



Features

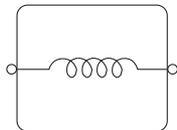
- Shielded construction for low radiation
- Metal powder core
- High saturation current
- Low buzz noise
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SRP8540A Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 100 kHz / 1 V | | Q Typ. | SRF (MHz) Typ. | DCR (mΩ) Typ. | DCR (mΩ) Max. | Irms (A) Typ. | Isat (A) Typ. |
|--------------------|----------------------------|----------|--------|----------------|---------------|---------------|---------------|---------------|
| | L (μH) | Tol. (%) | | | | | | |
| SRP8540A-R22M | 0.22 | ± 20 | 10 | 132 | 1.6 | 1.76 | 31 | 60 |
| SRP8540A-R33M | 0.33 | ± 20 | 10 | 90 | 2 | 2.2 | 30 | 55 |
| SRP8540A-R47M | 0.47 | ± 20 | 10 | 69 | 2.6 | 2.86 | 28 | 40 |
| SRP8540A-R56M | 0.56 | ± 20 | 15 | 58 | 2.7 | 2.97 | 25 | 38 |
| SRP8540A-R68M | 0.68 | ± 20 | 15 | 56 | 3.1 | 3.41 | 23 | 36 |
| SRP8540A-R82M | 0.82 | ± 20 | 15 | 46 | 3.7 | 4.1 | 21 | 32 |
| SRP8540A-1R0M | 1.0 | ± 20 | 20 | 35 | 4.5 | 4.95 | 18 | 29 |
| SRP8540A-1R5M | 1.5 | ± 20 | 20 | 33 | 6.6 | 7.3 | 17 | 27 |
| SRP8540A-2R2M | 2.2 | ± 20 | 20 | 27 | 10.8 | 11.9 | 16 | 25 |
| SRP8540A-3R3M | 3.3 | ± 20 | 20 | 23 | 15 | 16.5 | 14 | 22 |
| SRP8540A-4R7M | 4.7 | ± 20 | 20 | 17 | 26.8 | 29.5 | 8.5 | 19 |
| SRP8540A-5R6M | 5.6 | ± 20 | 20 | 15 | 30 | 35 | 7.5 | 17 |
| SRP8540A-6R8M | 6.8 | ± 20 | 20 | 14 | 40 | 46 | 6.5 | 16.5 |
| SRP8540A-8R2M | 8.2 | ± 20 | 20 | 13 | 44 | 51 | 6 | 16 |
| SRP8540A-100M | 10 | ± 20 | 20 | 10 | 53 | 61 | 5.6 | 10 |
| SRP8540A-220M | 22 | ± 20 | 20 | 9 | 100 | 120 | 3.9 | 8 |

Schematic

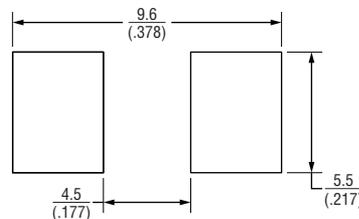


How to Order

SRP8540A - 100 M

Model _____
 Value Code (see table) _____
 Tolerance Code _____

Recommended Layout



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

Additional Information

Click these links for more information:



General Specifications

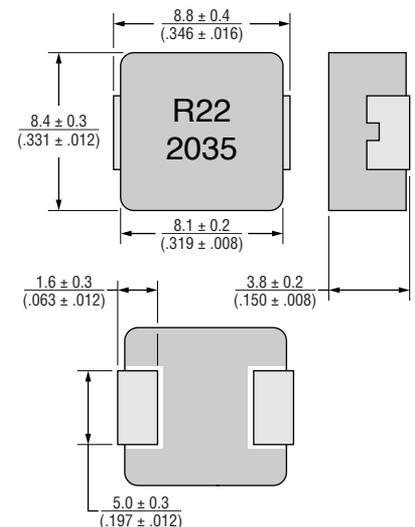
Operating Temperature -55 °C to +150 °C
 (Temperature rise included)
 Storage Temperature -55 °C to +150 °C
 Rated Current Inductance drops 30 % at Isat
 Temperature Rise 40 °C at rated Irms¹
 Moisture Sensitivity Level..... 1
 ESD Classification (HBM)..... N/A

