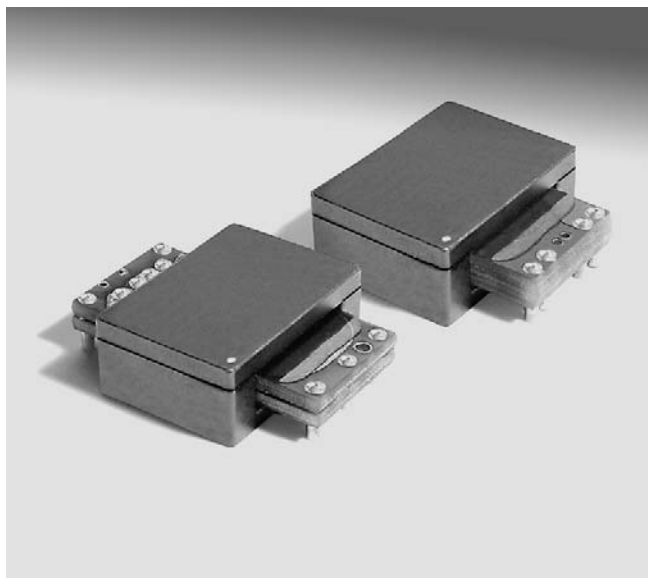


## Planar Magnetics

For National Semiconductor  
LM5041 IC



Coilcraft introduces a planar transformer and planar inductor for National Semiconductor's LM5041 IC.

The A9786-A transformer is engineered for use in high-current 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.

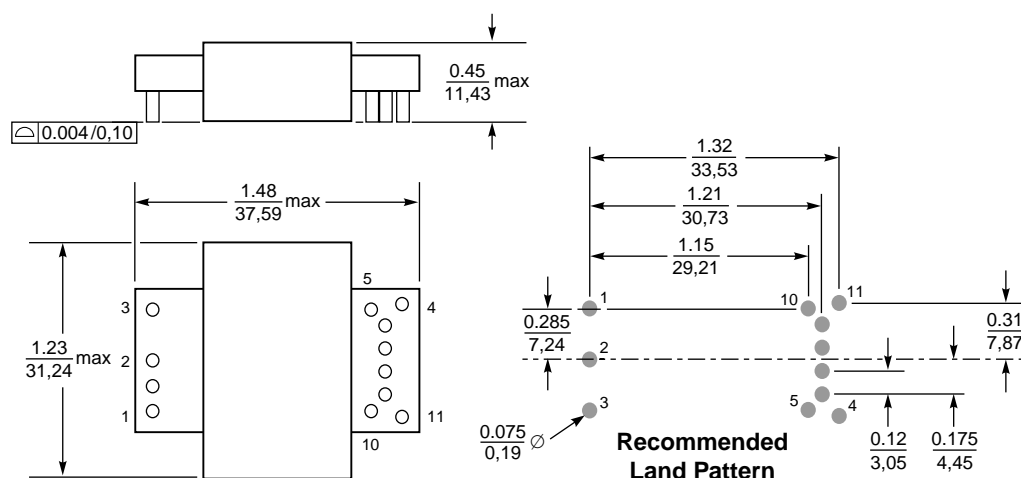
Request free evaluation samples by contacting Coilcraft or visiting [www.coilcraft.com](http://www.coilcraft.com).

### Transformer

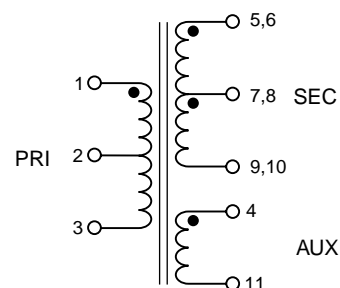
Part number	Output power (W)	Input voltage range (V)	Output voltage (V)	Output current (A rms)	Primary inductance <sup>1</sup> min (mH)	Leakage inductance <sup>2</sup> max (μH)	DCR max (mOhms)	Pri/sec isolation (Vdc)
A9786-A	150	36 – 75	2.5	60.0	1.25	0.90	Primary: 62.5 (1 – 3) Secondary: 0.91 (5,6 – 9,10) 180.0 (4 – 11)	1100

1. Inductance measured on an Agilent/HP 4284 between pins 1 and 3 at 250 kHz, 0.1 Vrms, 0 Adc.
2. Leakage inductance measured between pins 1 and 3 at 100 kHz, 0.1 Vrms, 0 Adc with all secondary pins shorted.
3. Operating temperature range: –40°C to +85°C.
4. Electrical specifications at 25°C.

