



## Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low DCR
- Low buzz noise
- RoHS compliant\* and halogen free\*\*

## Applications

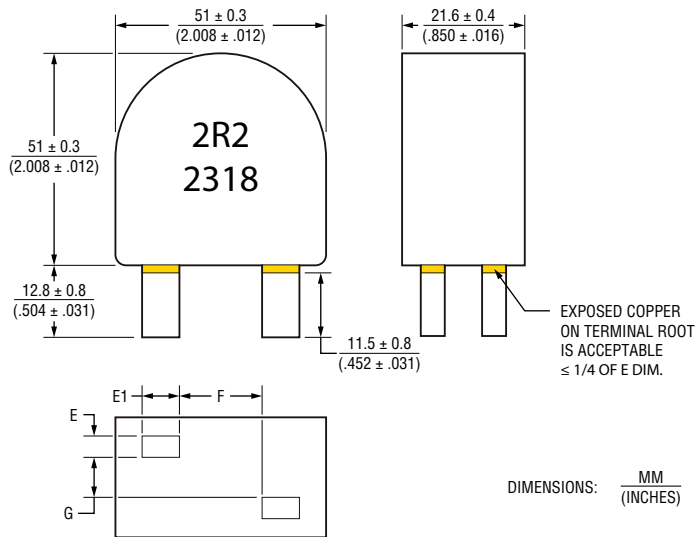
- Industrial high current filters
- High current battery charging
- DC-DC converters

# HRP5022X Series – Shielded Power Inductors

## Electrical Specifications

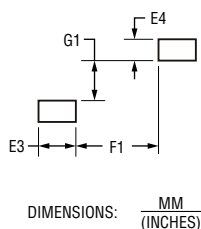
Bourns Part No.	Inductance @ 0 A		I <sub>rms</sub> (A) Typ.		I <sub>sat</sub> (A) Typ.		DCR (mΩ)		Q Min. @ 100 kHz	SRF (MHz) Ref.
	L (μH)	Tol. %	40 °C Rise	100 °C Rise	1	2	Typ.	Max.		
HRP5022X-2R2M	2.2	±20	125	187	190	280	0.21	0.23	280	12

## Product Dimensions



Part Number	E	E1	F	G
HRP5022X-2R2M	$\frac{4.0 \pm 0.25}{(.157 \pm .010)}$	$\frac{7.0 \pm 0.25}{(.276 \pm .010)}$	$\frac{25.0 \pm 0.5}{(.984 \pm .020)}$	$\frac{7.1 \pm 0.4}{(.280 \pm .016)}$

## Recommended Layout



Part Number	E3	E4	F1	G1
HRP5022X-2R2M	$\frac{7.5}{(.295)}$	$\frac{4.5}{(.177)}$	$\frac{24.5}{(.965)}$	$\frac{6.6}{(.260)}$

## Additional Information

Click these links for more information:



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## General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .... -40 °C to +125 °C  
 Temperature Rise ..... 40 °C and 100 °C at rated I<sub>rms</sub><sup>1</sup>  
 Saturation Current ..... Inductance drops 20 % at I<sub>sat1</sub>,  
 30 % at I<sub>sat2</sub>  
 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.

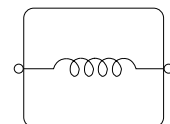
## Materials

Core Material.....Metal alloy powder  
 Wire .....Enameled copper  
 Terminal..... Sn  
 Packaging..... 12 pcs. per tray

## How to Order

Model HRP5022X - 2R2 M  
 Inductance Value Code \_\_\_\_\_  
 2R2 = 2.2 μH  
 Tolerance Code \_\_\_\_\_  
 M = ±20 %

## Electrical Schematic



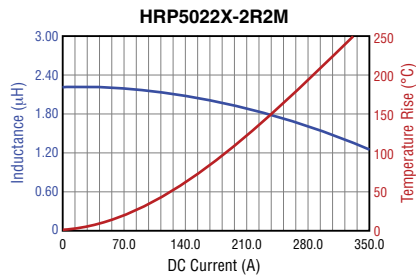
**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* 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).

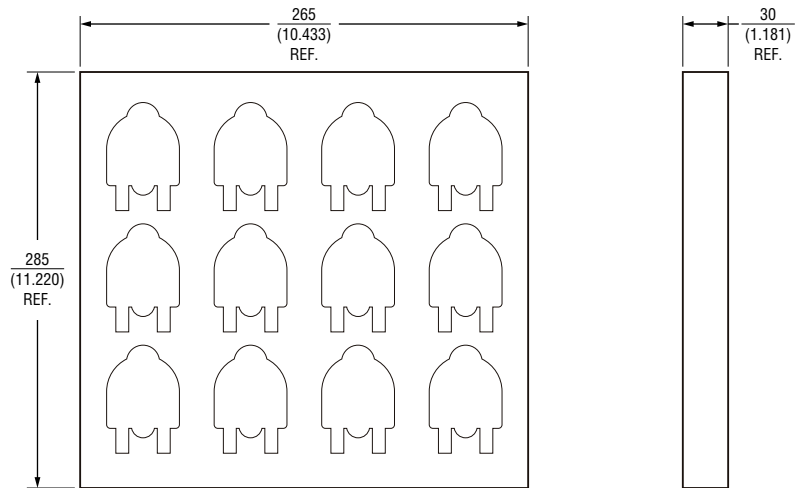
# HRP5022X Series – Shielded Power Inductors

**BOURNS®**

## Inductance vs. IDC



## Packaging Information



12 pcs./tray

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

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REV. 03/25

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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