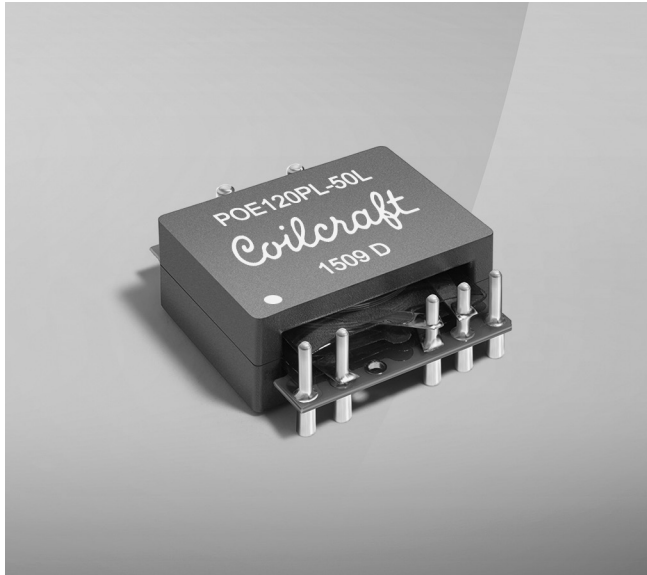




120 W PoE Planar Transformers

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 ¹ | Inductance ² ±20% (µH) | DCR max (mOhms) pri : sec : aux | Leakage inductance ³ max (µH) | Turns ratio pri : sec : aux | Output |
|--------------------------|--------------------------------------|---------------------------------------|--|--------------------------------|-------------|
| POE120PL-33L_ | 50 | 27.6 : 1.26 : 270 | 0.70 | 6 : 1 : 3.5 | 3.3 V, 36 A |
| POE120PL-50L_ | 50 | 18.9 : 1.26 : 123 | 0.31 | 4 : 1 : 2.5 | 5.0 V, 24 A |
| POE120PL-12L_ | 50 | 18.9 : 6.80 : 58.5 | 0.37 | 2 : 1 : 1 | 12 V, 10 A |
| POE120PL-24L_ | 50 | 18.9 : 13.6 : 58.5 | 0.39 | 1 : 1 : 0.5 | 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).

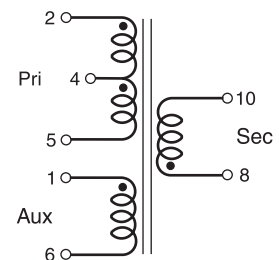
B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

2. Inductance is for the primary, measured at 200 kHz, 0.5 Vrms, 0 Adc.

3. Leakage inductance is for the primary and is measured with the secondary winding shorted.

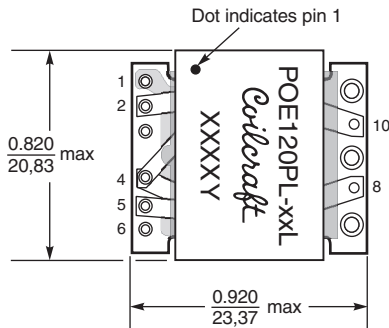
4. Electrical specifications at 25°C.

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

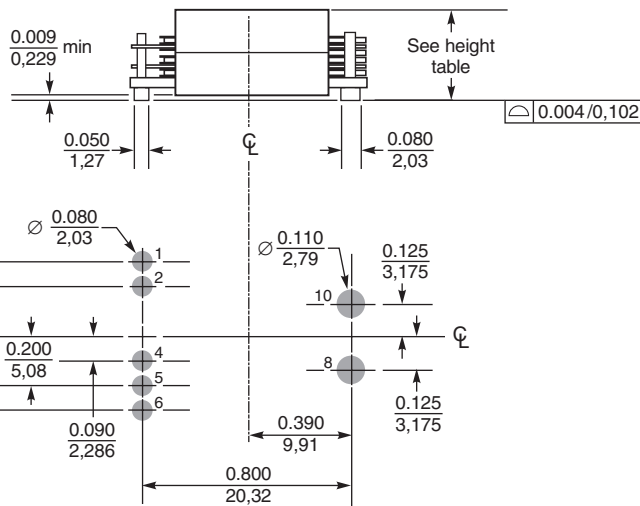




120 W Planar Transformers for PoE – POE120PL



| 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



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

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