



# Planar Magnetics

For National Semiconductor  
LM5025 and LM5034



This planar transformer and planar inductor pair is designed specifically for the National Semiconductor LM5110 Gate Driver and LM5025 Active Clamp Voltage Mode PWM Controller. These parts are also specified by NSC for use with their LM5034 Dual Interleaved Controller.

The B0357-B transformer is engineered for use in high current telecom power supply applications that require high efficiency in a low-profile package.

The main winding of the B0358-CC inductor serves as an output choke, while the auxiliary winding controls input current to the PWM.

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

## Transformer

| Part number <sup>1</sup> | Output power (W) | Output voltage (V) | Output current (A rms) | Primary inductance <sup>2</sup> min (μH) | Leakage inductance <sup>3</sup> max (μH) | DCR max (mOhms)                 | Pri/sec isolation (Vdc) |
|--------------------------|------------------|--------------------|------------------------|--|--|---------------------------------|-------------------------|
| B0357-BL_                | 100              | 3.3                | 30.0                   | 320.0                                    | 0.55                                     | Primary: 55.0<br>Secondary: 1.0 | 1500                    |

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

**B0357-BL D**

**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 measured on an Agilent/HP 4284 between pins 1 and 2 at 250 kHz, 0.1 Vrms, 0 Adc.

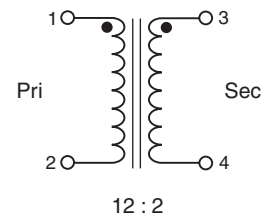
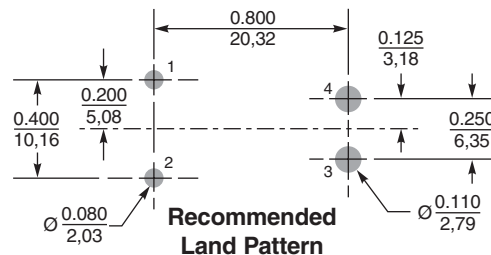
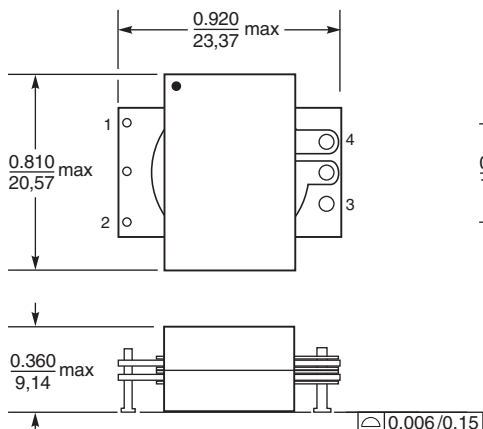
3. Leakage inductance measured between pins 1 and 2 at 100 kHz, 0.1 Vrms, 0 Adc with secondary pins shorted.

4. **Ambient temperature range:** -40°C to +85°C

5. **Storage temperature range:** Component: -40°C to +85°C  
Packaging: -40°C to +80°C

6. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds (+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room temperature between.

7. Electrical specifications at 25°C.



**Weight:** 11.3 g  
**Terminations:** Matte tin over nickel over brass  
**Tape and reel:** 200/13" reel 44 mm tape width

**Coilcraft**®

Specifications subject to change without notice.  
Please check our website for latest information.

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# Planar Magnetics for NSC LM5025 and LM5034

## Output Inductor

| Part number <sup>1</sup> | Inductance <sup>2</sup> at 0 Adc (μH) | DCR max (mOhms)         | Isolation <sup>3</sup> (Vdc) | Isat <sup>4</sup> (A) | Irms <sup>5</sup> (A) |
|--------------------------|---------------------------------------|-------------------------|------------------------------|-----------------------|-----------------------|
| B0358-CL_                | 2.0 ±10%                              | Main: 2.0<br>Aux: 900.0 | 1500                         | 32                    | 36                    |

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**B0358-CL D**

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2. Inductance measured on an Agilent/HP 4284 between pins 3 and 4 at 250 kHz, 0.1 Vrms.

