



# Flyback Transformers for PoE



- Flyback transformers for 6 W and 13 W PoE applications
- Designed to operate with 36 – 72 V input at 250 kHz
- 1500 Vrms isolation from primary and bias to secondary

**Designer's Kit C372** contains two samples of parts shown in bold

**Core material** Ferrite

**Terminations** RoHS tin-silver over tin over nickel over phosphor bronze. Other terminations available at additional cost.

**Weight** 5.0 – 5.6 g

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

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

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** 200 per 13" reel Plastic tape: 44 mm wide, 0.4 mm thick, 28 mm pocket spacing, 9.6 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

| Part number <sup>1</sup> | Power (W) | Inductance at 0 A <sup>2</sup> ±10% (μH) | Inductance at I <sub>pk</sub> <sup>3</sup> min (μH) | DCR max (Ohms) <sup>4</sup> |       |       | Leakage inductance <sup>5</sup> max (μH) | Turns ratios <sup>6</sup> |          | I <sub>pk</sub> <sup>3</sup> (A) | Output <sup>7</sup> |
|--------------------------|-----------|------------------------------------------|-----------------------------------------------------|-----------------------------|-------|-------|------------------------------------------|---------------------------|----------|----------------------------------|---------------------|
|                          |           |                                          |                                                     | pri                         | sec   | bias  |                                          | pri:sec                   | pri:bias |                                  |                     |
| <b>POE60F-18L</b>        | 6         | 75.0                                     | 67.5                                                | 0.195                       | 0.005 | 0.195 | 8.0                                      | 1 : 0.07                  | 1 : 0.36 | 1.3                              | 1.8 V, 3.3 A        |
| <b>POE60F-25L</b>        | 6         | 55.0                                     | 49.5                                                | 0.095                       | 0.005 | 0.150 | 4.6                                      | 1 : 0.08                  | 1 : 0.33 | 1.2                              | 2.5 V, 2.4 A        |
| <b>POE60F-33L</b>        | 6         | 65.0                                     | 58.5                                                | 0.138                       | 0.007 | 0.180 | 3.9                                      | 1 : 0.11                  | 1 : 0.36 | 1.2                              | 3.3 V, 1.8 A        |
| <b>POE60F-50L</b>        | 6         | 60.0                                     | 54.0                                                | 0.130                       | 0.009 | 0.165 | 2.3                                      | 1 : 0.15                  | 1 : 0.35 | 1.1                              | 5.0 V, 1.2 A        |
| <b>POE60F-12L</b>        | 6         | 55.0                                     | 49.5                                                | 0.095                       | 0.017 | 0.150 | 0.7                                      | 1 : 0.35                  | 1 : 0.35 | 1.1                              | 12 V, 0.5 A         |
| <b>POE13F-18L</b>        | 13        | 45.0                                     | 40.5                                                | 0.195                       | 0.005 | 0.195 | 7.9                                      | 1 : 0.07                  | 1 : 0.36 | 2.3                              | 1.8 V, 7.2 A        |
| <b>POE13F-25L</b>        | 13        | 35.0                                     | 31.5                                                | 0.095                       | 0.005 | 0.150 | 4.2                                      | 1 : 0.08                  | 1 : 0.33 | 2.2                              | 2.5 V, 5.2 A        |
| <b>POE13F-33L</b>        | 13        | 40.0                                     | 36.0                                                | 0.138                       | 0.007 | 0.180 | 3.4                                      | 1 : 0.11                  | 1 : 0.36 | 2.2                              | 3.3 V, 3.9 A        |
| <b>POE13F-50L</b>        | 13        | 40.0                                     | 36.0                                                | 0.130                       | 0.009 | 0.165 | 1.9                                      | 1 : 0.15                  | 1 : 0.35 | 2.1                              | 5.0 V, 2.6 A        |
| <b>POE13F-12L</b>        | 13        | 35.0                                     | 31.5                                                | 0.095                       | 0.017 | 0.150 | 0.6                                      | 1 : 0.35                  | 1 : 0.35 | 2.0                              | 12 V, 1.1 A         |
| <b>POE13F-19L</b>        | 13        | 37.0                                     | 33.3                                                | 0.085                       | 0.025 | 0.385 | 0.4                                      | 1 : 0.57                  | 1 : 0.35 | 2.0                              | 19.5 V, 0.67 A      |
| <b>POE13F-24L</b>        | 13        | 37.0                                     | 33.3                                                | 0.086                       | 0.049 | 0.370 | 0.4                                      | 1 : 0.67                  | 1 : 0.33 | 2.0                              | 24 V, 0.54 A        |

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

**POE13F-12L D**

**Packaging: D** = 13" machine-ready reel. EIA-481 embossed plastic tape (200 parts per full reel).

**B** = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter D instead.

2. Inductance is for the primary, measured at 250 kHz, 0.3 Vrms.

3. Peak primary current drawn at minimum input voltage.

4. DCR for the primary and for the secondary are with the windings connected in parallel.

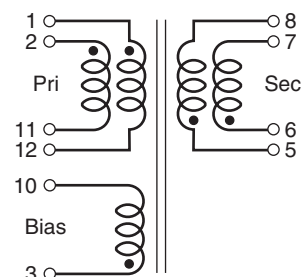
5. Leakage inductance is for the primary windings with the secondary windings shorted.

6. Turns ratios are with the primary the secondary windings connected in parallel.

7. Output of the secondary is with the windings connected in parallel. Bias winding output is 12 V, 20 mA.

8. Electrical specifications at 25°C.

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



Primary windings and secondary windings to be connected in parallel on PC board.

**Coilcraft**®

Specifications subject to change without notice.  
Please check our website for latest information.

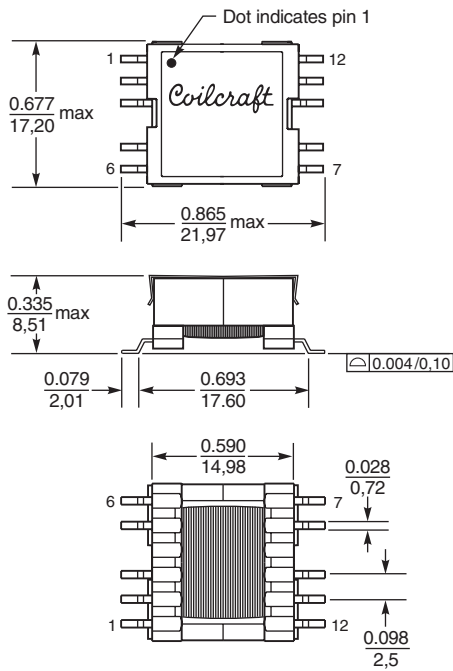
Document 381-1 Revised 10/28/08

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

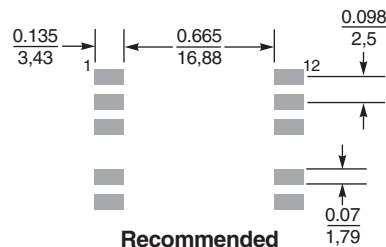
E-mail info@coilcraft.com Web http://www.coilcraft.com



# Flyback Transformers for PoE



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



**Recommended  
Land Pattern**

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.  
Please check our website for latest information.

Document 381-2 Revised 10/28/08

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9