



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

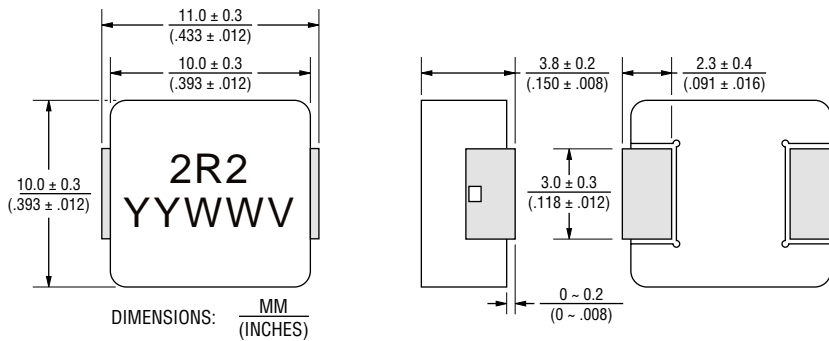
Operating Temperature-55 °C to +180 °C
 (Temperature rise included)
 Storage Temperature (Component)-55 °C to +180 °C
 Rated Current..... Inductance drops 30 % at Isat
 Temperature Rise ... 40 °C at rated Irms¹
 MSL 1
 ESD Classification (HBM)..... N/A

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.

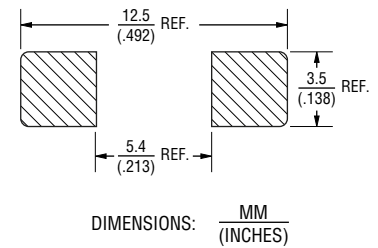
Materials

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

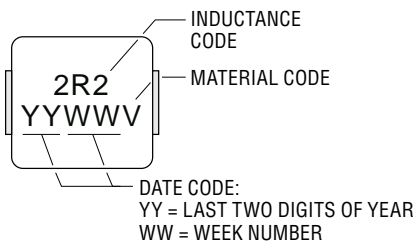
Product Dimensions



Recommended Layout



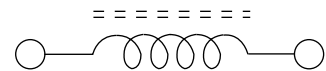
Typical Part Marking



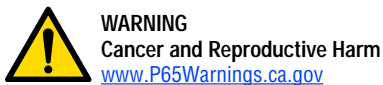
How to Order

SRP1040VA - 100M
 Model _____
 Value Code (see table) _____

Schematic



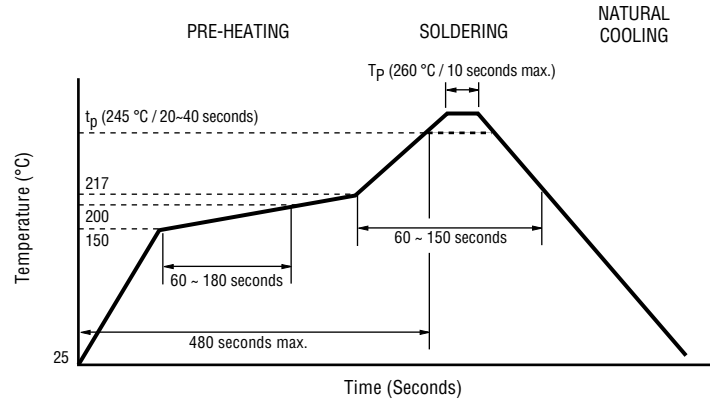
* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
 **Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less. Specifications are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



