



**THE DATASHEET OF
SRP5050FA-6R8M**





Features

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

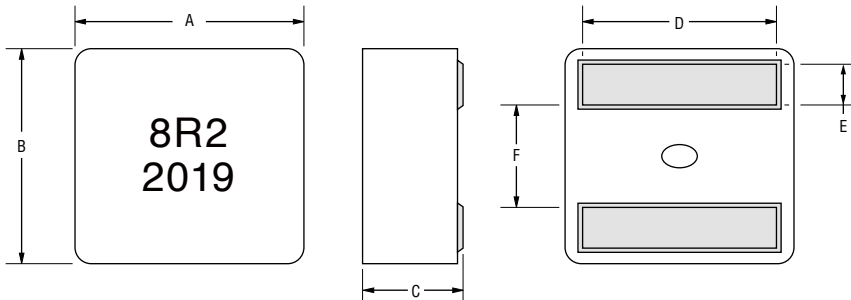
SRP5050FA Series – Shielded Power Inductors

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. |
|--------------------|------------------------------|--------|----------------|---------------|---------------|------------------|------------------|----------------|
| | L (μH) | Tol. % | | | | 20 °C Temp. Rise | 40 °C Temp. Rise | |
| | SRP5050FA-5R6M | 5.60 | | | | ± 20 % | 20 | |
| SRP5050FA-6R8M | 6.80 | ± 20 % | 18 | 26.0 | 28.6 | 4.8 | 6.4 | 7.8 |
| SRP5050FA-8R2M | 8.20 | ± 20 % | 15 | 29.5 | 32.5 | 4.6 | 6.1 | 7.2 |
| SRP5050FA-100M1 | 10 | ± 20 % | 10 | 39.0 | 43 | 3.8 | 5 | 6.5 |
| SRP5050FA-150M1 | 15 | ± 20 % | 9 | 60.0 | 66 | 3 | 4 | 5.5 |
| SRP5050FA-220M1 | 22 | ± 20 % | 8 | 90.6 | 99.65 | 2.5 | 3.4 | 5 |

NEW!

Product Dimensions



| Bourns Part Number | Dimensions | | | | | |
|--------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--|
| | A | B | C | D | E | F |
| SRP5050FA-xxxM | $\frac{5.5 \pm 0.2}{(.217 \pm .008)}$ | $\frac{5.3 \pm 0.2}{(.209 \pm .008)}$ | $\frac{4.8 \pm 0.2}{(.189 \pm .008)}$ | $\frac{4.3 \pm 0.3}{(.169 \pm .012)}$ | $\frac{1.1 \pm 0.2}{(.043 \pm .008)}$ | $\frac{2.3 \pm 0.25}{(.091 \pm .010)}$ |
| SRP5050FA-xxxM1 | $\frac{6.0 \pm 0.2}{(.236 \pm .008)}$ | $\frac{5.7 \pm 0.2}{(.224 \pm .008)}$ | | | | |

DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$



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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.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Additional Information

Click these links for more information:



General Specifications

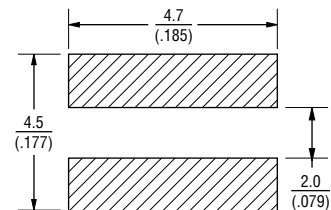
Operating Temperature-55 °C to +155 °C
 (Temperature rise included)
 Storage Temperature (Component)-55 °C to +155 °C
 Rated Current..... Inductance drops
 30 % at Isat
 Temperature Rise20 or 40 °C
 at rated Irms!
 MSL1
 ESD Classification (HBM)..... N/A

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

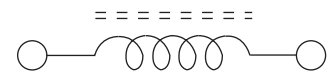
Core..... Metal alloy powder
 Wire Enameled copper
 Terminal Finish Sn
 Packaging..... 1500 pcs. per 13-inch reel