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.....Ni/Sn
 Packaging..... 800 pcs. per 13-inch reel

Product Dimensions



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



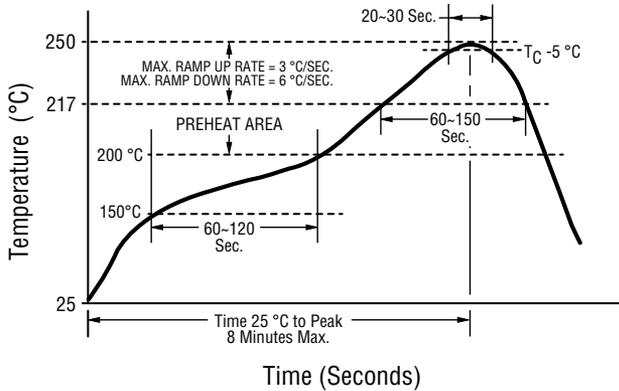
WARNING Cancer and Reproductive Harm www.P65Warnings.ca.gov

* 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. 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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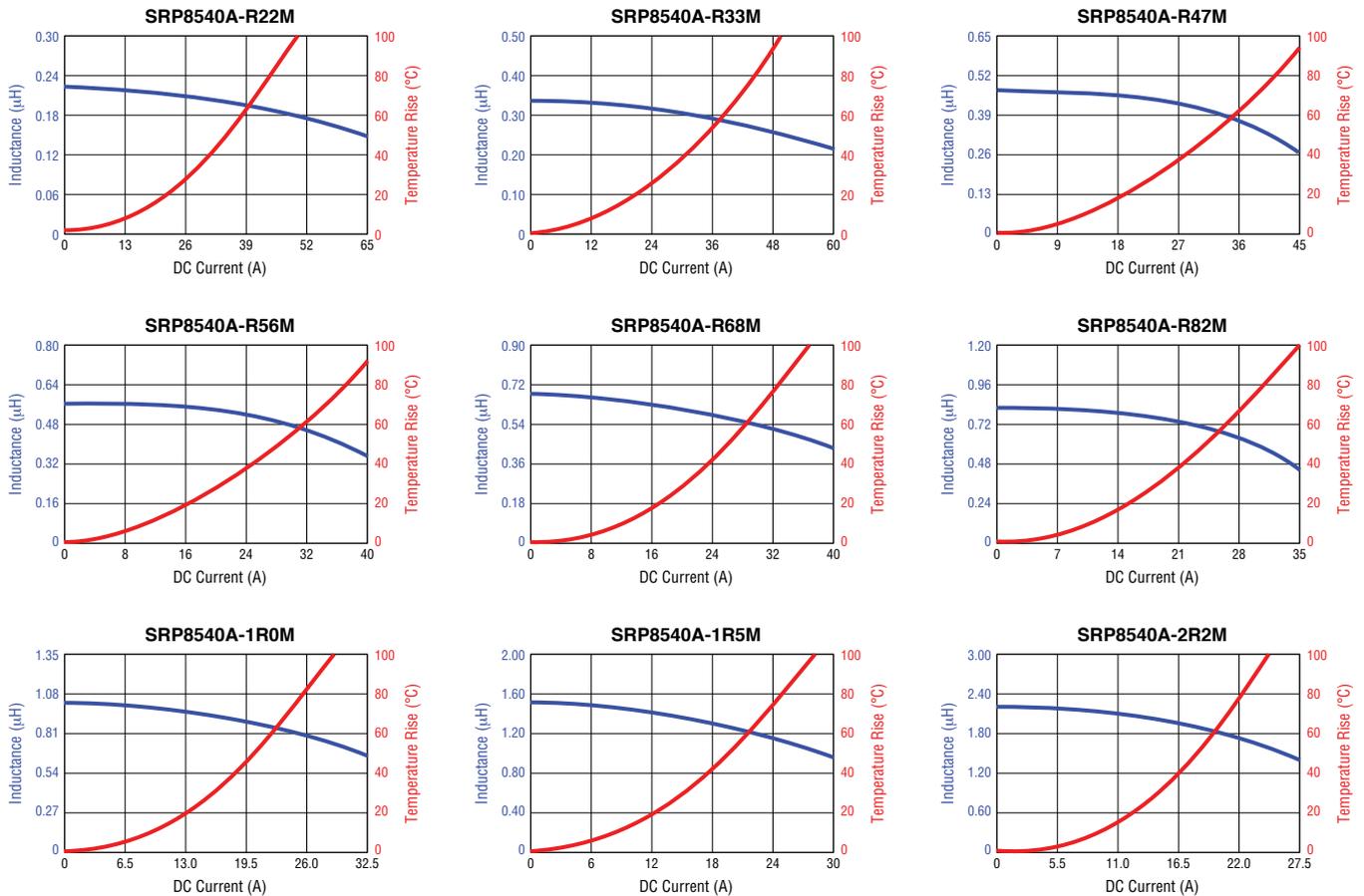
Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