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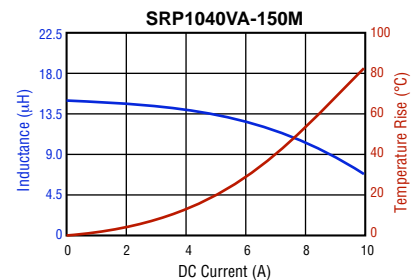
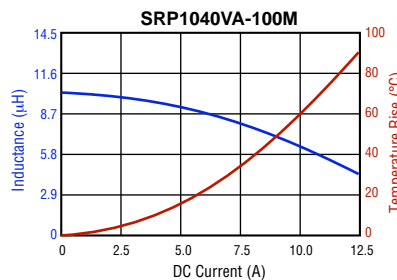
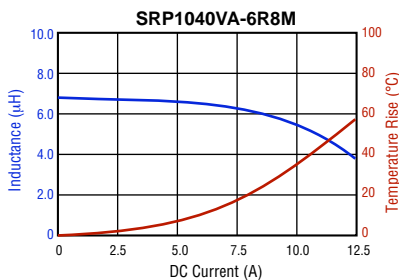
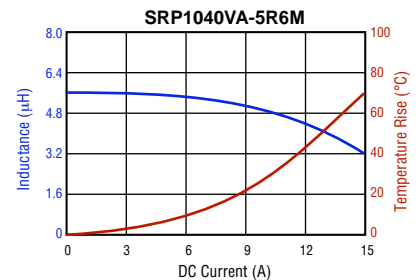
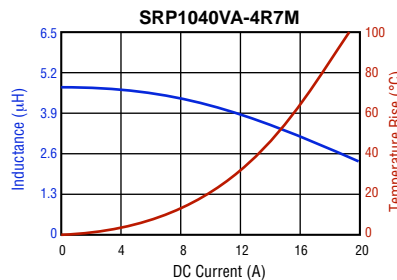
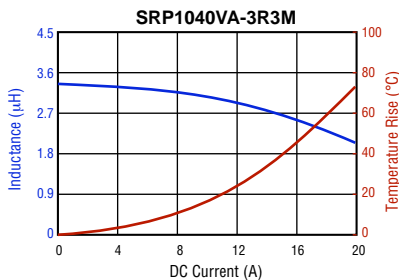
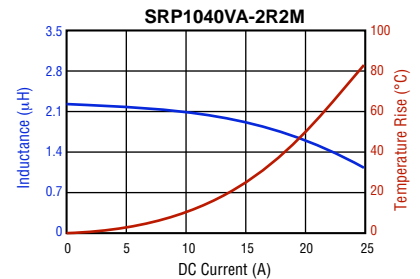
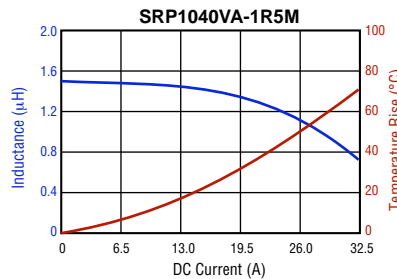
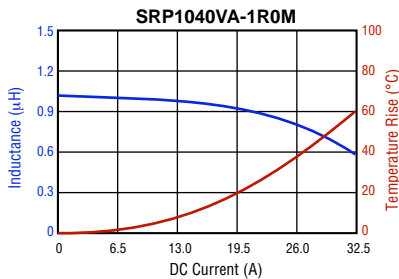
Soldering Profile



REFLOW TIMES: 3 MAX.

NOTE: 0.12 mm thick solder paste recommended.

L vs. I Charts



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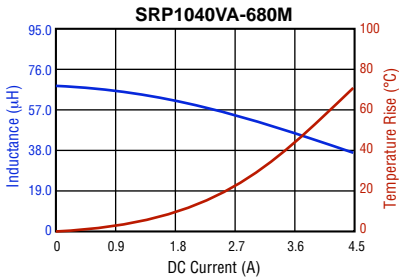
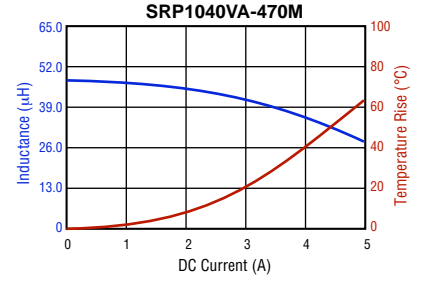
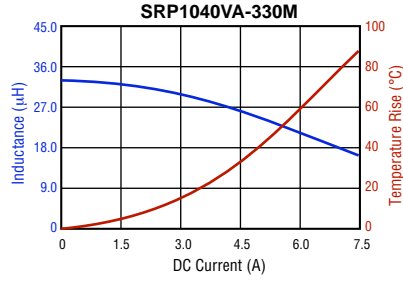
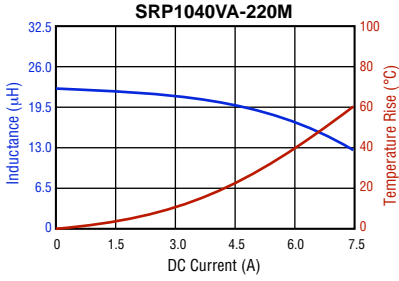
Users should verify actual device performance in their specific applications.

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SRP1040VA Series – Shielded Power Inductors



L vs. I Charts (Continued)



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