



## Features

- Semi-shielded construction
- Inductance range: 1.5 to 47  $\mu\text{H}$
- Rated current up to 3.6 A
- RoHS compliant\* and halogen free\*\*

## Applications

- DC/DC converters
- Notebook computers
- Digital video cameras
- HDDs
- Cellphones
- Televisions, LCD displays

# SRN5040 Series - Semi-shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns Part No. | Inductance<br>@ 100 KHz / 1 V |        | Q<br>(Ref.) | Test<br>Freq.<br>(MHz) | SRF<br>(MHz)<br>Typ. | DCR<br>( $\Omega$ )<br>Max. | Irms<br>(A) | Isat<br>(A) |
|-----------------|-------------------------------|--------|-------------|------------------------|----------------------|-----------------------------|-------------|-------------|
|                 | L ( $\mu\text{H}$ )           | Tol. % |             |                        |                      |                             |             |             |
| SRN5040-1R5Y    | 1.5                           | 30     | 15          | 7.96                   | 66                   | 0.018                       | 3.6         | 6.0         |
| SRN5040-2R2Y    | 2.2                           | 30     | 20          | 7.96                   | 40                   | 0.021                       | 3.5         | 4.6         |
| SRN5040-3R3M    | 3.3                           | 20     | 20          | 7.96                   | 30                   | 0.027                       | 3.3         | 3.8         |
| SRN5040-4R7M    | 4.7                           | 20     | 15          | 7.96                   | 27                   | 0.035                       | 3.1         | 3.3         |
| SRN5040-6R8M    | 6.8                           | 20     | 15          | 7.96                   | 21                   | 0.059                       | 2.3         | 2.6         |
| SRN5040-8R2M    | 8.2                           | 20     | 15          | 7.96                   | 18                   | 0.065                       | 2.2         | 2.4         |
| SRN5040-100M    | 10                            | 20     | 17          | 7.96                   | 17                   | 0.068                       | 2.1         | 2.3         |
| SRN5040-150M    | 15                            | 20     | 17          | 2.52                   | 15                   | 0.096                       | 1.8         | 2.0         |
| SRN5040-220M    | 22                            | 20     | 17          | 2.52                   | 11                   | 0.152                       | 1.4         | 1.6         |
| SRN5040-270M    | 27                            | 20     | 17          | 2.52                   | 9                    | 0.198                       | 1.3         | 1.4         |
| SRN5040-330M    | 33                            | 20     | 17          | 2.52                   | 8                    | 0.216                       | 1.2         | 1.3         |
| SRN5040-470M    | 47                            | 20     | 15          | 2.52                   | 7                    | 0.324                       | 0.9         | 1.1         |

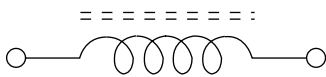
### General Specifications

Operating Temperature  
 ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature (Component)  
 ..... -40 °C to +125 °C  
 Resistance to Solder Heat  
 ..... +260 °C for 10 sec.  
 Temperature Rise ..... 40 °C at rated Irms  
 Rated Current  
 ..... Inductance drops 30 % at Isat  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

### Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Coating ..... Magnetic epoxy resin  
 Packaging ..... 1000 pcs. per 13-inch reel

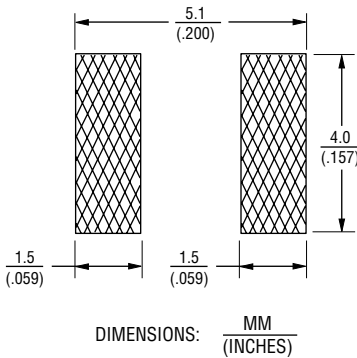
### Electrical Schematic



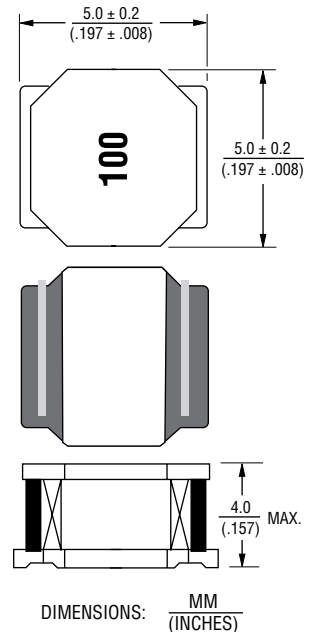
### How to Order

SRN5040 - 4R7M  
 Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

### Recommended Layout



### Product Dimensions



\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

\*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice.

