



Features

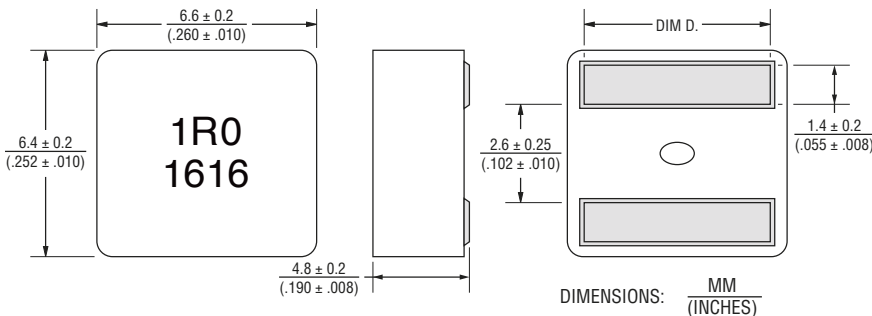
- Shielded construction
- Metal alloy powder core
- High saturation current
- Flat wire
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SRP6050CA Series – Shielded Power Inductors

Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 100 kHz / 0.1 V | | SRF (MHz) Typ. | DCR (mΩ) Typ. | DCR (mΩ) Max. | I rms (A) Typ. | | I sat (A) Typ. | D Dim. (mm) ± 0.3 mm |
|--------------------|------------------------------|--------|----------------|---------------|---------------|------------------|------------------|----------------|----------------------|
| | L (μH) | Tol. % | | | | 20 °C Temp. Rise | 40 °C Temp. Rise | | |
| SRP6050CA-1R0M | 1.0 | ± 20 % | 50 | 4.1 | 4.52 | 15 | 20 | 23.0 | 5.3 |
| SRP6050CA-1R2M | 1.2 | ± 20 % | 43 | 5.3 | 5.83 | 14 | 18 | 22.0 | 5.3 |
| SRP6050CA-1R5M | 1.5 | ± 20 % | 40 | 5.7 | 6.3 | 13 | 17 | 19.5 | 5.3 |
| SRP6050CA-1R8M | 1.8 | ± 20 % | 33 | 6.4 | 7.1 | 12 | 16 | 18.5 | 5.3 |
| SRP6050CA-2R2M | 2.2 | ± 20 % | 30 | 7.7 | 8.5 | 10 | 13 | 16.0 | 5.2 |
| SRP6050CA-3R3M | 3.3 | ± 20 % | 25 | 11.2 | 12.5 | 8.5 | 11 | 12.5 | 5.2 |
| SRP6050CA-4R3M | 4.3 | ± 20 % | 23 | 15.1 | 16.2 | 7.0 | 9.0 | 11.0 | 5.2 |
| SRP6050CA-4R7M | 4.7 | ± 20 % | 22 | 16.7 | 18.4 | 6.5 | 8.5 | 10.5 | 5.2 |

Product Dimensions

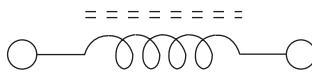


How to Order

SRP6050CA - 1R0M

Model _____
Value Code (see table) _____

Schematic



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 Isat

Temperature Rise 20 or 40 °C at rated I_{rms}¹

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.

Materials

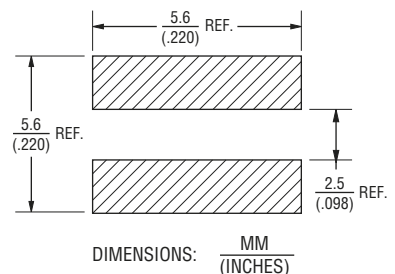
Core Metal alloy powder

Wire Enameled copper

Terminal Finish Sn

Packaging 800 pcs. per 13-inch reel

Recommended Layout



BOURNS®

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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



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

** Bourns follows the prevailing definition of "halogen free" in the industry. 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.

