



### Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Flat wire
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

### Applications

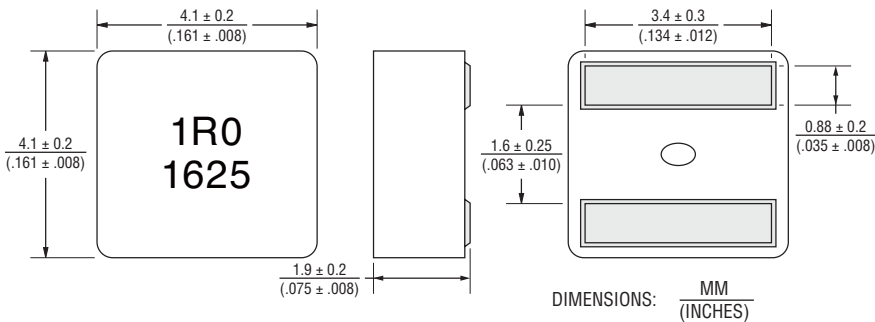
- Selected automotive applications:
  - Driver assistant
  - Infotainment
  - Lighting
- DC/DC converters
- Power supplies

## SRP4020FA Series – Shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 100 kHz / 1 V |        | Q Min. | SRF (MHz) Typ. | DCR (mΩ) Typ. | DCR (mΩ) Max. | I rms (A) Typ.   |                  | I sat (A) Typ. |             |             |
|--------------------|----------------------------|--------|--------|----------------|---------------|---------------|------------------|------------------|----------------|-------------|-------------|
|                    | L (μH)                     | Tol. % |        |                |               |               | 20 °C Temp. Rise | 40 °C Temp. Rise | 10 % L Drop    | 20 % L Drop | 30 % L Drop |
| SRP4020FA-R47M     | 0.47                       | ± 20 % | 30     | 90             | 6.0           | 6.8           | 9.8              | 13.2             | 7.0            | 10.0        | 14.0        |
| SRP4020FA-R68M     | 0.68                       | ± 20 % | 20     | 73             | 7.3           | 8.2           | 9.2              | 12.0             | 5.2            | 8.0         | 11.6        |
| SRP4020FA-R82M     | 0.82                       | ± 20 % | 20     | 62             | 8.6           | 9.5           | 8.5              | 11.5             | 4.8            | 6.5         | 9.0         |
| SRP4020FA-1R0M     | 1.0                        | ± 20 % | 20     | 56             | 10.6          | 11.7          | 8.0              | 11.0             | 4.5            | 5.4         | 8.0         |
| SRP4020FA-1R2M     | 1.2                        | ± 20 % | 20     | 53             | 12.2          | 13.4          | 7.2              | 9.5              | 4.3            | 5.0         | 7.5         |
| SRP4020FA-1R5M     | 1.5                        | ± 20 % | 20     | 45             | 14.4          | 15.8          | 6.7              | 9.1              | 4.1            | 4.5         | 7.5         |
| SRP4020FA-2R0M     | 2.0                        | ± 20 % | 15     | 40             | 21.15         | 23.3          | 6.2              | 8.2              | 3.2            | 4.0         | 5.0         |
| SRP4020FA-2R2M     | 2.2                        | ± 20 % | 15     | 38             | 21.35         | 23.5          | 6.0              | 8.0              | 3.1            | 3.8         | 4.8         |
| SRP4020FA-3R3M     | 3.3                        | ± 20 % | 15     | 26             | 34.2          | 38.3          | 4.4              | 5.5              | 2.7            | 3.4         | 5.3         |
| SRP4020FA-4R7M     | 4.7                        | ± 20 % | 15     | 25             | 52.0          | 57.2          | 3.8              | 5.1              | 2.0            | 2.7         | 4.0         |

### Product Dimensions



### General Specifications

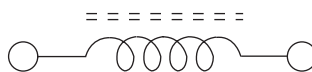
Operating Temperature ..... -55 °C to +155 °C  
 (Temperature rise included)  
 Storage Temperature (Component) ..... -55 °C to +155 °C  
 Rated Current ..... Inductance drops 10, 20 or 30 % at Isat  
 Temperature Rise ..... 20 or 40 °C at rated Irms<sup>1</sup>  
 MSL ..... 1  
 ESD Classification (HBM) ..... N/A

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

### How to Order

SRP4020FA - 1R0M  
 Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

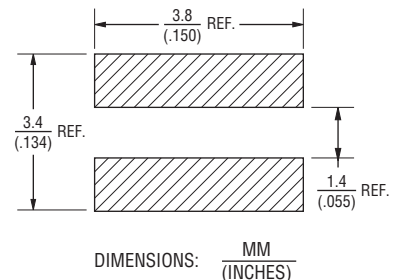
### Schematic



### Materials

Core ..... Metal alloy powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 3000 pcs. per 13-inch reel

### Recommended Layout



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EMEA: Tel: +36 88 520 390 • Email: eurocus@bourns.com

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

www.bourns.com

\* 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.