3. Isolation measured from pin 1 to pin 3.

4. DC current at which inductance drops 10% (typ) from its value without current.

5. Current that causes a 40°C temperature rise from 25°C ambient.

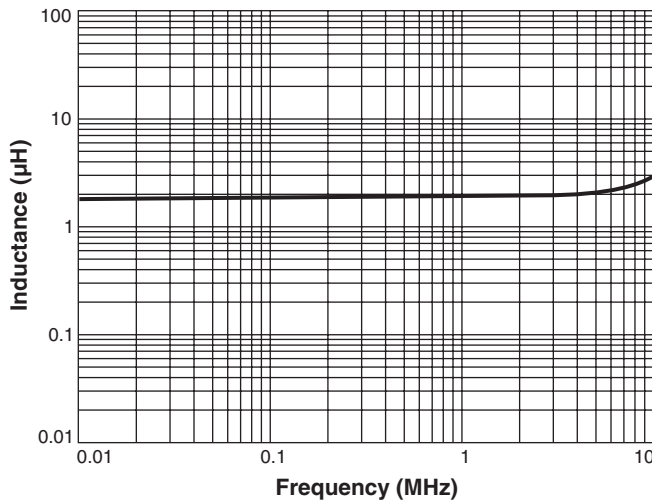
6. **Ambient temperature range:** -40°C to +85°C

7. **Storage temperature range:** Component: -40°C to +85°C  
Packaging: -40°C to +80°C

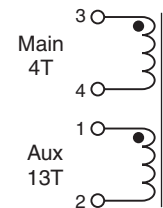
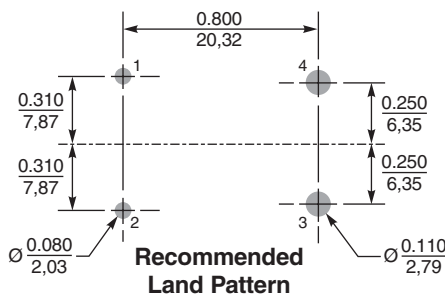
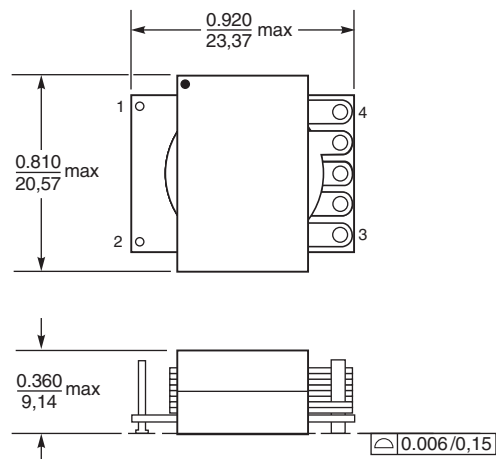
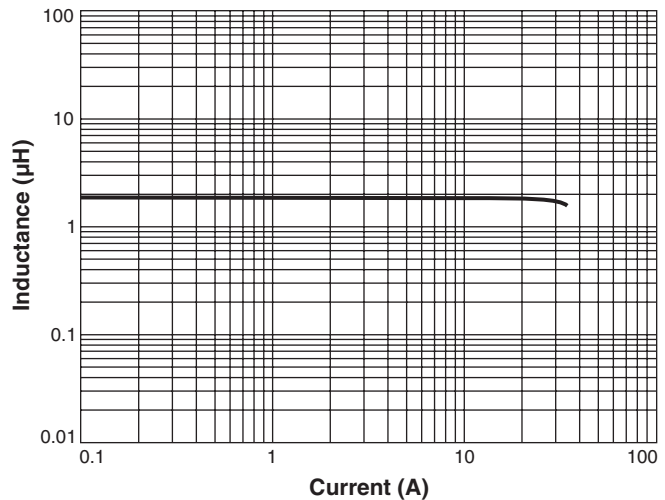
8. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds (+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room temperature between.

9. Electrical specifications at 25°C.

### Typical L vs Frequency



### Typical L vs Current



**Weight:** 11.7 g  
**Terminations:** Matte tin over nickel over brass  
**Tape and reel:** 200/13" reel 44 mm tape width



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