60 W PoE Transformers

For Active Clamp Forward Topology

- Designed for active clamp forward topology
- Operates at 200 kHz, with 36 – 72 Volt input
- Includes a 12-Volt auxiliary winding
- Isolation: 1500 Vrms, one minute primary and aux to secondary; 500 Vrms primary to auxiliary

### Core material
Ferrite

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

### Weight
12.7 g

### Ambient temperature
−40°C to +125°C

### Storage temperature
Component: −40°C to +125°C. Tape and reel packaging: −40°C to +80°C

### Resistance to soldering heat
Max three 40 second refows 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
175 per 13” reel. 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 11.9 mm pocket depth

### PCB washing
Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

### Electrical Specifications
- **POE600F-33L**
  - Inductance: 100 ±20% (µH)
  - DCR max: 35 : 2.30 : 185
  - Leakage: 0.55
  - Turns ratio: 6 : 1 : 3.5
  - Output: 3.3 V, 18.18 A

- **POE600F-50L**
  - Inductance: 100 ±20% (µH)
  - DCR max: 35 : 2.70 : 185
  - Leakage: 0.30
  - Turns ratio: 4 : 1 : 2.3
  - Output: 5.0 V, 12 A

- **POE600F-12L**
  - Inductance: 100 ±20% (µH)
  - DCR max: 35 : 8.00 : 156
  - Leakage: 0.17
  - Turns ratio: 2 : 1 : 1
  - Output: 12 V, 5.0 A

- **POE600F-24L**
  - Inductance: 100 ±20% (µH)
  - DCR max: 35 : 3.0 : 156
  - Leakage: 0.14
  - Turns ratio: 1 : 1 : 0.5
  - Output: 24 V, 2.5 A

1. When ordering, please specify packaging code:
   - **POE600F-50L**

   **Packaging:**
   - **D** = 13” machine-ready reel. EIA-481 embossed plastic tape (175 parts per full reel). 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, 0.1 Vrms, 0 Adc.
3. DCR for the primary and the secondary is measured with the windings connected in parallel.
4. Leakage inductance is for the primary and is measured with all secondary windings shorted.
5. Turns ratio is with the primary windings and the secondary windings connected in parallel.
6. Output is with the secondary windings connected in parallel.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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**Primary windings and secondary windings to be connected in parallel on the PC board.**
60 W PoE Transformers – POE600F

Dimensions are in inches or mm.

Parts shown are preproduction products available for evaluation only.

RoHS/REACH compliant.

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Specification subject to change without notice.
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