



**THE DATASHEET OF  
SRP1040VA-1R0M**





### Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- High temperature 180 °C
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRP1040VA Series – Shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 100 kHz / 1 V		Q Min. @ 100 kHz	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	I rms (A) Typ.	I sat (A) Typ.
	L (μH)	Tol. %						
SRP1040VA-1R0M	1.0	± 20 %	15	44	2.8	3.07	27	29
SRP1040VA-1R5M	1.5	± 20 %	15	36	4.2	4.5	22	27
SRP1040VA-2R2M	2.2	± 20 %	15	27	6.5	7.2	18	21
SRP1040VA-3R3M	3.3	± 20 %	15	20	10.2	11.8	15	18
SRP1040VA-4R7M	4.7	± 20 %	15	15	14.3	15.3	13	15
SRP1040VA-5R6M	5.6	± 20 %	15	14	15.5	17.5	12	13
SRP1040VA-6R8M	6.8	± 20 %	15	12	20.2	22.3	10.5	11
SRP1040VA-100M	10	± 20 %	20	10	29.3	33	8	9
SRP1040VA-150M	15	± 20 %	20	9.0	45	50	7	7.6
SRP1040VA-220M	22	± 20 %	20	7.0	64	72	6	6.5
SRP1040VA-330M	33	± 20 %	20	6.0	110	117.7	5	5.3
SRP1040VA-470M	47	± 20 %	20	5.0	145	167	4	4.5
SRP1040VA-680M	68	± 20 %	20	4.0	210	240	3.5	3.5

### General Specifications

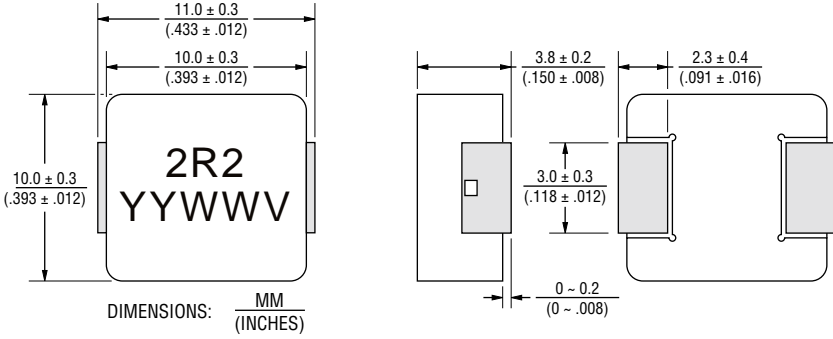
Operating Temperature .....-55 °C to +180 °C  
 (Temperature rise included)  
 Storage Temperature (Component) .....-55 °C to +180 °C  
 Rated Current..... Inductance drops 30 % at Isat  
 Temperature Rise ... 40 °C at rated Irms<sup>1</sup>  
 MSL ..... 1  
 ESD Classification (HBM)..... N/A

Note 1: Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all can affect the part temperature. Part temperature should be verified in the end application.

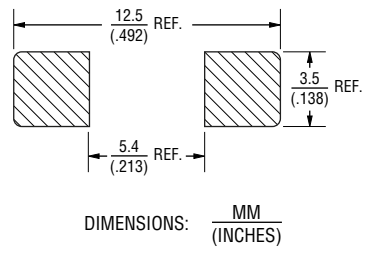
### Materials

Core..... Metal alloy powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn/Ni  
 Packaging..... 500 pcs. per 13-inch reel

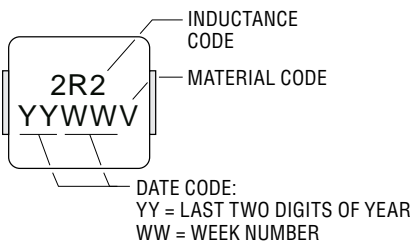
### Product Dimensions



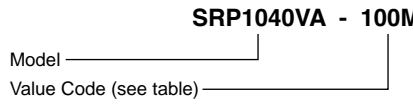
### Recommended Layout



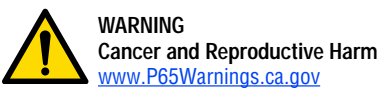
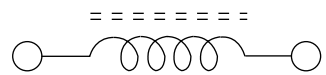
### Typical Part Marking



### How to Order



### Schematic

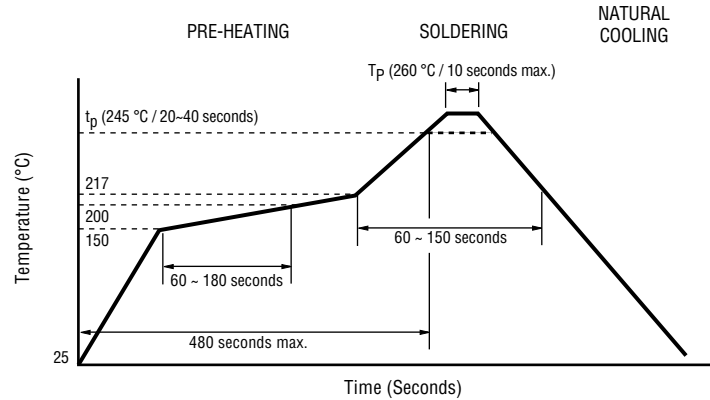


\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 \*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less. Specifications 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).

