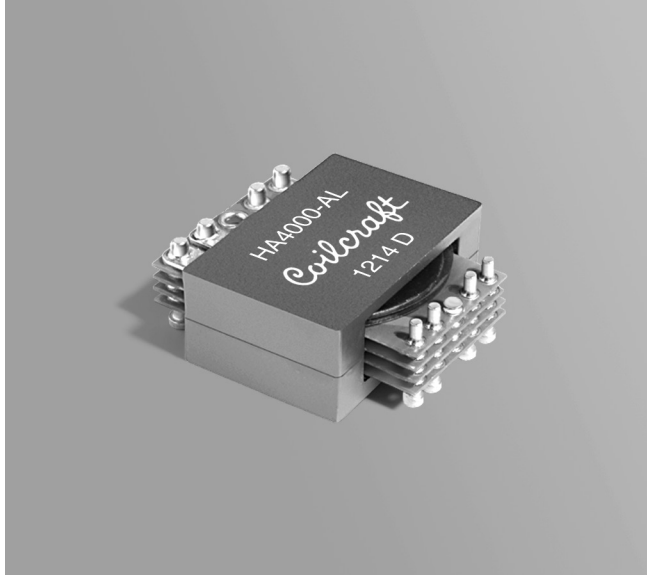


Planar Transformer

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 $+85^{\circ}\text{C}$

Storage temperature Component: -40°C to $+85^{\circ}\text{C}$.

Tape and reel packaging: -40°C to $+80^{\circ}\text{C}$

Resistance to soldering heat Max three 40 second reflows at $+260^{\circ}\text{C}$, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 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 200/13" 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

Part number ¹	Inductance ² min (μH)	DCR max (mOhms) ³			Leakage inductance ⁴ max (μH)	Input voltage range (V)	Turns				Output ⁵
		pri	sec	aux			pri	sec1	sec2	aux	
HA4000-AL_	270	56	0.5	294	0.6	36 – 78	12	1	1	7	3.3 V, 30 A

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

HA4000-ALD

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 across pins 2 and 4 at 200 kHz, 0.1 Vrms, 0 Adc.

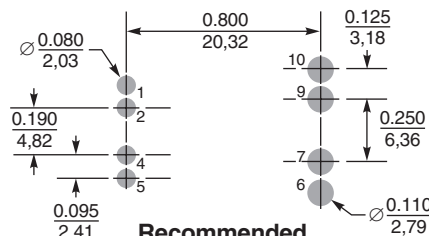
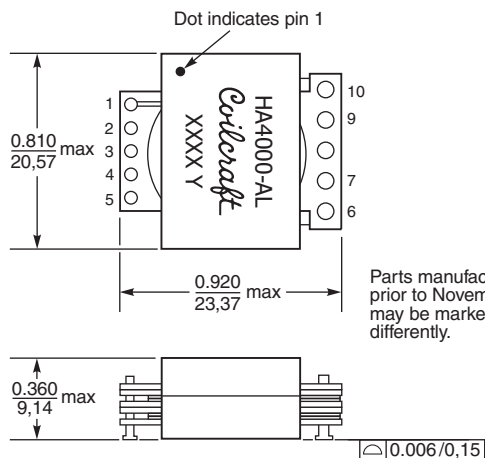
3. DCR for the primary is measured from pin 2 to pin 4. DCR for the secondary is for each winding.

4. Leakage inductance is for the full primary and is measured with the secondary shorted.

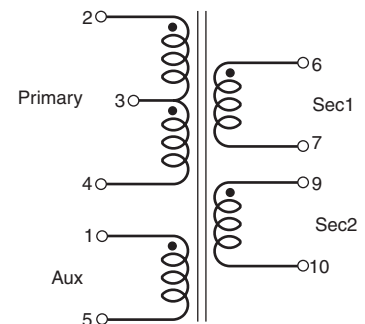
5. Output is with the secondary windings connected in series. Bias winding output is 10 V, 65 mA.

6. Electrical specifications at 25°C .

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



Recommended Land Pattern



Pins 7 and 9 to be connected on the PCB board. Pin 3 is internally connected only and does not touch the PCB board.

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



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