


## 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**

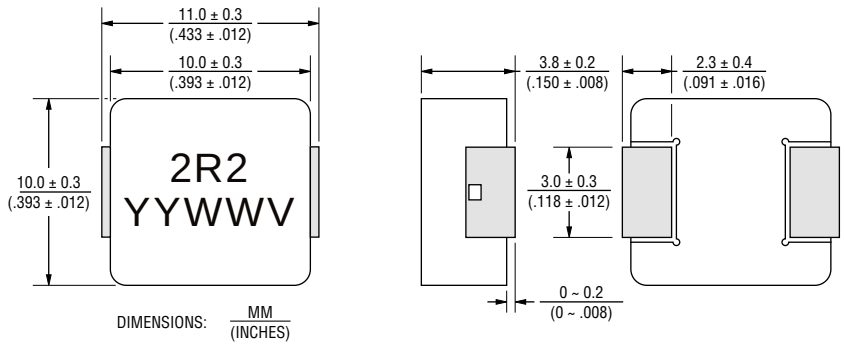
BOURNS®

# SRP1040VA Series – Shielded Power Inductors

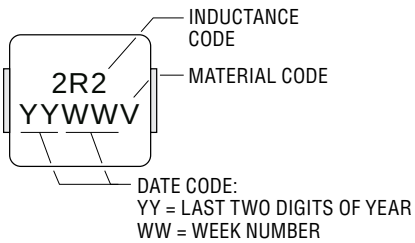
### Electrical Specifications @ 25 °C

| 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 |

### Product Dimensions




### Typical Part Marking




### How to Order

**SRP1040VA - 100M**

Model

Value Code (see table)

### Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

### 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[1]

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

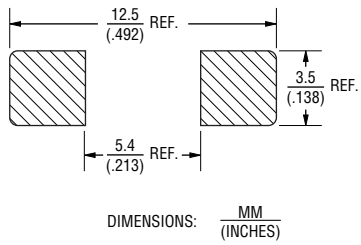
Core.....Metal alloy powder

Wire .....Enameled copper

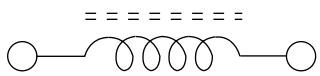
Terminal Finish .....Sn/Ni

Packaging..... 500 pcs. per 13-inch reel

### Recommended Layout




### Schematic



**WARNING**
**Cancer and Reproductive Harm**
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.

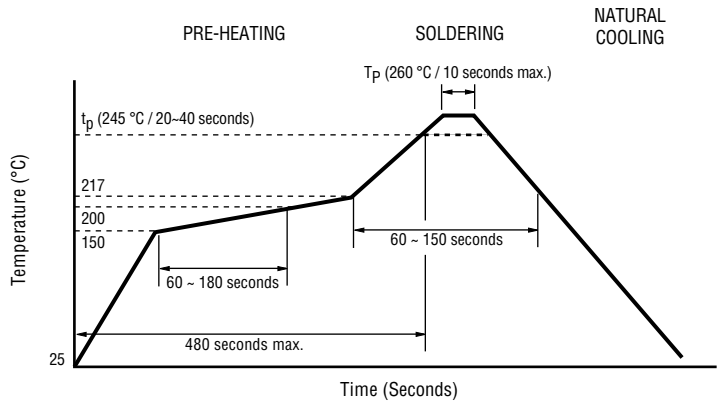
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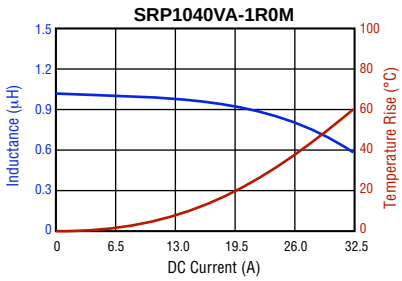
## Soldering Profile

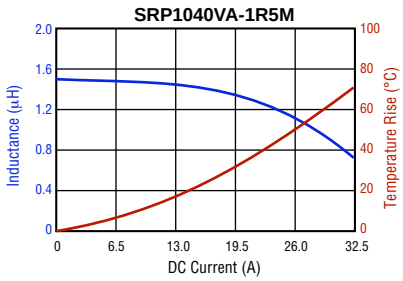


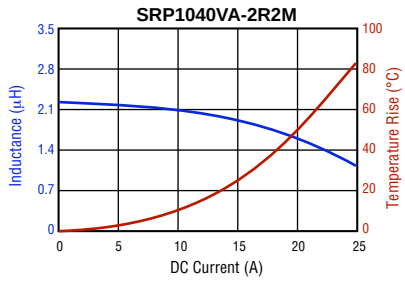

REFLOW TIMES: 3 MAX.

