

## Features

- Compact size
- Shielded construction for low radiation
- Metal alloy powder core for high saturation current
- Flat wire
- Low DCR

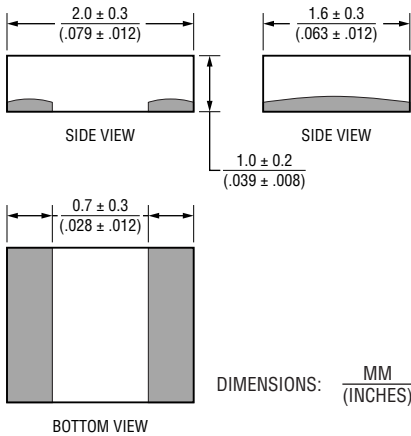
- Wide range of operating temperatures
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRP2012TMA Series - Shielded Power Inductors

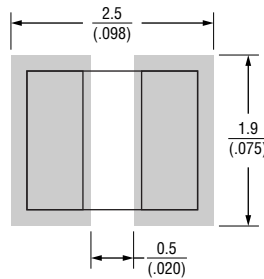
### Electrical Specifications @ 25 °C

Bourns Part No.	Inductance @ 1 MHz / 1 V		Q 1 MHz Typ.	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	Irms (A) Typ.	Isat (A) Typ.
	L (μH)	Tol. %						
SRP2012TMA-R22M	0.22	20	5	170	10	13	7.0	8.0
SRP2012TMA-R33M	0.33	20	5	125	15	18	5.9	7.0
SRP2012TMA-R47M	0.47	20	5	102	20	26	5.4	6.0
SRP2012TMA-R68M	0.68	20	10	80	30	36	4.2	5.0
SRP2012TMA-1R0M	1.0	20	10	70	40	48	3.7	4.5
SRP2012TMA-1R5M	1.5	20	10	52	70	84	2.9	3.1
SRP2012TMA-2R2M	2.2	20	15	40	105	126	2.5	2.7

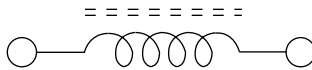
### Product Dimensions



### Recommended Layout



### Electrical Schematic



### Additional Information

Click these links for more information:



[PRODUCT SELECTOR](#) [TECHNICAL LIBRARY](#) [INVENTORY](#) [SAMPLES](#) [CONTACT](#)

### General Specifications

Operating Temperature ..... -55 °C to +150 °C  
 (Temperature rise included)  
 Storage Temperature (Component) ..... -55 °C to +150 °C  
 Temperature Rise ... 40 °C at rated Irms<sup>1</sup>  
 Rated Current ..... Inductance drops 30 % 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 ..... Metal alloy powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Ni/Sn  
 Packaging ..... 2000 pcs. per 7-inch reel

### How to Order

**SRP2012TMA - R22M**

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



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

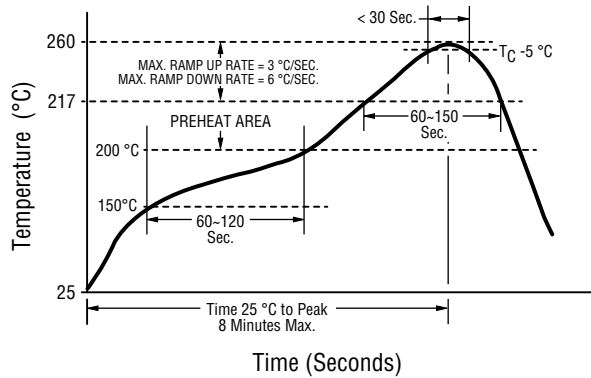
\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

\*\* 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).