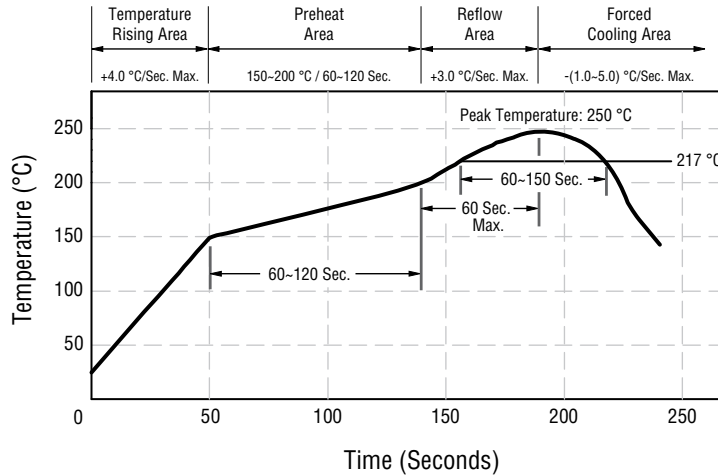
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

# SRN5040 Series - Semi-shielded Power Inductors

**BOURNS®**

## Soldering Profile

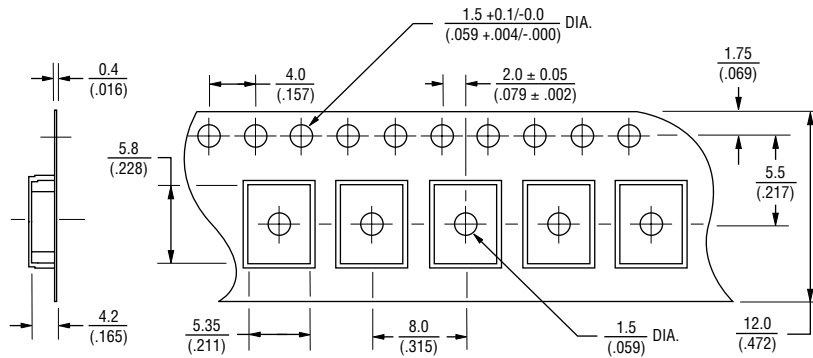
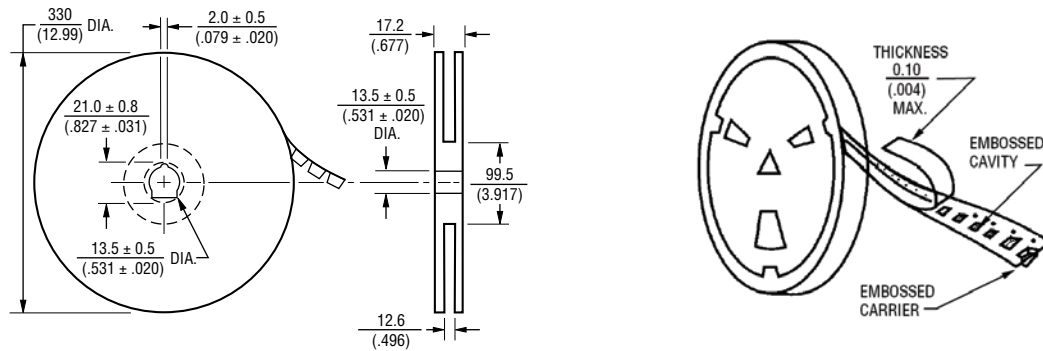


Peak Temperature:  
250 °C max.

Max. Peak Temp. -5 °C:  
30 sec. max.

Max. Time Above 217 °C:  
60-150 sec. max.

## Packaging Specifications



USER DIRECTION OF FEED

QTY: 1000 PCS. PER REEL

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

REV. 08/17

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