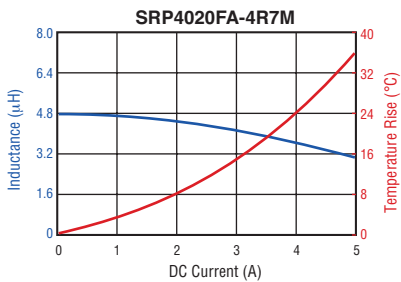
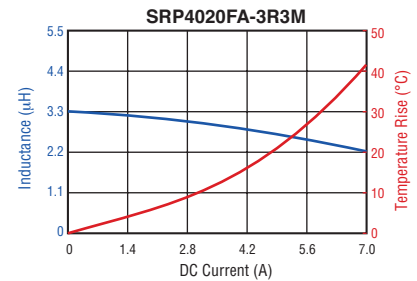
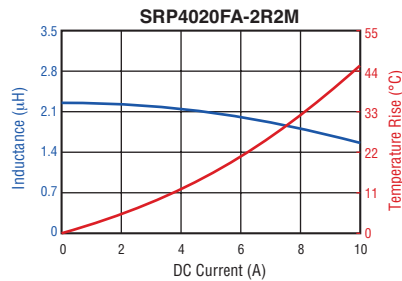
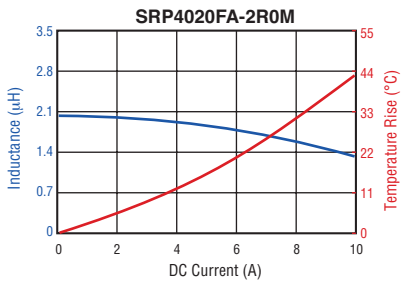
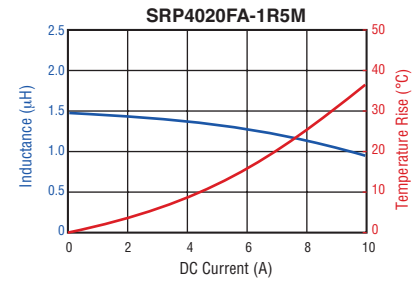
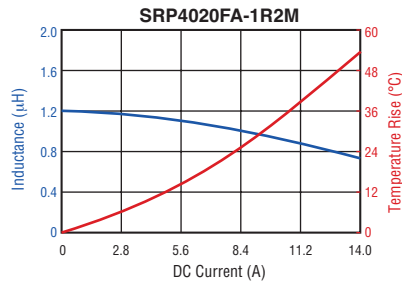
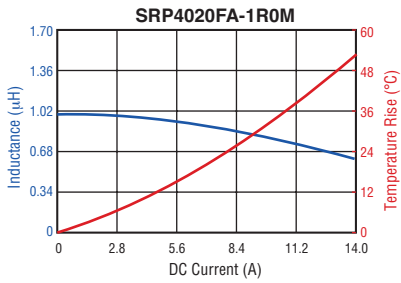
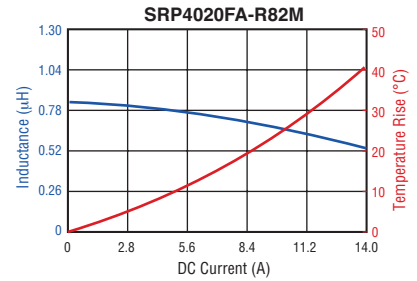
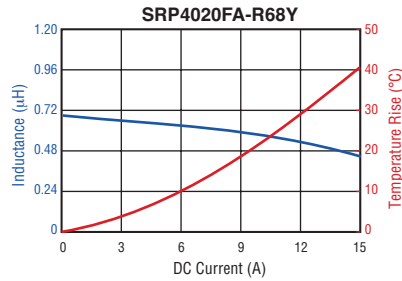
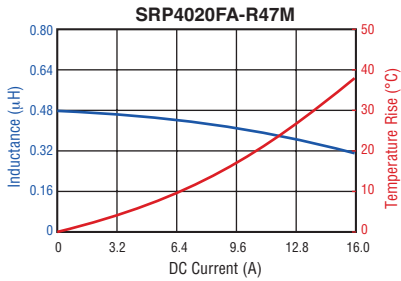
Users should verify actual device performance in their specific applications.

