Planar Transformer
For National Semiconductor
LM5027 Active Clamp Controller

- Developed for the National Semiconductor LM5027 Voltage Mode Active Clamp Controller.
- Chosen by NSC for T1 on the LM5027 Evaluation Board, and is described in Application Note AN-1976.
- 1500 Vdc isolation, primary and auxiliary to secondaries
- Auxiliary winding provides 10 V to power the chipset.

Core material  Ferrite
Terminations  RoHS matte tin over nickel over brass.
Weight  11.9 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)
Packaging  200/13” reel  Plastic tape: 44 mm wide, 0.37 mm thick, 32 mm pocket spacing, 9.35 mm pocket depth
PCB washing  Only pure water or alcohol recommended

1. When ordering, please specify a packaging code:

**HA4000-AL**

Packaging:  D = 13” machine ready reel. EIA-481 embossed plastic tape (200 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.

<table>
<thead>
<tr>
<th>Part number™</th>
<th>Inductance (µH)</th>
<th>DCR max (mOhms)</th>
<th>Leakage inductance (µH)</th>
<th>Input voltage range (V)</th>
<th>Turns</th>
<th>Output (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA4000-AL</td>
<td>270</td>
<td>56 0.5 294</td>
<td>0.6 36 – 78</td>
<td>12 : 1 : 1 : 7</td>
<td>3.3 V, 30 A</td>
<td></td>
</tr>
</tbody>
</table>

2. Inductance is for the primary, measured across pins 2 and 4 at 200 kHz, 0.1 Vrms, 0 Adc.
3. DCR for the primary is measured from pin 2 to pin 4. DCR for the secondary is for each winding.
4. Leakage inductance is for the full primary and is measured with the secondary shorted.
5. Output is with the secondary windings connected in series. Bias winding output is 10 V, 65 mA.
6. Electrical specifications at 25°C.
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

- Dot indicates pin 1
- Parts manufactured prior to November, 2011 may be marked differently.
- Recommended Land Pattern

Dimensions are in inches

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Specification subject to change without notice.
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