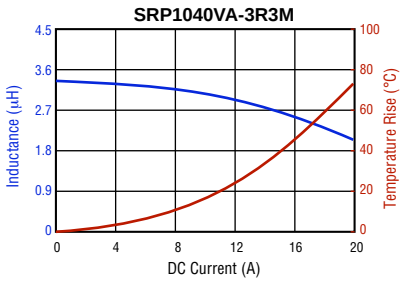
NOTE: 0.12 mm thick solder paste recommended.

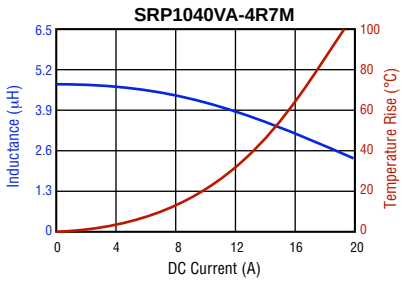
## L vs. I Charts

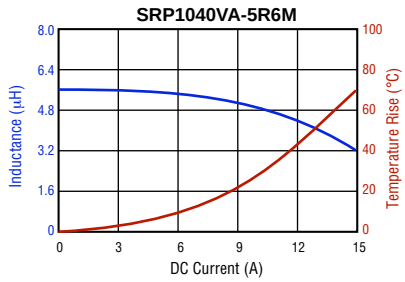


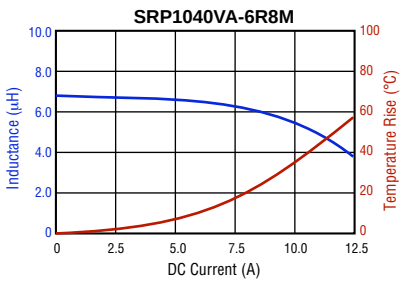



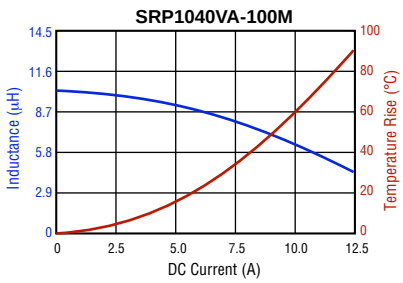



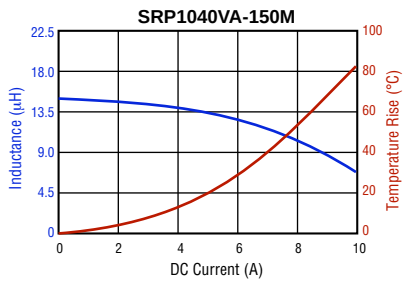



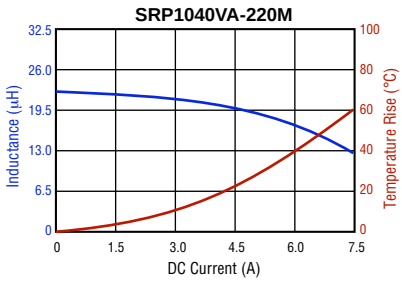



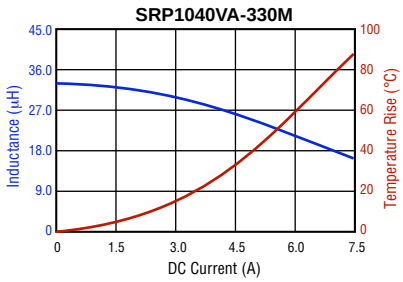



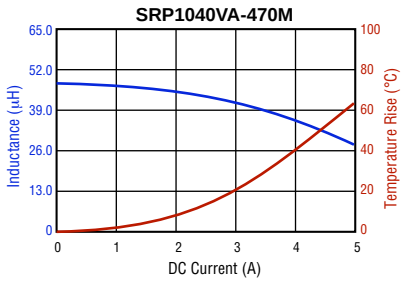

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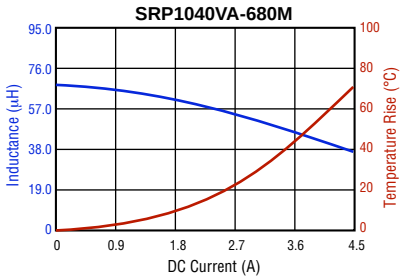
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## L vs. I Charts (Continued)



