



### Features

- Shielded construction for low radiation
- High rated current
- Low DCR
- RoHS compliant\* and halogen free\*\*

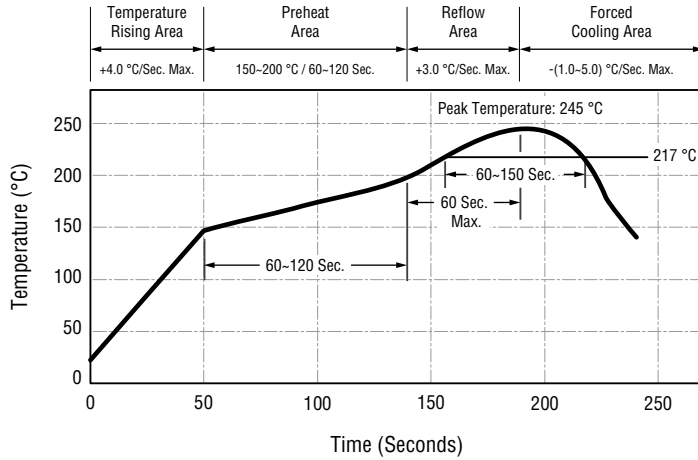
## SPB1012 Series – Power Bead Inductors

### Electrical Specifications @ 25 °C

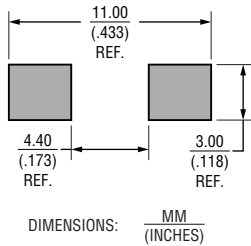
| Bourns Part No. | Inductance @ 100 kHz / 0.1 V |        | DCR (mΩ) Typ. | DCR (mΩ) Max. | Irms (A) Max. | Isat (A) Typ. |
|-----------------|------------------------------|--------|---------------|---------------|---------------|---------------|
|                 | L (nH)                       | Tol. % |               |               |               |               |
| SPB1012-R10Y    | 100.0                        | 15     | 0.12          | 0.14          | 60.0          | 92.0          |
| SPB1012-R12Y    | 120.0                        | 15     | 0.12          | 0.14          | 60.0          | 78.0          |
| SPB1012-R13Y    | 130.0                        | 15     | 0.12          | 0.14          | 60.0          | 75.0          |
| SPB1012-R15Y    | 150.0                        | 15     | 0.12          | 0.14          | 60.0          | 70.0          |
| SPB1012-R33Y    | 330.0                        | 15     | 0.12          | 0.14          | 60.0          | 28.0          |

### Soldering Profile

Peak Temperature: 245 °C max.  
 Max. Peak Temperature -5 °C : 30 sec. max.  
 Max. Time Above 217 °C : 60-150 sec. max.



### Recommended Layout

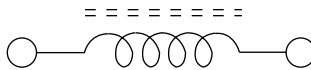


### How to Order

SPB1012 - R10Y

Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

### Electrical Schematic



### Additional Information

Click these links for more information:



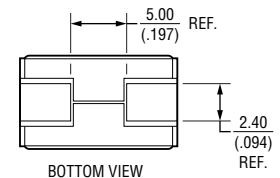
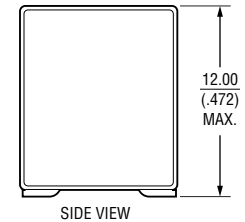
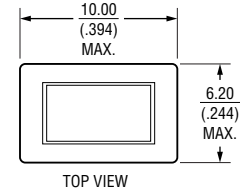
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 (Component Mounted)  
 Temperature Rise .... 40 °C at rated Irms<sup>1</sup>  
 Rated Current ..... Inductance drops 20 % at Isat  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A  
<sup>1</sup> Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### Materials

Core ..... Ferrite  
 Flat Wire ..... Copper  
 Terminal Finish ..... Ni/Sn  
 Packaging ..... 350 pcs. per 13-inch reel

