

## WPoE 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

cost). Factory order only, not stocked.

**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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF) 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332 Packaging 36 per tray (standard). Optional tape and reel (additional

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787\_PCB\_Washing.pdf.

| Part number¹  | Inductance <sup>2</sup><br>±20% (μΗ) | DCR max<br>(mOhms)<br>pri : sec : aux | Leakage<br>inductance <sup>3</sup><br>max (µH) | Turns ratio<br>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   |

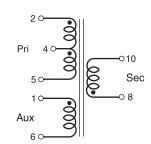
1. When ordering, please specify packaging code:

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.
- B = Optional tape and reel (additional cost), less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter D instead. Factory order only, not stocked.
- 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.





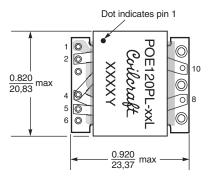




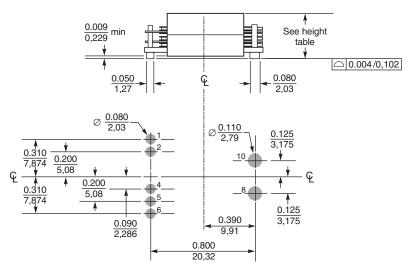
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## 120 W Planar Transformers for PoE – POE120PL





| Dash<br>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             |



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

Recommended Land Pattern

## 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, 32 mm pocket spacing, 9.40 mm pocket depth POE120PL-24: 200/13" reel POE120PL-33: 200/13" reel POE120PL-50: 250/13" reel POE120PL-50: 250/13" reel Plastic tape: 44 mm wide, 0.5 mm thick, 28 mm pocket spacing, 9.98 mm pocket depth POE120PL-50: 250/13" reel Plastic tape: 44 mm wide, 0.5 mm thick, 32 mm pocket spacing, 9.78 mm pocket depth