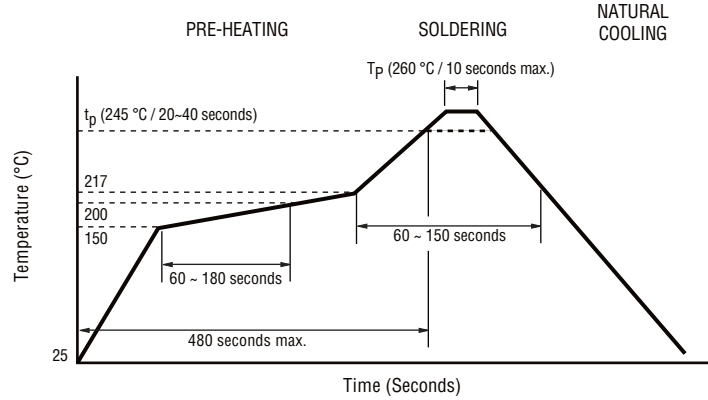
Users should verify actual device performance in their specific applications.

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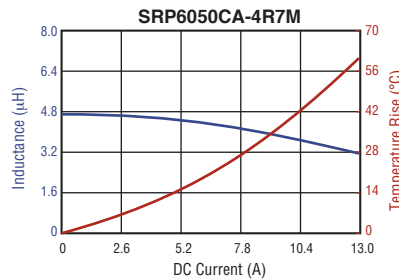
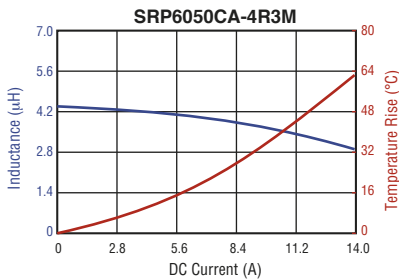
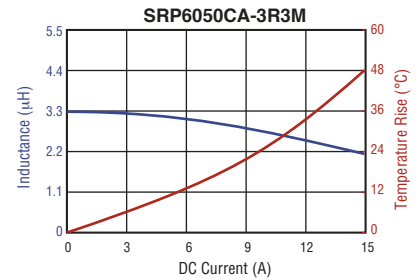
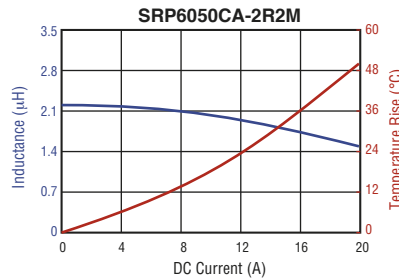
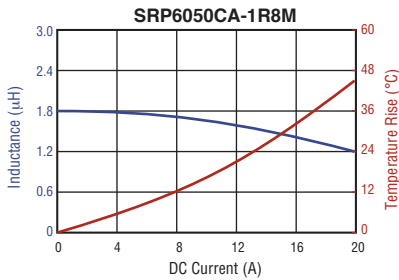
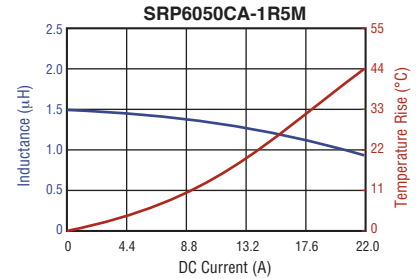
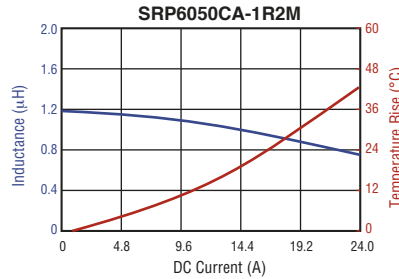
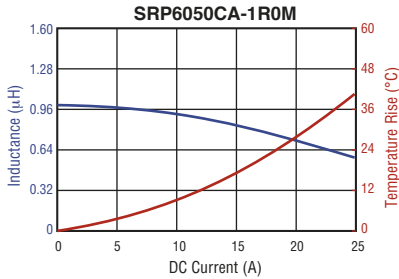
Soldering Profile



REFLOW TIMES: 3 MAX.

NOTE: 0.15 mm thick solder paste recommended.

