



# PoE Transformer

For National Semiconductor LM5070 PoE Interface



This surface mount flyback transformer was developed specifically for the National Semiconductor LM5070 Powered Devices Interface in 13 Watt Power over Ethernet (PoE) applications.

It is designed to operate at frequencies up to 1 MHz with an input voltage of 36 – 72 Volts. Output with the secondary windings connected in parallel is 3.3 V, 4.5 A. Isolation is 1500 Vrms from the primary and auxiliary windings to the secondary.

Coilcraft can design custom transformers with voltage, inductance and DCR values to meet your specific requirements.

For free evaluation samples, contact Coilcraft or order them on-line at [www.coilcraft.com](http://www.coilcraft.com).

| Part number <sup>1</sup> | L at 0 A <sup>2</sup><br>±10% (µH) | L at Ipk <sup>3</sup><br>±10% (µH) | DCR max (Ohms) <sup>4</sup> |       |       | Leakage L (µH) <sup>5</sup> | Turns ratio <sup>6</sup> |           | Capacitance <sup>7</sup><br>(pF) | Ipk <sup>3</sup><br>(A) | Isolation <sup>8</sup><br>(Vrms) |
|--------------------------|------------------------------------|------------------------------------|-----------------------------|-------|-------|-----------------------------|--------------------------|-----------|----------------------------------|-------------------------|----------------------------------|
|                          |                                    |                                    | pri                         | aux   | sec   |                             | pri : sec                | pri : aux |                                  |                         |                                  |
| C1023-AL_                | 110                                | 99.0                               | 0.139                       | 0.656 | 0.016 | 1.40                        | 1 : 0.19                 | 1 : 0.69  | 70                               | 1.5                     | 1500                             |

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

**C1023-AL D**

**Packaging:** D = 13" machine ready reel. EIA-481 embossed plastic tape (175 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 10 kHz, 0.1 Vrms, 0 Adc.

3. Ipk is the peak current drawn at minimum input voltage.

4. DCR for the secondary is per winding.

5. Leakage inductance is for the primary winding with all other pins shorted.

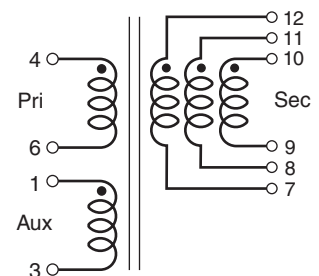
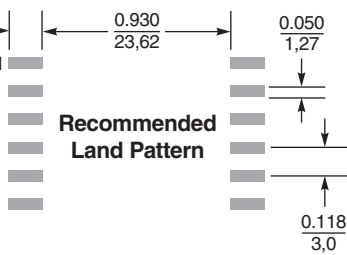
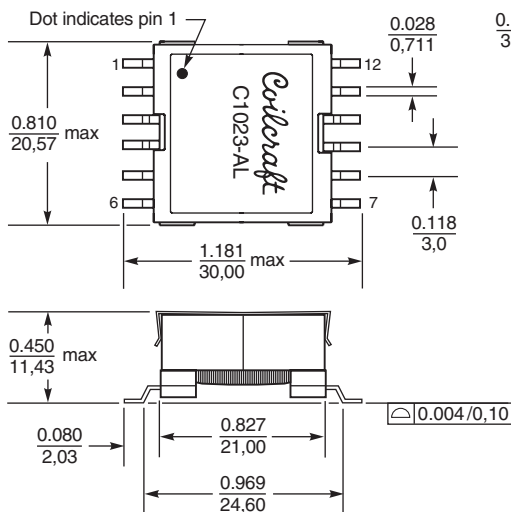
6. Turns ratio is with the secondary windings connected in parallel.

7. Capacitance measured between pins 3 and 4 with other pins shorted.

8. Isolation is measured from the primary and aux to the secondary.

9. Operating temperature range -40°C to +85°C.

10. Electrical specifications at 25°C.



Secondary windings to be connected in parallel on PC board.

**Weight:** 12.4 g  
**Terminations:** Tin-silver over tin over nickel over phos bronze  
**Tape and reel:** 175/13" reel, 44 mm tape width



Specifications subject to change without notice. Please check our website for latest information. Document 423 Revised 10/25/06

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