

## Features

- 7.5 mm seated height
- Distortion of only 0.015 %
- Vacuum encapsulated
- Weight - 2 g
- UL60950 approved
- RoHS compliant\*

## Applications

- Modems (V34 and V92)
- Laptop Computers
- Telecommunications
- Instrumentation

## SM-LP-5002 Series - Surface Mount Line Matching Transformers

### Electrical Specifications

Nominal Impedance ..... 600 Ω  
 Turns Ratio ..... 1:1  
 Insertion Loss ..... 2.0 dB max. at 2 kHz  
 Frequency Response ..... ±0.25 dB max. 200-4 kHz  
 Return Loss ..... 24 dB min. 200-4 kHz\*  
 Balance ..... 80 dB min.  
 Distortion ..... -85 dB max.  
 @ 600 Hz, -10 dBm  
 Dielectric Strength...2000 VRMS for 1 min.  
 Insulation Resistance ..... 100 MΩ @ 500 V  
 DC Resistance\*\*  
 Primary ..... 136 Ω ±12 %  
 Secondary ..... 136 Ω ±12 %  
 Shunt Inductance ..... 3.8 H min.  
 Shunt Loss ..... 7500 Ω min.  
 Leakage Inductance ...6-7 mH typ. @ 1 kHz  
 Power Level ..... 10 dBm  
 Operating Temperature.... -20 °C to +85 °C  
 Storage Temperature..... -40 °C to +85 °C

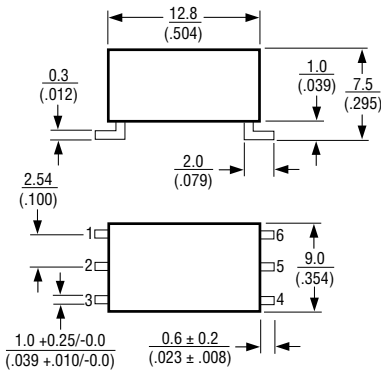
### Materials

Terminal Plating ..... Sn/Ag/Cu

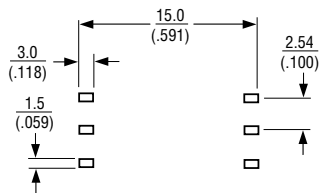
\*For use with recommended circuit (BS6305 impedance Class A non-speech or Class B speech).

\*\*SM-LP-5002 is symmetrical, meaning there is no real primary nor secondary winding.

### Product Dimensions



### Suggested PCB Layout



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

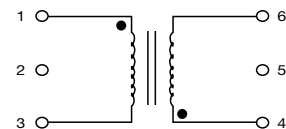
LEAD COPLANARITY:  $\frac{0.15}{(0.006)}$  MAX.

UNLESS OTHERWISE SPECIFIED, TOLERANCE:  $\pm 0.25$  (0.010) MAX.

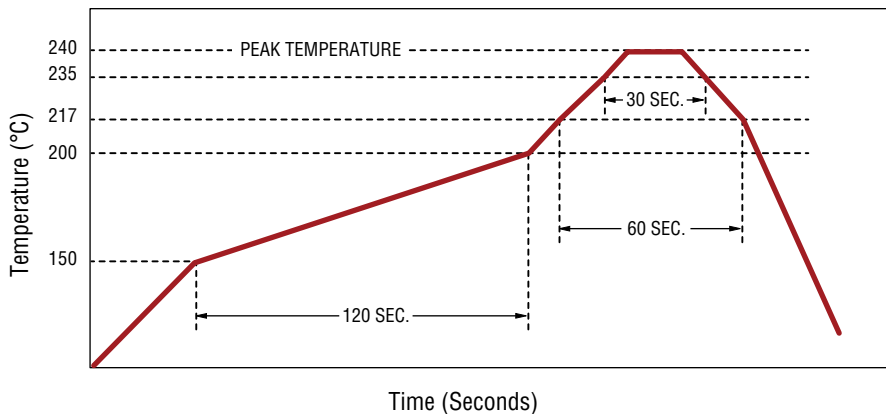
### How To Order

Model **SM-LP-5002**  
 Packaging \_\_\_\_\_  
 Blank = Packaged in tubes  
 E = Tape and reel (400 pcs. per reel)

### Schematic



### Solder Profile



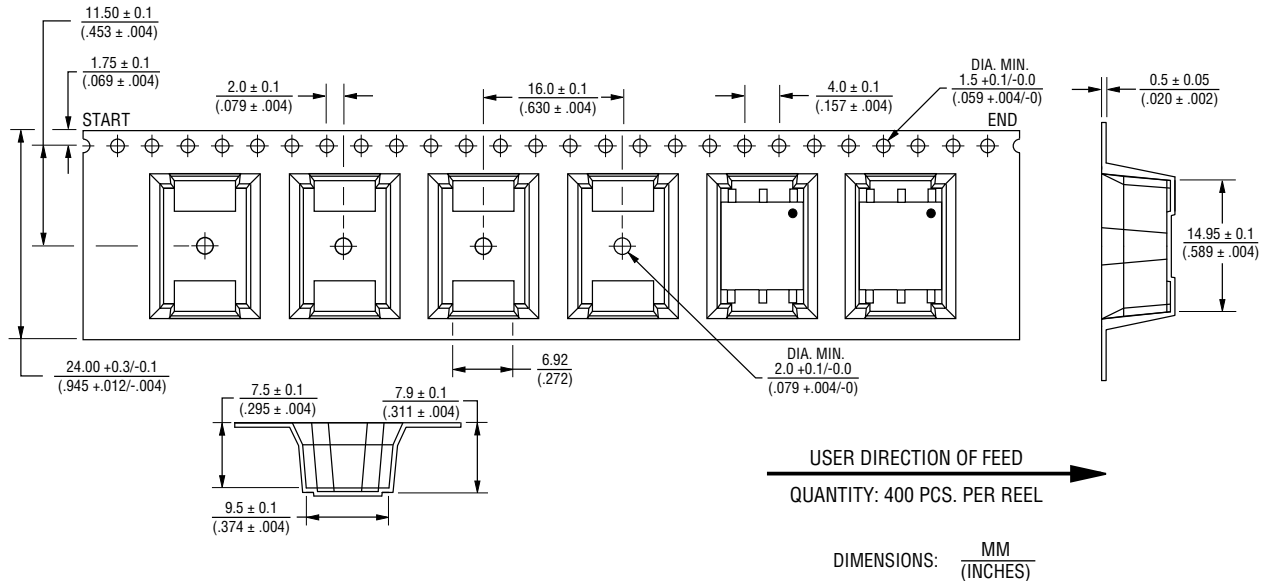
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

# SM-LP-5002 Series - Surface Mount Line Matching Transformers

**BOURNS®**

## Packaging Specifications



**BOURNS®**

Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 520 390 • Email: eurocus@bourns.com

The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

[www.bourns.com](http://www.bourns.com)

REV. 05/17

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