Recommended Layout



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Schematic



How to Order

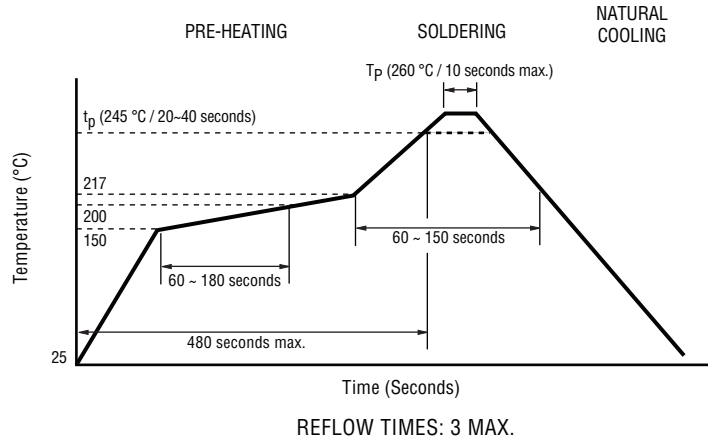
SRP5050FA - 8R2M

Model _____
 Value Code (see table) _____

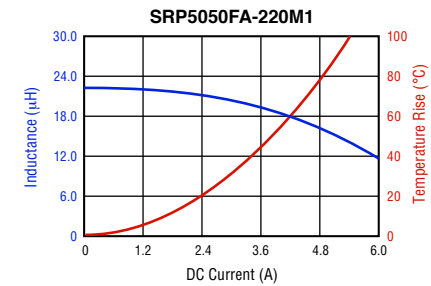
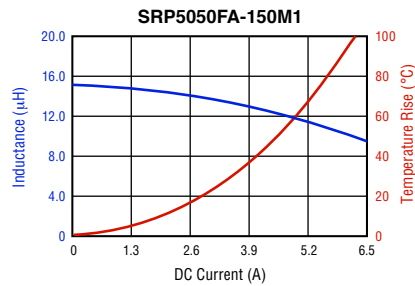
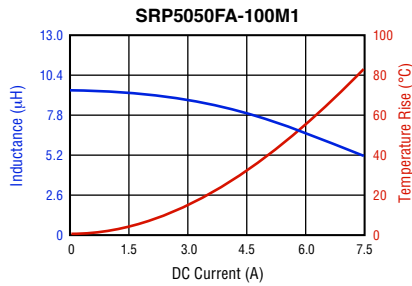
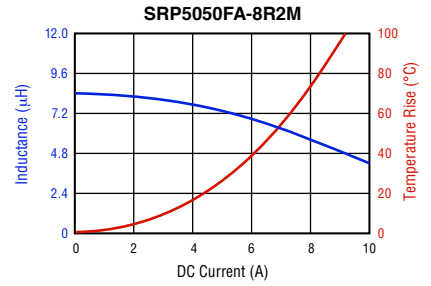
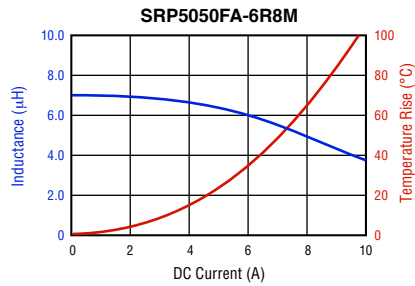
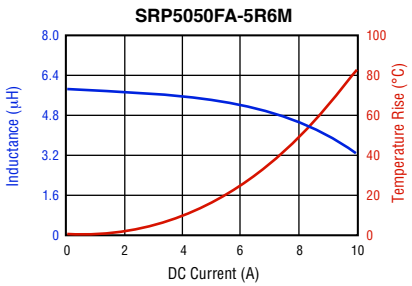
SRP5050FA Series – Shielded Power Inductors



