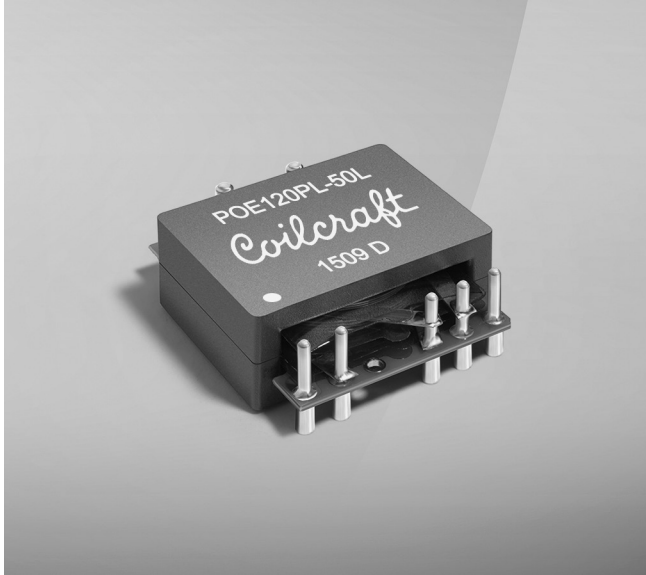




# 120 W PoE Planar Transformers

For Active Clamp  
Forward Topology



- Designed for active clamp forward topology
- Operates at 200 kHz, with 36 – 72 Volt input
- High efficiency; excellent DCR; very low leakage inductance
- Isolation: 1500 Vrms one minute primary and aux to secondary.
- Provides 0.009" (0.229 mm) clearance above the seating plane
- Includes a 12-Volt auxiliary winding

**Core material** Ferrite

**Terminations** Matte tin over nickel over brass.

**Weight** 11.1 – 11.9 g

**Ambient temperature** –40°C to +125°C

**Maximum part temperature** +165°C (ambient + temp rise)

**Storage temperature** Component: –40°C to +125°C.

Tray or 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** 36 per tray (standard). Optional tape and reel (additional cost). Factory order only, not stocked.

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

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR max (mOhms) pri : sec : aux	Leakage inductance <sup>3</sup> max (µH)	Turns ratio pri : sec : aux	Volt-time <sup>4</sup> (V-µs)	Output
POE120PL-33L_	50	27.6 : 1.26 : 270	0.70	6 : 1 : 3.5	225	3.3 V, 36 A
POE120PL-50L_	50	18.9 : 1.26 : 123	0.31	4 : 1 : 2.5	150	5.0 V, 24 A
POE120PL-12L_	50	18.9 : 6.80 : 58.5	0.37	2 : 1 : 1	150	12 V, 10 A
POE120PL-24L_	50	18.9 : 13.6 : 58.5	0.39	1 : 1 : 0.5	150	24 V, 5 A

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

**POE120PL-24LD**

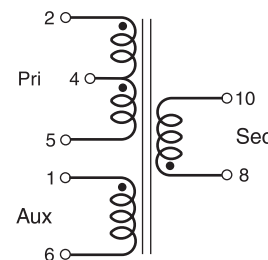
**Packaging:** Blank In trays, 36 per tray

**D** = Optional tape and reel (additional cost), 13" machine-ready reel. EIA-481 embossed plastic tape. See tape and reel specifications on page 2. Factory order only, not stocked. 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 200 kHz, 0.5 Vrms, 0 Adc.
- Leakage inductance is for the primary and is measured with the secondary winding shorted.
- Volt-time product is based on primary winding pins 2, 5.
- Electrical specifications at 25°C.

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



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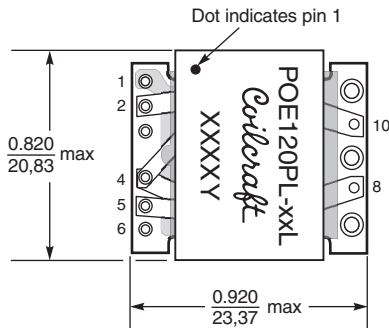
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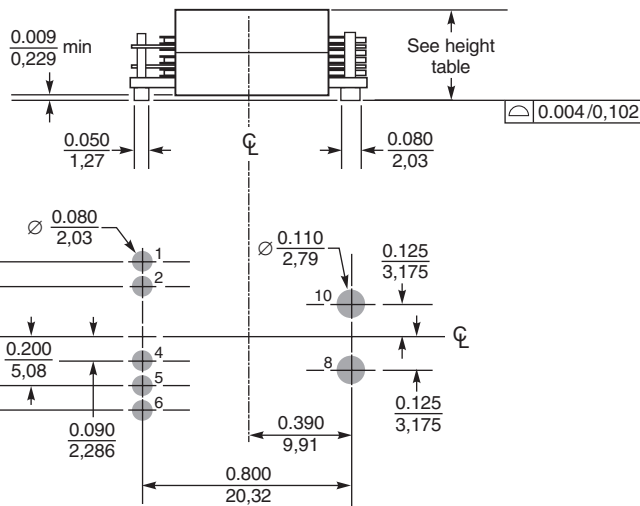
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# 120 W Planar Transformers for PoE – POE120PL



Dash number	Height max (inches / mm)
-12L	0.352 / 8.94
-24L	0.380 / 9.64
-33L	0.407 / 10.34
-50L	0.375 / 9.53



**Recommended Land Pattern**

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

**Optional tape and reel packaging (additional cost). Factory order only, not stocked.**

- POE120PL-12:** 250/13" reel Plastic tape: 44 mm wide, 0.5 mm thick, 28 mm pocket spacing, 9.40 mm pocket depth
- POE120PL-24:** 200/13" reel Plastic tape: 44 mm wide, 0.5 mm thick, 28 mm pocket spacing, 9.98 mm pocket depth
- POE120PL-33:** 200/13" reel Plastic tape: 44 mm wide, 0.5 mm thick, 28 mm pocket spacing, 10.68 mm pocket depth
- POE120PL-50:** 250/13" reel Plastic tape: 44 mm wide, 0.5 mm thick, 28 mm pocket spacing, 9.78 mm pocket depth



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