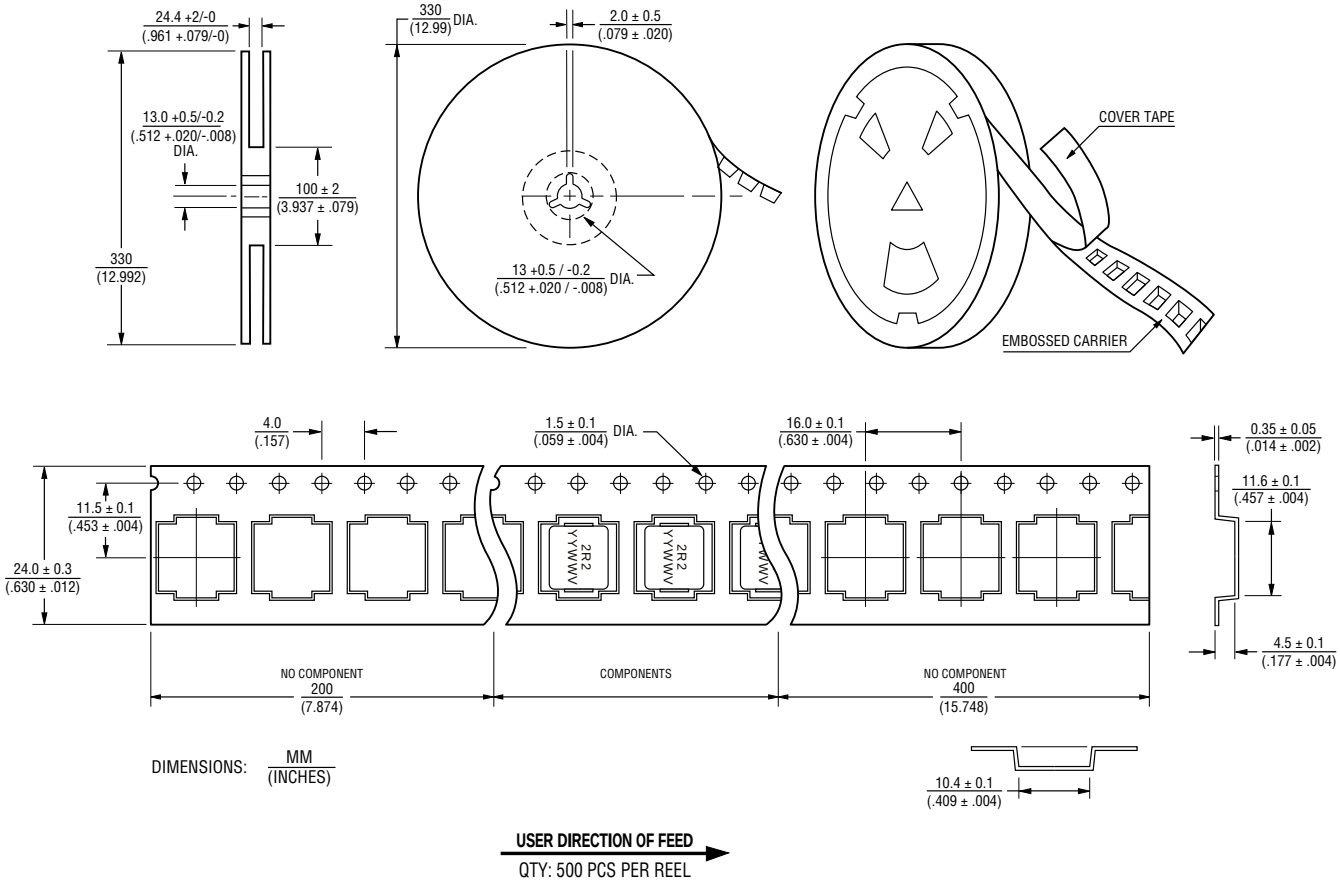




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## Packaging Specifications




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