PoE Transformer
For National Semiconductor
LM5070 PoE Interface

1. When ordering, please specify a packaging code:

C1023-AL

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.

Core material Ferrite
Terminations RoHS tin-silver (96.5/3.5) over tin over nickel over phosph bronze. Other terminations available at additional cost.
Weight 12.4 g
Ambient temperature −40°C to +85°C
Storage temperature Component: −40°C to +85°C.
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)
Mean Time Between Failures (MTBF) / Failures in Time (FIT) 26,315,789 hours / 38 per billion hours, Calculated per Telcordia SR-322
Packaging 175 per 13" reel. Plastic tape: 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.

- Developed for the NSC LM5070 PD Interface in 13W applications.
- Operates at frequencies up to 1 MHz
- Input: 36–72 V; Output: 3.3V, 4.5A, with secondary windings connected in parallel
- Isolation: 1500 Vrms from the primary and auxiliary windings to the secondary.

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**Recommended Land Pattern**

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Secondary windings to be connected in parallel on PC board.

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Dimensions are in inches / mm

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Part number1 L at 0 A2 ±10% (µH) L at Ipk3 ±10% (µH) DCR max (Ohms)4

<table>
<thead>
<tr>
<th>Part number</th>
<th>L at 0 A2</th>
<th>L at Ipk3</th>
<th>DCR max (Ohms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1023-AL...</td>
<td>110</td>
<td>99.0</td>
<td>0.139</td>
</tr>
</tbody>
</table>

1. When ordering, please specify a packaging code:

C1023-ALD

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.

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Parts manufactured prior to December 2011 may be marked differently.

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US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

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