# SRP2012TMA Series - Shielded Power Inductors

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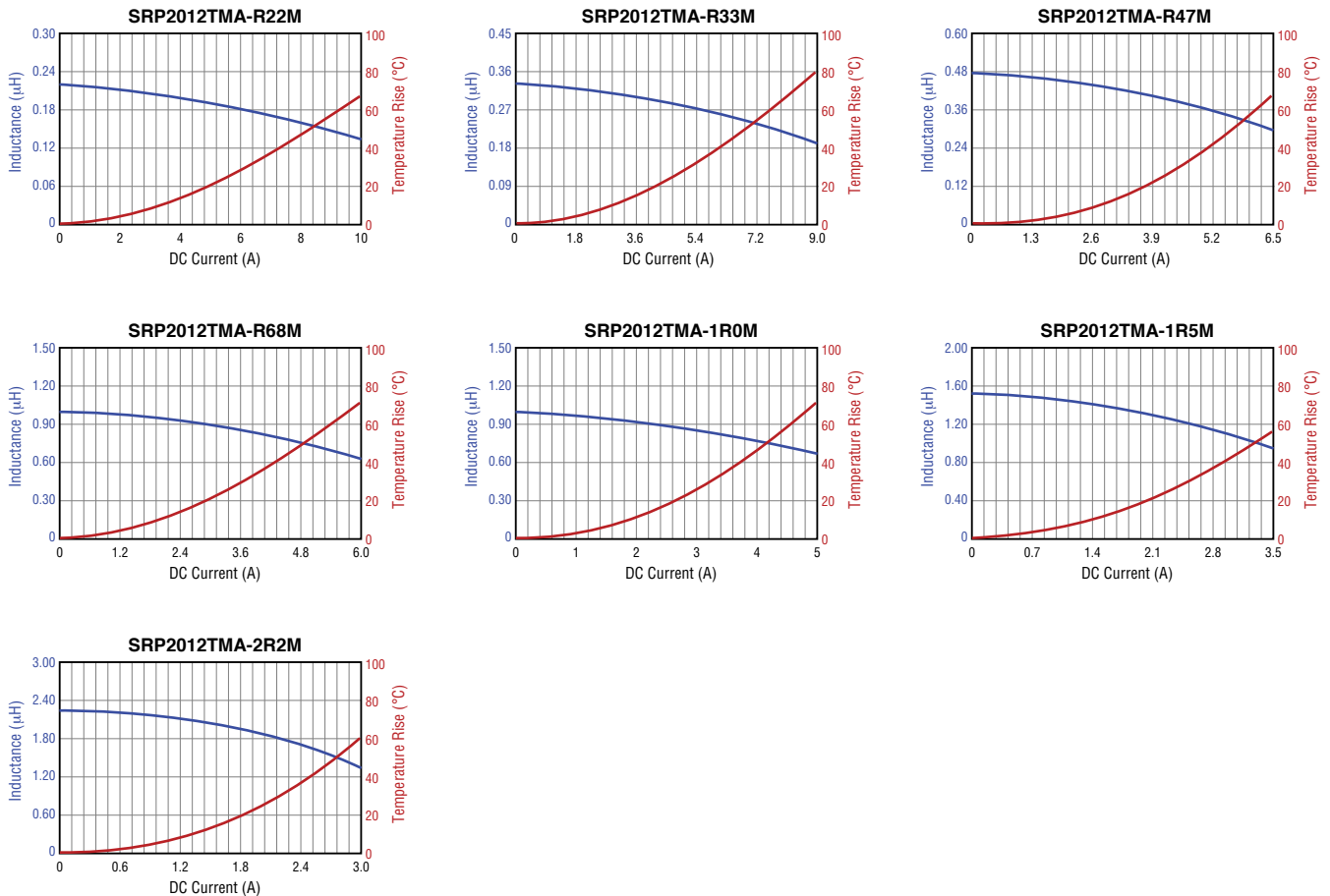
## Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat <ul style="list-style-type: none"> <li>- Temperature Min. (<math>T_{smin}</math>)</li> <li>- Temperature Max. (<math>T_{smax}</math>)</li> <li>- Time (<math>t_s</math>) from <math>T_{smin}</math> to <math>T_{smax}</math></li> </ul>	150 °C 200 °C 60-120 seconds
Ramp-up Rate ( $T_L$ to $T_P$ )	3 °C/second max.
Liquidous temperature ( $T_L$ ) Time ( $t_L$ ) maintained above $T_L$	217 °C 60-150 seconds
Peak package body temperature ( $T_P$ )	260 °C
Time within 5 °C of Actual Peak Temperature ( $t_p$ )	< 30 seconds
Ramp-Down Rate ( $T_P$ to $T_L$ )	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