### Product Dimensions



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

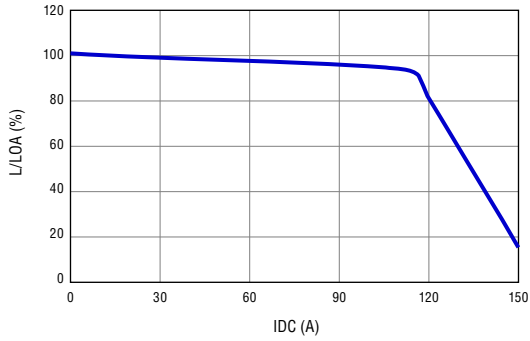


**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

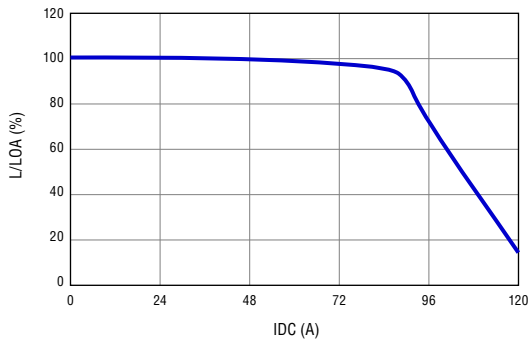
\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 \*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less. Specifications are subject to change without notice. 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).

## Typical Percentage of Inductance vs. Current Curves

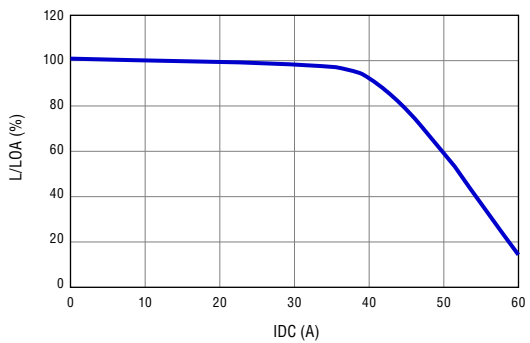
**SPB1012-R10Y**



**SPB1012-R15Y**

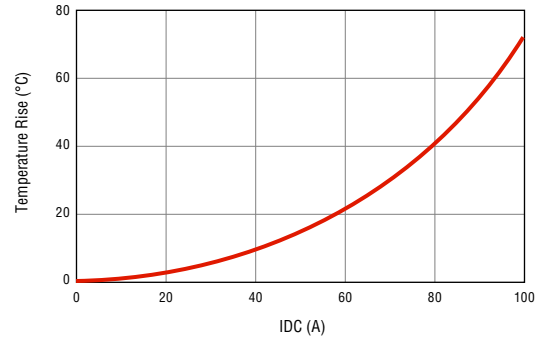


**SPB1012-R33Y**

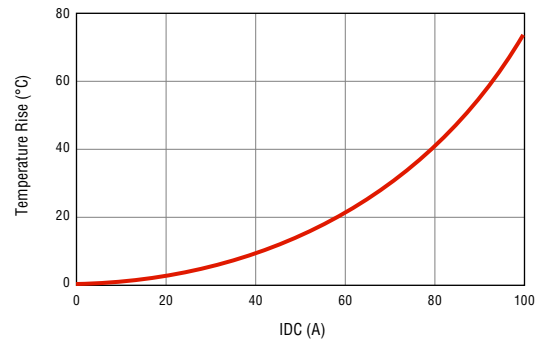


## Temperature Rise vs. Current Plots

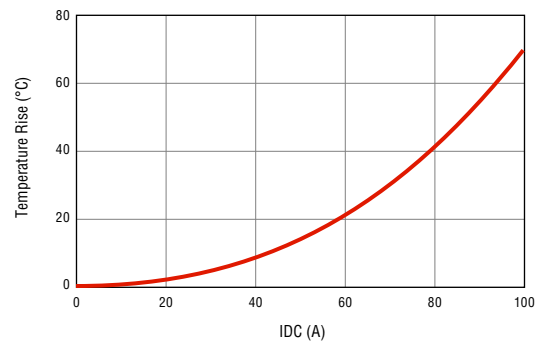
**SPB1012-R10Y**



**SPB1012-R15Y**



**SPB1012-R33Y**



Specifications are subject to change without notice.

