



SMT Planar Transformers For Applications up to 160 Watts



- Designed to operate between 200 kHz and 700 kHz with a nominal 48 V input.
- High efficiency; excellent DCR; very low leakage inductance; 1500 Vrms, one minute primary to secondary isolation.
- Provides 0.009" (0.229 mm) clearance above the seating plane
- · May be special ordered with an auxiliary winding

Core material Ferrite

Terminations Matte tin over nickel over brass

Weight 12.0 - 12.8 g

Ambient temperature -40°C to +125°C

Storage temperature Component: -40°C to +125°C.

Tray 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

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

| Part | Primary turns | | Primary inductance ² | Leakage inductance ³ | DCR max (mOhms) | | | Volt-time product typ5 | Height max |
|---------------------|----------------|----------------|---------------------------------|---------------------------------|---------------------------|---------------------------|------------------------|---------------------------|---------------|
| number ¹ | N ₁ | N ₂ | min (µH) | max (µH) | Primary (N ₁) | Primary (N ₂) | Secondary ⁴ | (Vµsec) | (in/mm) |
| PL160-100L | 4 | 4 | 246 | 0.35 | 14.7 | 14.7 | 6.8 | 150 | 0.352 / 8.94 |
| PL160-101L | 4 | 5 | 312 | 0.40 | 14.7 | 18.5 | 6.8 | 168 | 0.352 / 8.94 |
| PL160-102L | 5 | 5 | 378 | 0.45 | 18.5 | 18.5 | 6.8 | 187 | 0.360 / 9.14 |
| PL160-103L | 5 | 6 | 449 | 0.55 | 18.5 | 21.5 | 6.8 | 206 | 0.375 / 9.53 |
| PL160-104L | 6 | 6 | 534 | 0.55 | 21.5 | 21.5 | 6.8 | 224 | 0.375 / 9.53 |

1. When ordering, please specify packaging code:

PL160-104LD

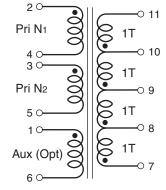
Packaging: Blank In trays, 36 per tray

D = Optional tape and reel (additional cost). Factory order only, not stocked. 13" machine-ready reel. EIA-481 embossed plastic tape. 250/13" reel Plastic tape: 44 mm wide, 0.5 mm thick, 32 mm pocket spacing, 9.78 mm pocket depth. Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

To order a transformer with an optional auxiliary winding, add an "X" and the turn count after the PL160, e.g. PL160X3-100LB. Turn counts of 2, 3, 4, 5, 7 and 9 are available for the auxiliary winding. Transformers with auxiliary windings are not stocked.

- 2. Inductance measured on an Agilent/HP 4284 at 200 kHz, 0.5 Vrms, 0 Adc between pins 2 and 5 with pins 3 and 4
- 3. Leakage inductance measured at 200 kHz, 0.5 Vrms, 0 Adc between pins 2 and 5, with pins 3 and 4 connected, and with all secondary pins shorted.
- 4. DCR for secondary is measured between pins 7 and 11.
- 5. Volt-time product is based on primary windings connected in series.
- 6. Electrical specifications at 25°C.

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

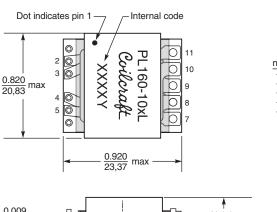




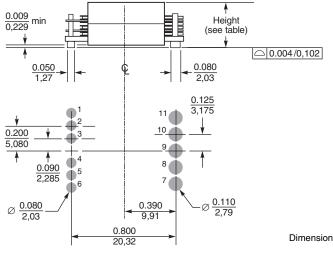


AEC

PL160 Series SMT Planar Transformers



| Dash number | Height max (inches / mm) |
|----------------|--------------------------|
| -100L | 0.352 / 8.94 |
| -101L | 0.352 / 8.94 |
| -102L | 0.360 / 9.14 |
| -103L | 0.375 / 9.53 |
| -104L | 0.375 / 9.53 |
| | |



Recommended Land Pattern

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

