

# Planar Magnetics For National Semiconductor LM5041 IC



This planar transformer and inductor pair were designed specifically for National Semiconductor's LM5041 IC.

The A9786-A transformer is engineered for use in highcurrent telecom power supply applications that require high efficiency in a low-profile package. The auxiliary winding can be used to control input current to PWMs. It offers very high current handling capability and extremely low DC resistance in a low profile package.

Coilcraft's A9787-A inductor is designed as the output choke for the LM5041.

Planar magnetics offer high power densities along with great reliability and repeatability. Windings are etched into a printed circuit board, ensuring high efficiency and consistency.

Request free evaluation samples by contacting Coilcraft or visiting www.coilcraft.com.

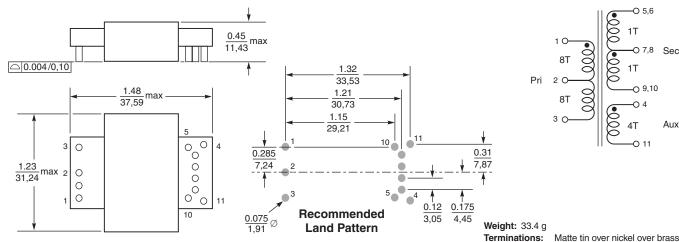
## **Transformer**

Part number <sup>1</sup>	Output power (W)	Input voltage range (V)	Output voltage (V)	Output current (A rms)	Primary inductance <sup>1</sup> min (mH)	Leakage inductance <sup>2</sup> max (µH)	DCR max (mOhms)	Pri/sec isolation (Vdc)
A9786-AL_	150	36-75	2.5	60.0	1.25	0.90	Primary: 62.5 (1-3)	1100
							Secondary: 0.91 (5,6-9,10)	
							200 (4-11)	

1. When ordering, please specify packaging code:

- Packaging: D = 13" machine-ready reel. EIA-481 embossed plastic tape (125 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 measured on an Agilent/HP 4284 between pins 1 and 3 at 250 kHz, 0.1 Vrms, 0 Adc.
- 3. Leakage inductance measured between pins 1 and 3 at 100 kHz, 0.1 Vrms, 0 Adc with all secondary pins shorted.
- 4. Operating temperature range: -40°C to +85°C.
- 5. Electrical specifications at 25°C.

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





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 Document 328-1 Revised 06/09/08

Tape and reel: 125/13" reel 56 mm tape

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Aux

This product may not be used in medical or high risk applications without prior Coilcraft approval Specification subject to change without notice Please check web site for latest information



# Planar Magnetics for National Semiconductor LM5041

## **Output Inductor**

Part number¹	Inductance² @ 0 Adc (µH)	Inductance <sup>2</sup> @ 7.5 Adc min (µH)	DCR max (mOhms)	Isolation <sup>3</sup> (Vdc)	Isat <sup>4</sup> (A)	Irms <sup>5</sup> (A)
A9787-AL_	57 ±7%	47.0	17.0	1100	8.1	12.0

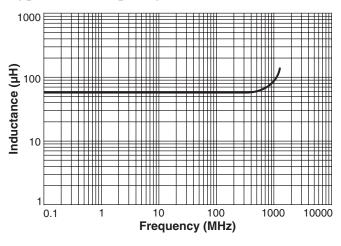
1. When ordering, please specify packaging code:

#### A9787-ALD

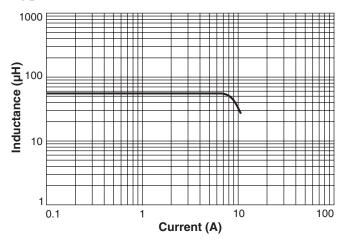
- Packaging: D = 13" machine-ready reel. EIA-481 embossed plastic tape (125 parts per full reel).
  - B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter D instead.
- 2. Inductance measured on an Agilent/HP 4284 at 250 kHz, 0.1 Vrms.
- 3. Isolation measured from pins 1,2 to the core.
- DC current at which inductance drops 10% (typ) from its value without current.
- 5. Current that causes a 40°C rise from 25°C ambient.
- 6. Operating temperature range: -40°C to +85°C.
- 7. Electrical specifications at 25°C.

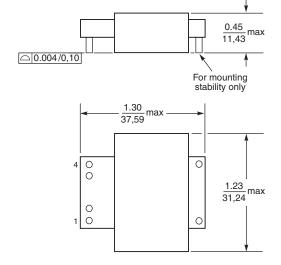
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

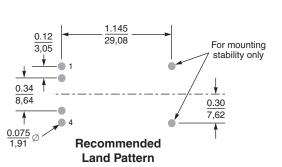
### Typical L vs Frequency



#### Typical L vs Current







Weight: 31.0 g

**Terminations:** Matte tin over nickel over brass **Tape and reel:** 125/13" reel 56 mm tape



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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

#### Document 328-2 Revised 06/09/08