### Dimensions



### Schematic



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Specifications subject to change without notice. Document 328-1 Revised 01/28/03

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**PRELIMINARY**

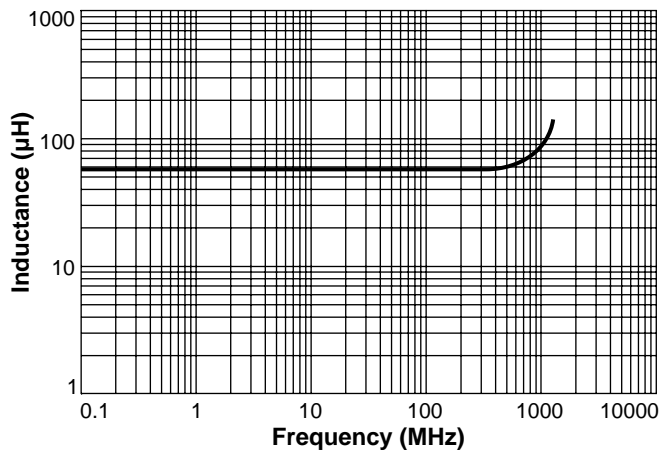
# Planar Magnetics for National Semiconductor LM5041

## Output Inductor

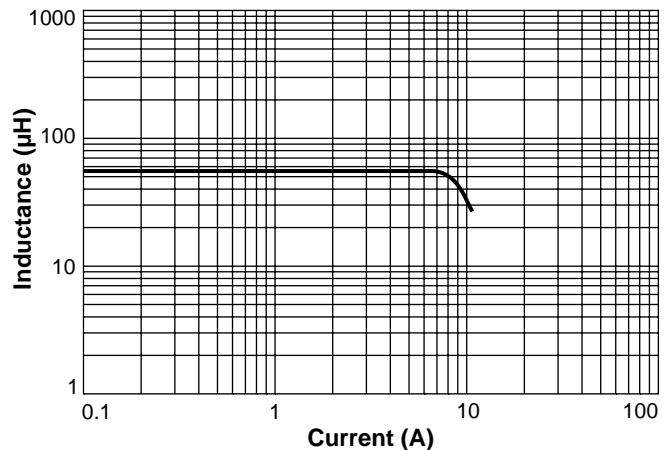
Part number	Inductance <sup>1</sup> @ 0 Adc ( $\mu$ H)	Inductance <sup>1</sup> @ 7.5 Adc min ( $\mu$ H)	DCR max (mOhms)	Isolation <sup>2</sup> (Vdc)	Isat <sup>3</sup> (A)	Irms <sup>4</sup> (A)
A9787-A	57 $\pm$ 7%	47.0	17.0	1100	8.1	12.0

1. Inductance measured on an Agilent/HP 4284 at 250 kHz, 0.1 Vrms.
2. From pins 1,2 to core.
3. DC current at which inductance drops 10% (typ) from its value without current.
4. Average current for a 40°C rise above 25°C ambient.
5. Operating temperature range: -40°C to +85°C.
6. Electrical specifications at 25°C.

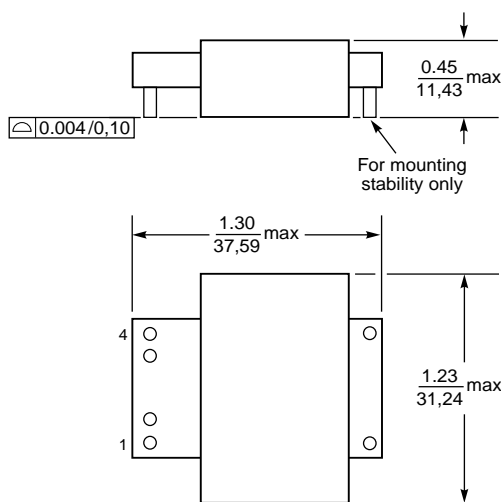
### Typical L vs Frequency



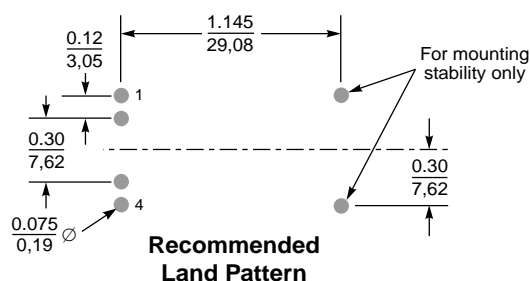
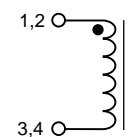
### Typical L vs Current



### Dimensions



### Schematic



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