE applications
- Designed to operate in continuous mode at 250 kHz with an input of 36 – 72 Vdc
- 1500 Vrms isolation from primary and bias to secondary

Designer's Kit C395 contains two of each part shown in bold

Core material Ferrite

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

Weight POE13P: 6.15 g; POE70P: 3.85 g; POE30P: 2.05 g

Ambient temperature –40°C to +85°C

Storage temperature Component: –40°C to +85°C. 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

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	bias	sec	Leakage inductance max (µH)[5]	Turns ratio[6] pri : sec	pri : bias	Ipk[3] (A)	Output[7]
POE30P-33L_	3	310	279.0	1.02	2.01	0.066	4.75	1 : 0.19	1 : 0.70	0.3	3.3 V, 0.91 A
POE30P-50L_	3	310	279.0	1.02	2.01	0.118	4.50	1 : 0.28	1 : 0.70	0.3	5.0 V, 0.6 A
POE30P-12L_	3	310	279.0	1.04	2.01	0.700	4.25	1 : 0.70	1 : 0.70	0.3	12 V, 0.25 A
POE70P-33L_	7	155	139.5	0.414	0.822	0.036	4.00	1 : 0.19	1 : 0.667	0.65	3.3 V, 2.12 A
POE70P-50L_	7	155	139.5	0.414	0.822	0.060	3.60	1 : 0.262	1 : 0.667	0.65	5.0 V, 1.4 A
POE70P-12L_	7	155	139.5	0.414	0.822	0.343	3.25	1 : 0.667	1 : 0.667	0.65	12 V, 0.6 A
POE13P-33L_	13	127	114.3	0.255	0.310	0.024	1.25	1 : 0.166	1 : 0.50	1.0	3.3 V, 4.0 A
POE13P-50L_	13	127	114.3	0.222	0.348	0.039	0.950	1 : 0.25	1 : 0.50	1.0	5.0 V, 2.6 A
POE13P-12L_	13	127	114.3	0.199	0.308	0.065	0.650	1 : 0.50	1 : 0.50	1.0	12 V, 1.08 A
POE13P-19L_	13	127	114.3	0.290	0.355	0.066	0.800	1 : 0.567	1 : 0.50	1.0	19.5 V, 0.67 A
POE13P-24L_	13	127	114.3	0.255	0.315	0.067	0.600	1 : 0.667	1 : 0.50	1.0	24 V, 0.54 A

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

   POE30P-12L D

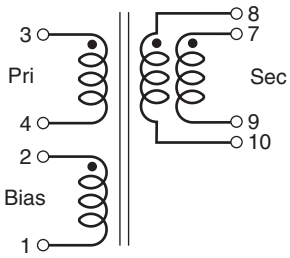
   Packaging: D = 13″ machine-ready reel. EIA-481 embossed plastic tape.

   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, 0.1 Vrms, 0 Adc.
3. Ipk is peak primary current drawn at minimum input voltage.
4. DCR for the secondary is per winding.
5. Leakage inductance measured between pins 3 and 4 with all other pins shorted.
6. Turns ratio is with the 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. Electrical specifications at 25°C.