L vs. I Charts



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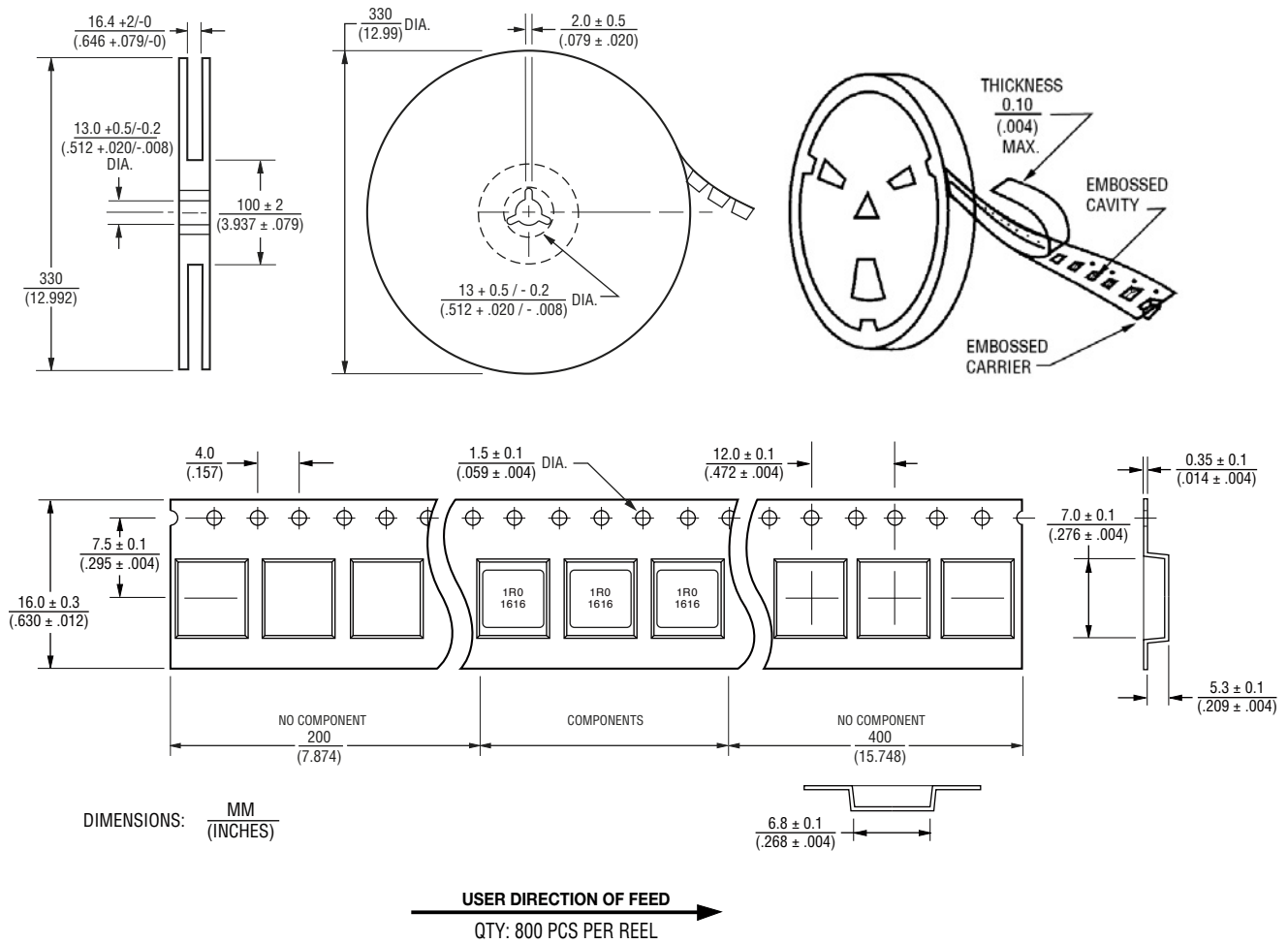
Users should verify actual device performance in their specific applications.

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Packaging Specifications



06/18

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