Soldering Profile



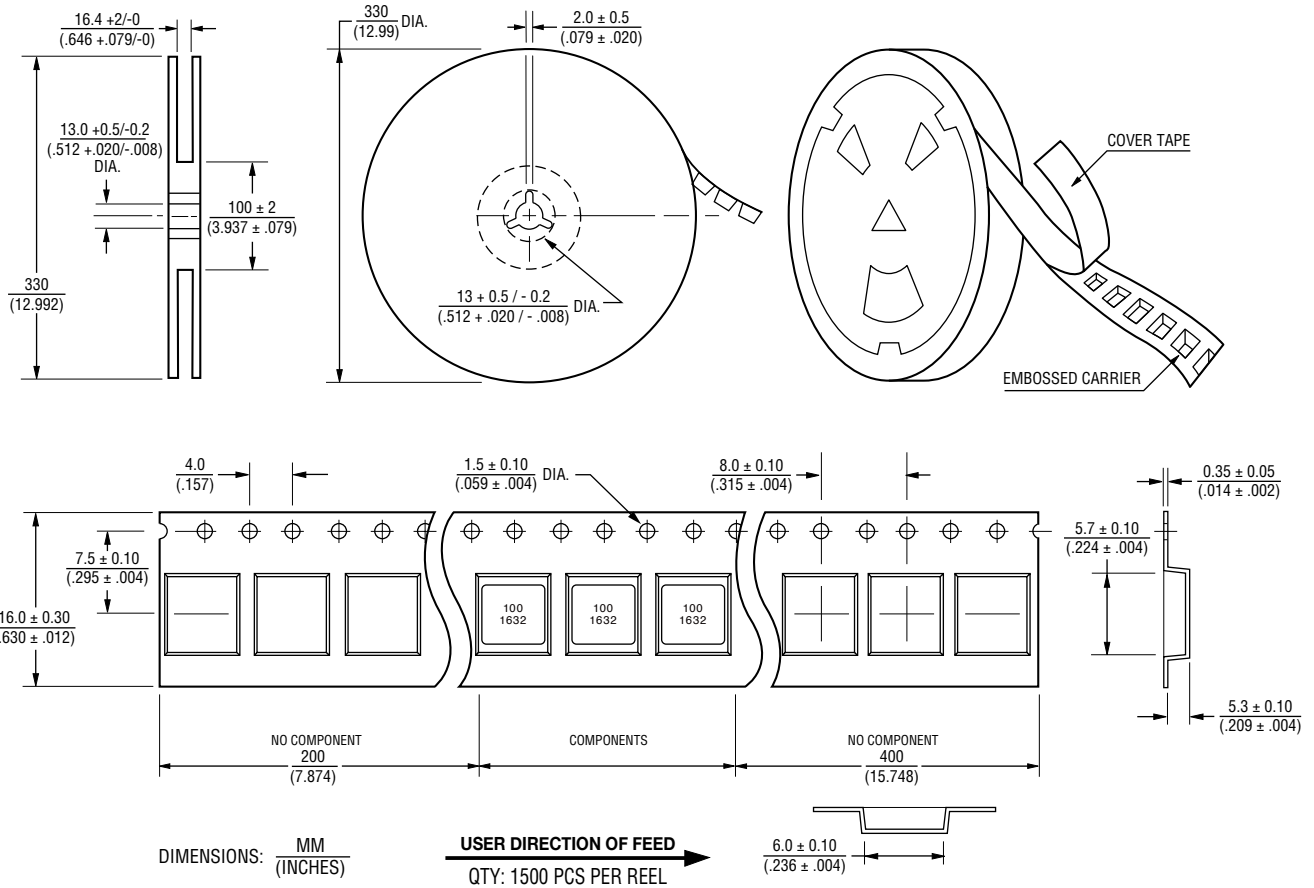
L vs. I Charts



SRP5050FA Series – Shielded Power Inductors

BOURNS®

Packaging Specifications



REV. 12/21

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