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

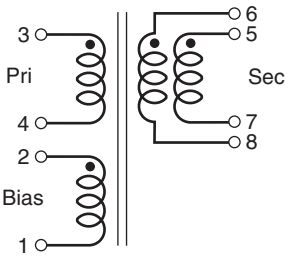
Schematics

POE13P



Secondary windings to be connected in parallel on PC board

POE70P, POE30P



Secondary windings to be connected in parallel on PC board

1102 Silver Lake Road Cary, Illinois 60013 **Phone** 847/639-6400 **Fax** 847/639-1469
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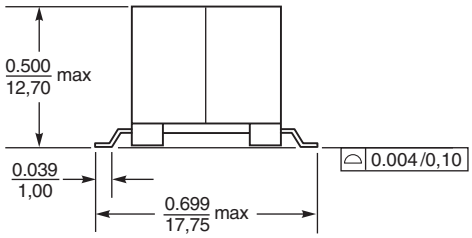
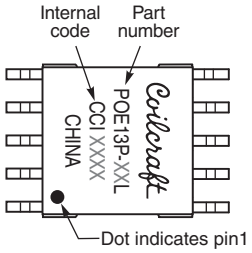
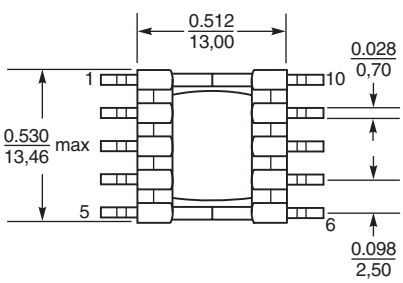
Flyback Transformers for PoE

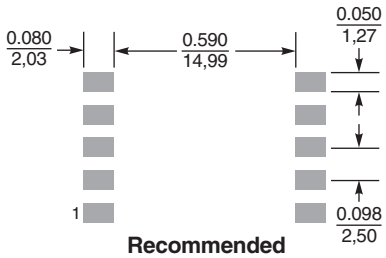
POE13P





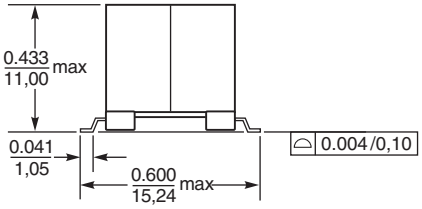
Packaging 175 per 13″ reel
Plastic tape: 32 mm wide, 0.5 mm thick,
28 mm pocket spacing, 12.93 mm pocket depth

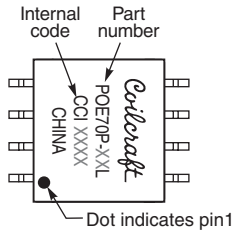




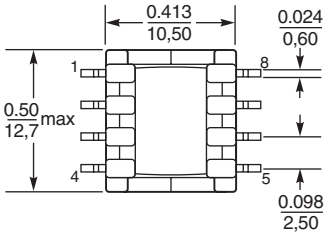
Recommended Land Pattern

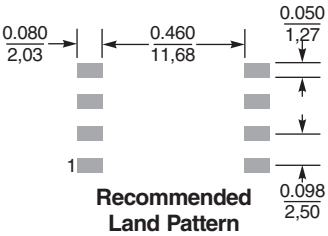
POE70P





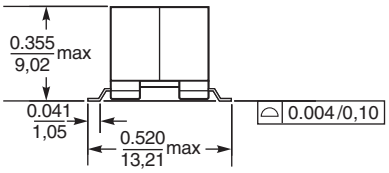
Packaging 200 per 13″ reel
Plastic tape: 32 mm wide, 0.5 mm thick,
24 mm pocket spacing, 11.2 mm pocket depth

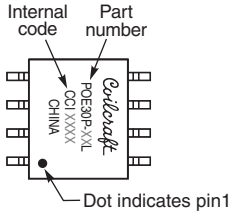




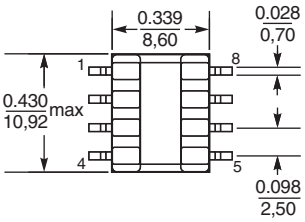
Recommended Land Pattern

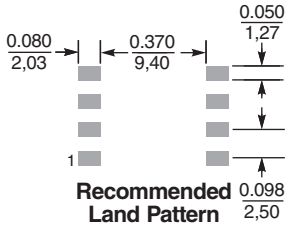
POE30P





Packaging 350 per 13″ reel
Plastic tape: 32 mm wide, 0.42 mm thick,
20 mm pocket spacing, 9.16 mm pocket depth





Recommended Land Pattern

Dimensions are in inches / mm

Coilcraft®

Specifications subject to change without notice.
Please check our website for latest information. Document 460-2 Revised 10/29/08

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