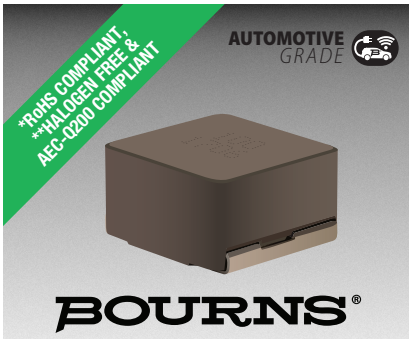




**THE DATASHEET OF  
SRP2313AA-220M**





## Features

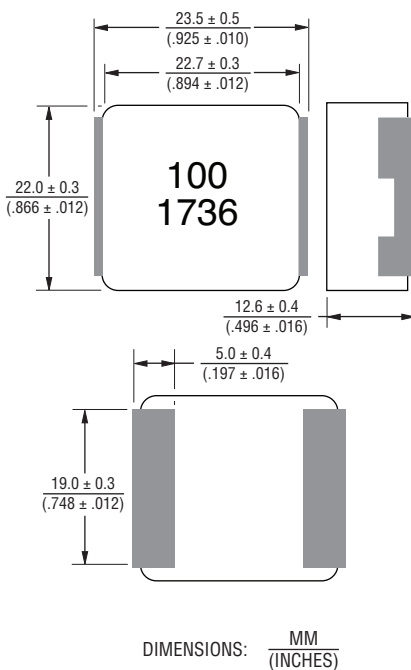
- Shielded construction
- Metal alloy powder core
- High saturation current
- Inductance range 1 to 100  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRP2313AA Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 100 kHz / 1 V		Q (Min.) @ 100 kHz / 1 V	SRF (MHz) Typ.	DCR (m $\Omega$ ) Typ.	DCR (m $\Omega$ ) Max.	I <sub>rms</sub> (A) Typ.	I <sub>sat</sub> (A) Typ.	Terminal Type
	L ( $\mu$ H)	Tol. (%)							
SRP2313AA-1R0M	1.0	20	60	23	0.8	0.95	70	60	Lead Frame
SRP2313AA-1R5M	1.5	20	60	21	1.0	1.15	62	52	
SRP2313AA-2R2M	2.2	20	60	19	1.05	1.25	58	48	
SRP2313AA-3R3M	3.3	20	60	15	1.5	1.75	49	41	
SRP2313AA-4R7M	4.7	20	40	11	1.9	2.2	47	38	
SRP2313AA-6R8M	6.8	20	40	9	2.7	3.1	40	36	
SRP2313AA-100M	10	20	40	7	3.8	4.15	33	28	
SRP2313AA-220M	22	20	30	5	9.2	11	22	15	
SRP2313AA-230M	23	20	30	5	9.2	11	22	15	
SRP2313AA-330M	33	20	30	4	13.5	15.4	19	12	
SRP2313AA-470M	47	20	20	3.5	17.3	20.8	17	12	
SRP2313AA-680M	68	20	20	3	26.2	29.5	14	12	
SRP2313AA-101M	100	20	20	2	36.0	40.0	11	9	

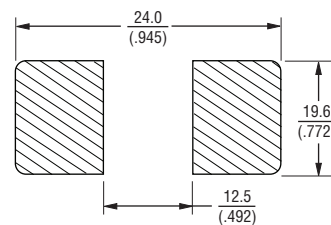
### Product Dimensions



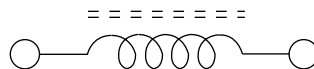
### How to Order

SRP2313AA - 100M  
 Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

### Recommended Layout



### Electrical Schematic



### Additional Information

Click these links for more information:



### General Specifications

Operating Temperature  
 .....-55 °C to +155 °C  
 (Temperature rise included)  
 Storage Temperature (Component)  
 .....-55 °C to +155 °C  
 Rated Current  
 ..... Inductance drops 30 % at I<sub>sat</sub>  
 Temperature Rise ... 40 °C at rated I<sub>rms</sub><sup>1</sup>  
 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 ..... Sn  
 Packaging..... 80 pcs. per 13-inch reel