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# SRP4020FA Series – Shielded Power Inductors

**BOURNS®**

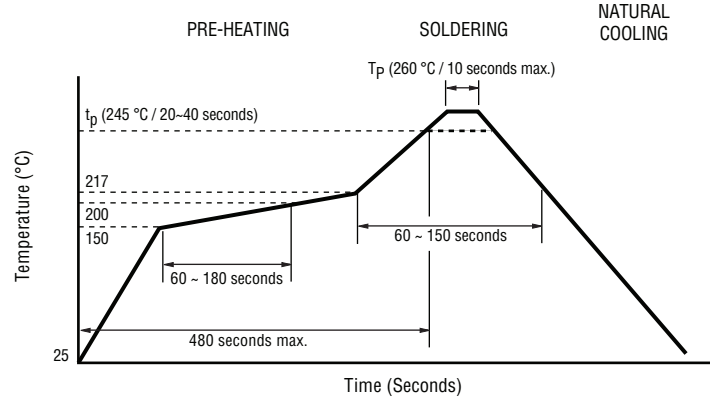
## L vs. I Charts



# SRP4020FA Series – Shielded Power Inductors

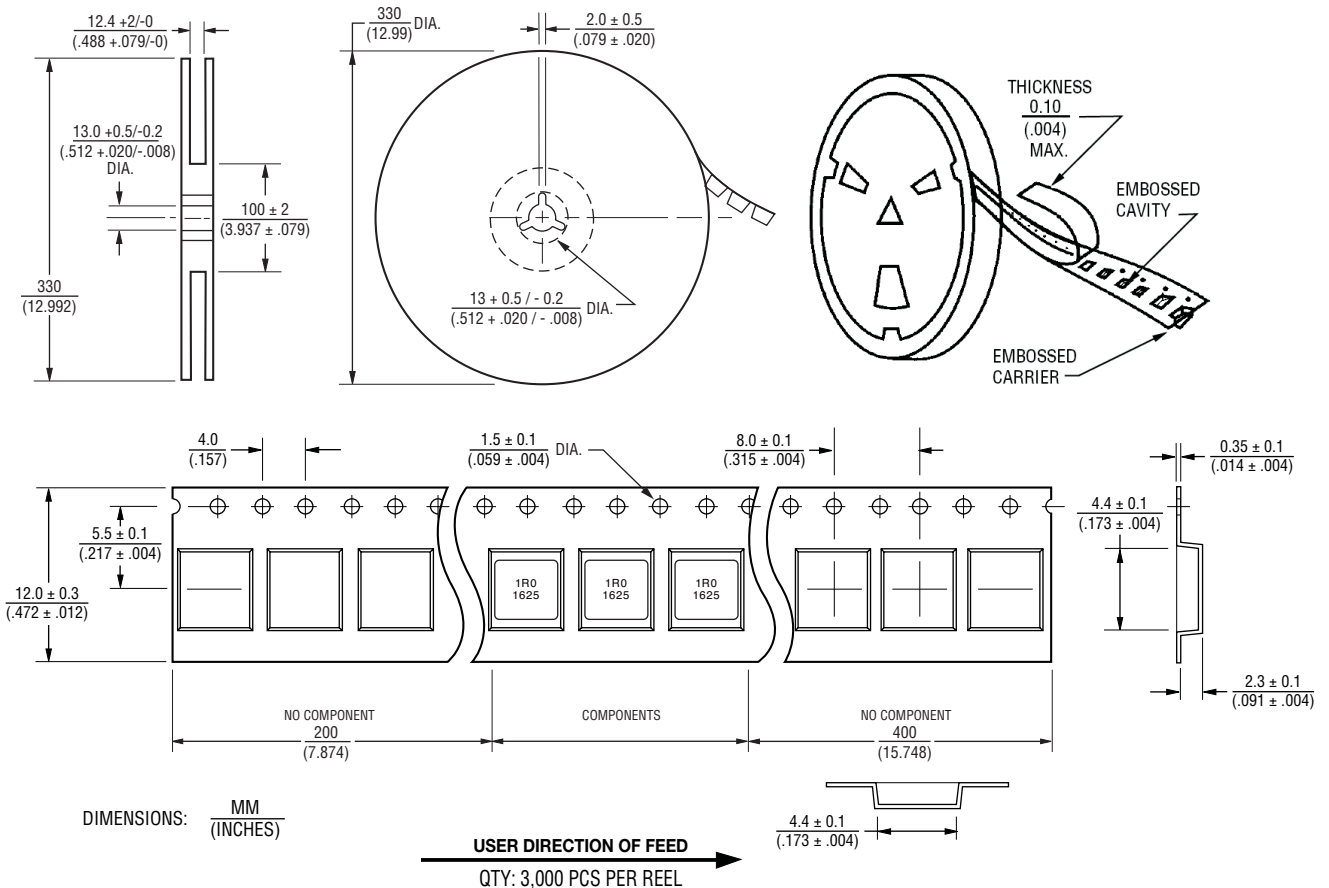
**BOURNS®**

## Soldering Profile



REFLOW TIMES: 3 MAX.

## Packaging Specifications



06/18

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