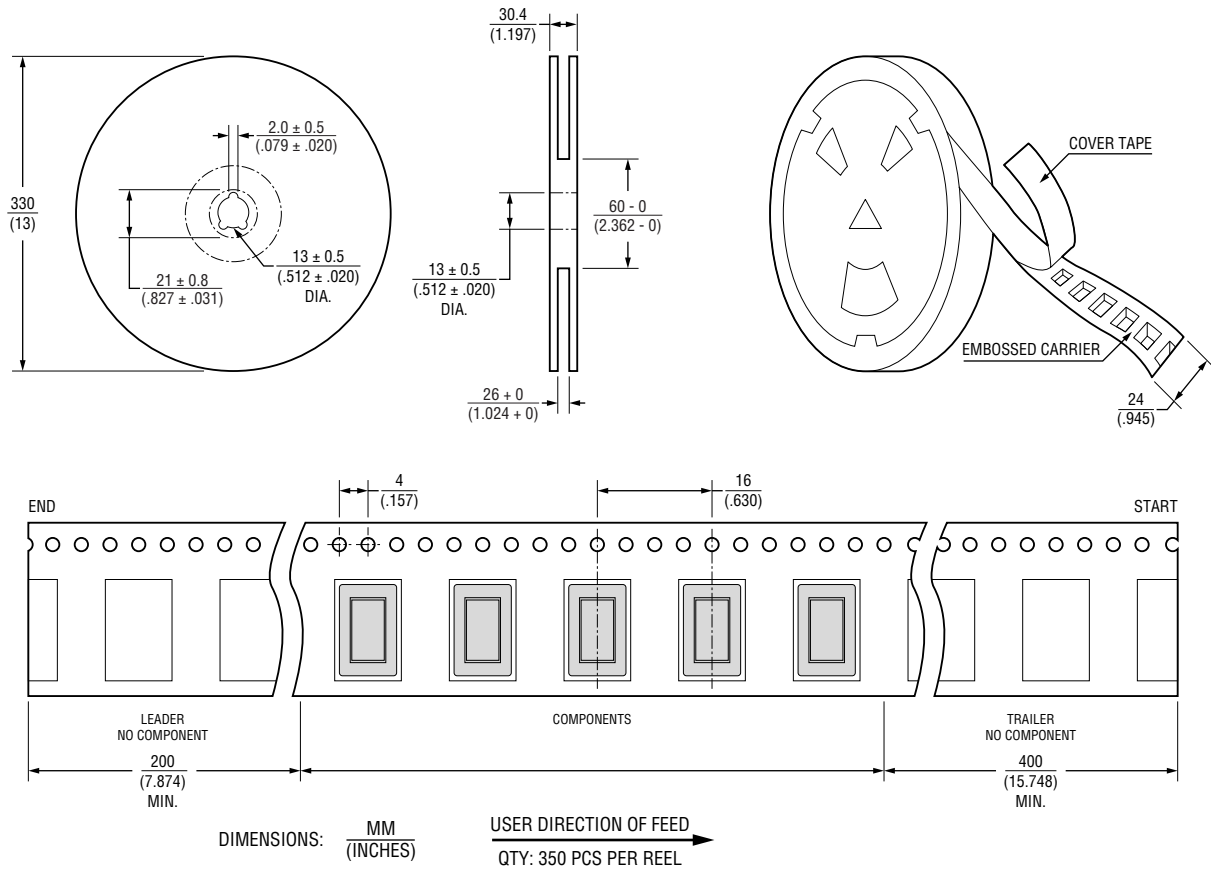
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# SPB1012 Series – Power Bead Inductors

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## Packaging Specifications



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REV. 10/22

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