**BOURNS®**

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 Email: asiacus@bourns.com

#### Europe:

Tel: +36 88 885 877  
 Email: eurocus@bourns.com

#### The Americas:

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

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



**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.

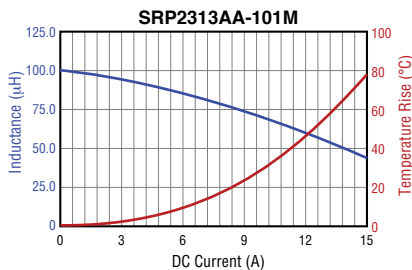
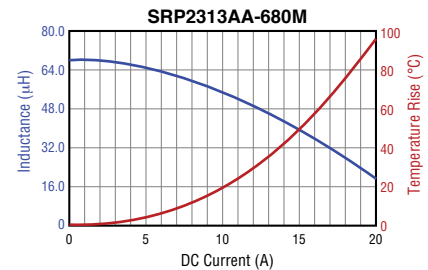
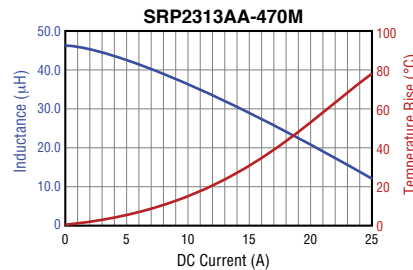
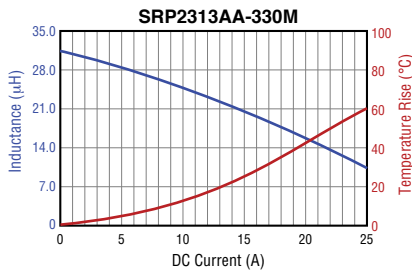
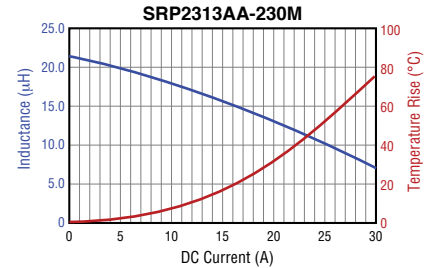
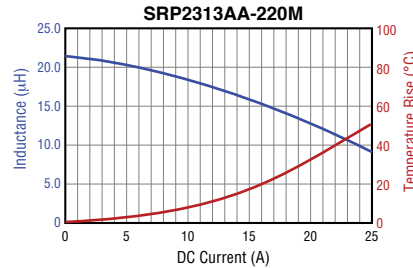
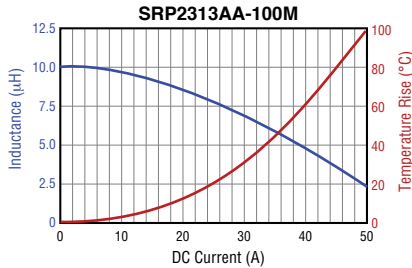
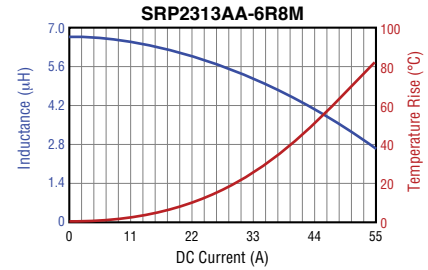
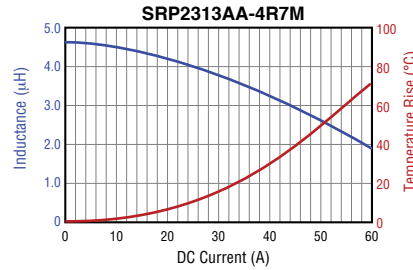
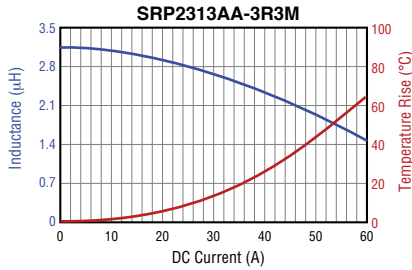
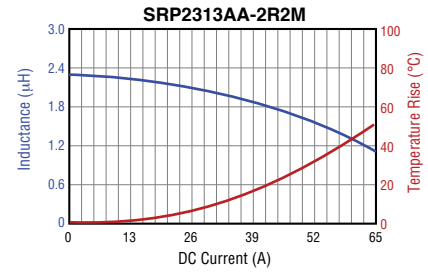
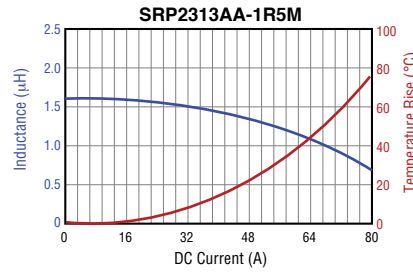
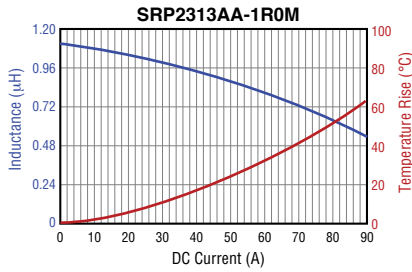
Users should verify actual device performance in their specific applications.