## L vs. I Charts



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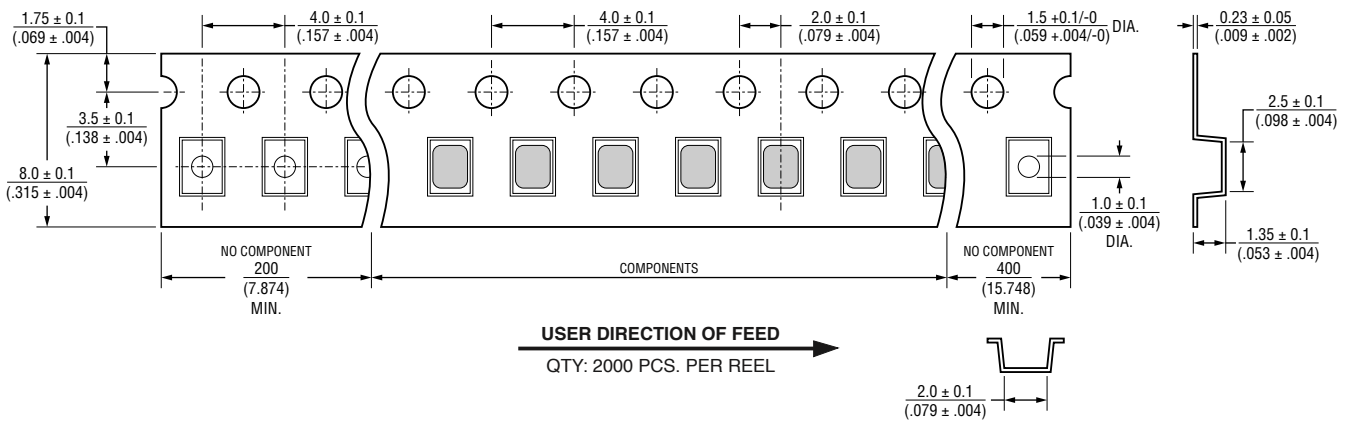
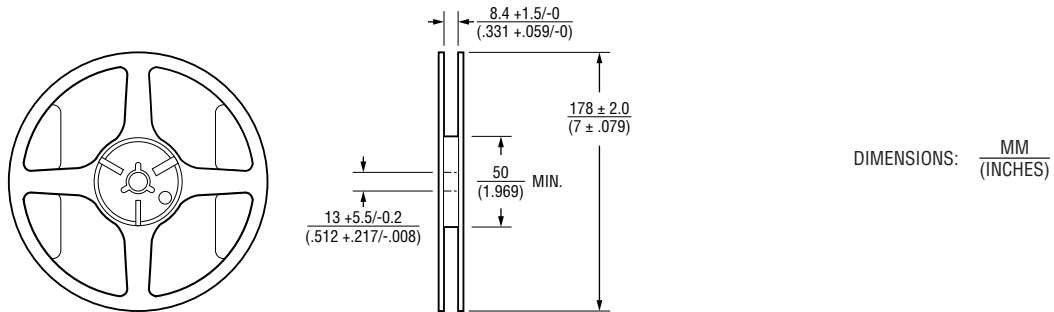
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# SRP2012TMA Series - Shielded Power Inductors

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## Packaging Specifications



**BOURNS®**

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