# SRP1040VA Series – Shielded Power Inductors

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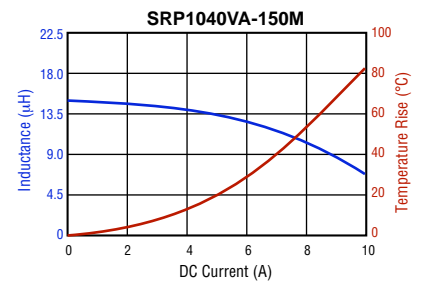
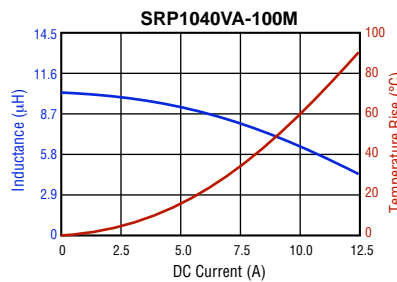
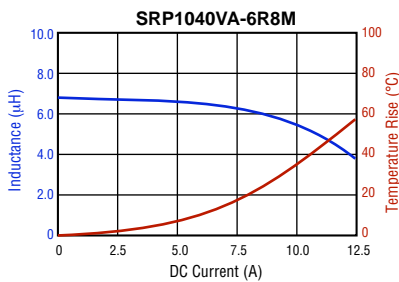
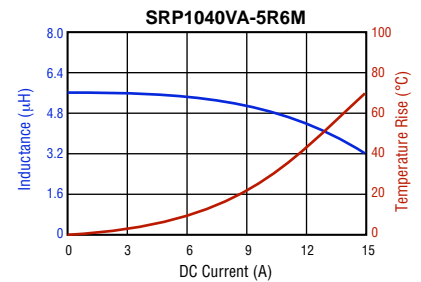
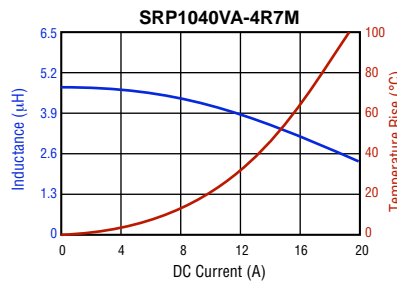
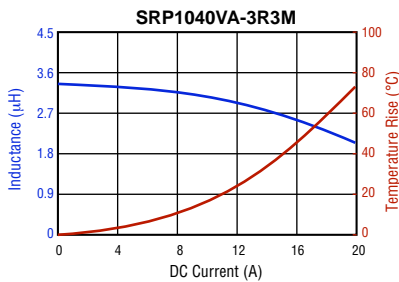
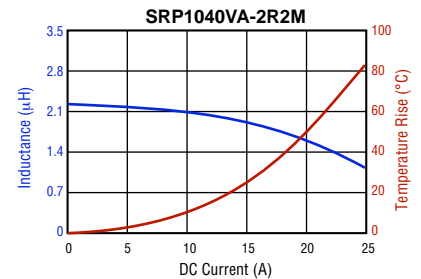
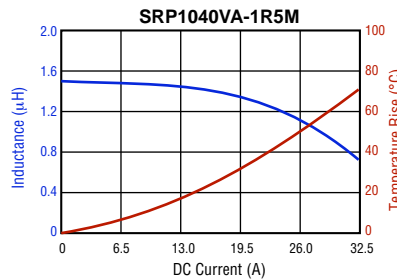
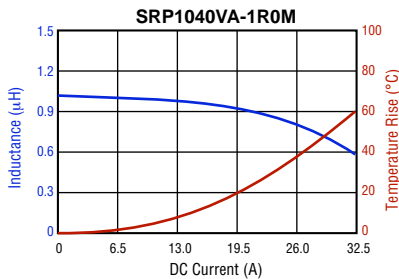
## Soldering Profile



REFLOW TIMES: 3 MAX.

NOTE: 0.12 mm thick solder paste recommended.

## L vs. I Charts



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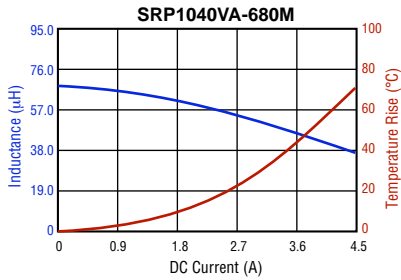
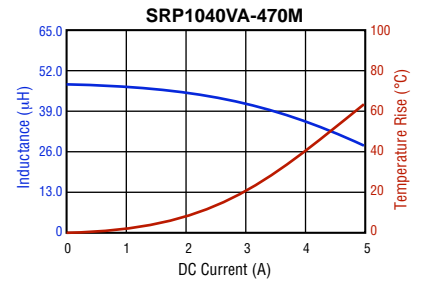
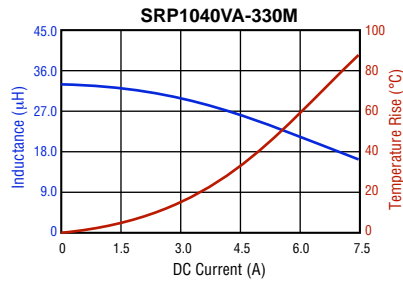
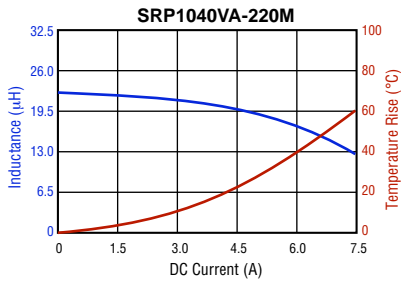
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# SRP1040VA Series – Shielded Power Inductors



## L vs. I Charts (Continued)



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