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# SRP2313AA Series - Shielded Power Inductors



## L vs. I Charts



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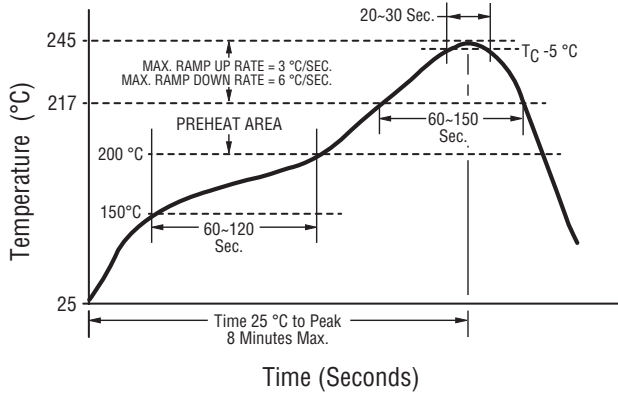
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# SRP2313AA Series - Shielded Power Inductors



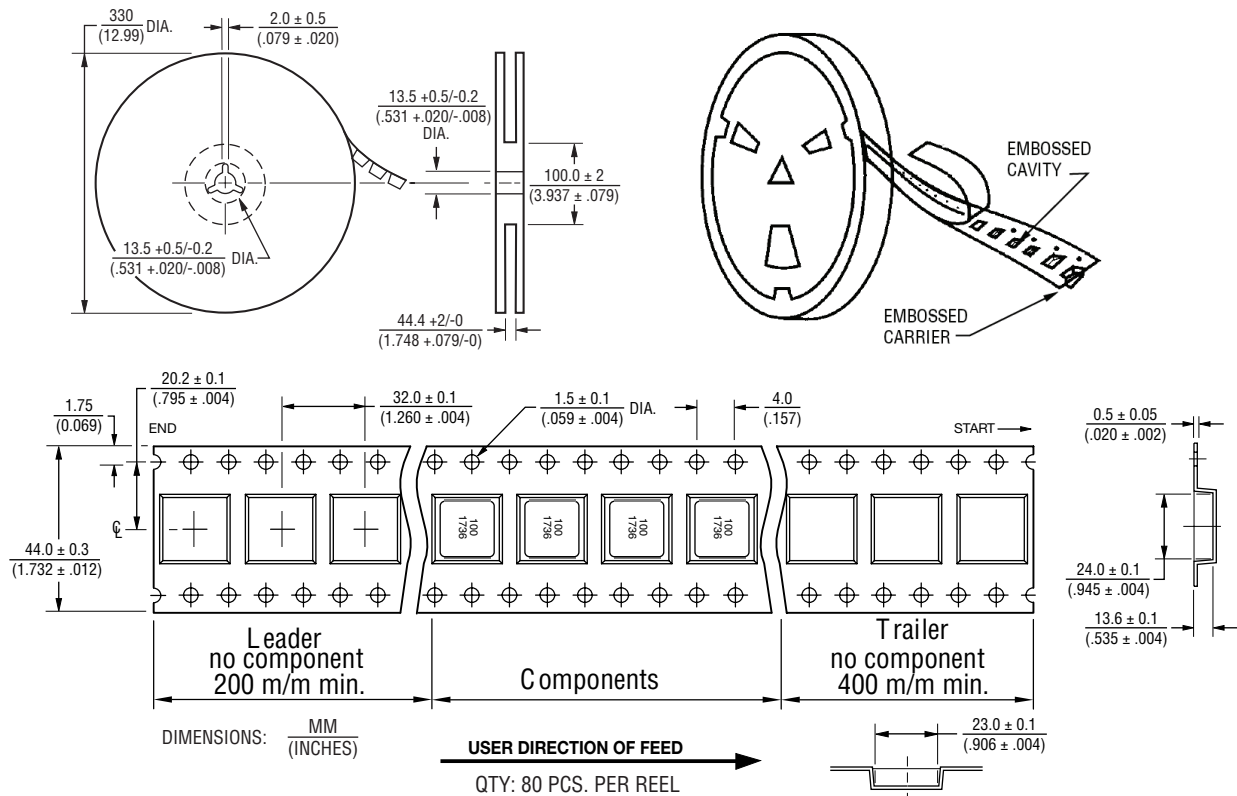
## Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat	
- Temperature Min. ( $T_{smin}$ )	150 °C
- Temperature Max. ( $T_{smax}$ )	200 °C
- Time ( $t_s$ ) from $T_{smin}$ to $T_{smax}$	60-120 seconds
Ramp-up Rate ( $T_L$ to $T_P$ )	3 °C/second max.
Liquidous temperature ( $T_L$ )	217 °C
Time ( $t_L$ ) maintained above $T_L$	60-150 seconds
Peak package body temperature ( $T_P$ )	245 °C
Time within 5 °C of Actual Peak Temperature ( $t_p$ )	20-30 seconds
Ramp-Down Rate ( $T_P$ to $T_L$ )	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

## Packaging Specifications



REV. 08/23

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