| Profile Feature | Pb Free Assembly |
|---|------------------|
| Preheat | |
| - Temperature Min. (T_{smin}) | 150 °C |
| - Temperature Max. (T_{smax}) | 200 °C |
| - Time (t_s) from T_{smin} to T_{smax} | 60-120 seconds |
| Ramp-up Rate (T_L to T_P) | 3 °C/second max. |
| Liquidous temperature (T_L) | 217 °C |
| Time (t_L) maintained above T_L | 60-150 seconds |
| Peak package body temperature (T_P) | 250 °C |
| Time within 5 °C of Actual Peak Temperature (t_p) | < 30 seconds |
| Ramp-Down Rate (T_P to T_L) | 6 °C/second max. |
| Time 25 °C to Peak Temperature | 8 minutes max. |

L vs. I Charts



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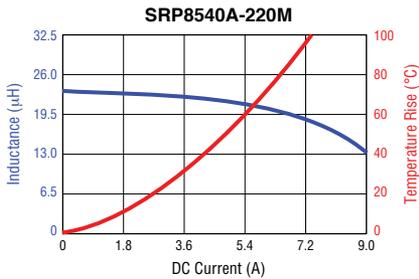
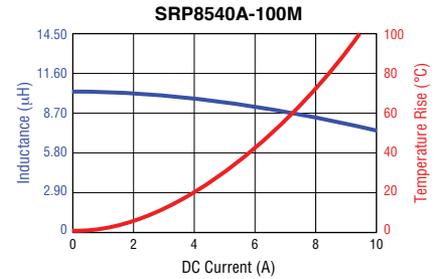
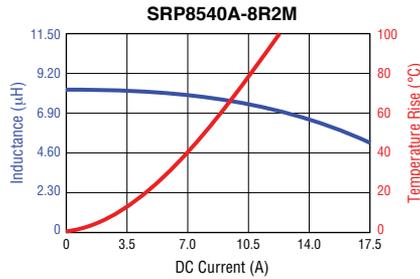
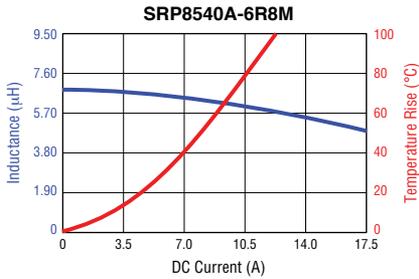
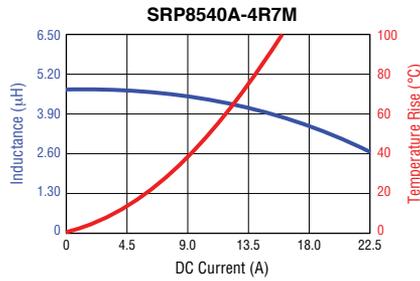
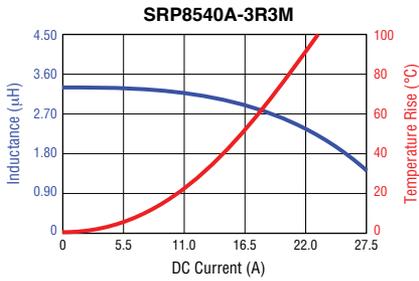
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L vs. I Charts



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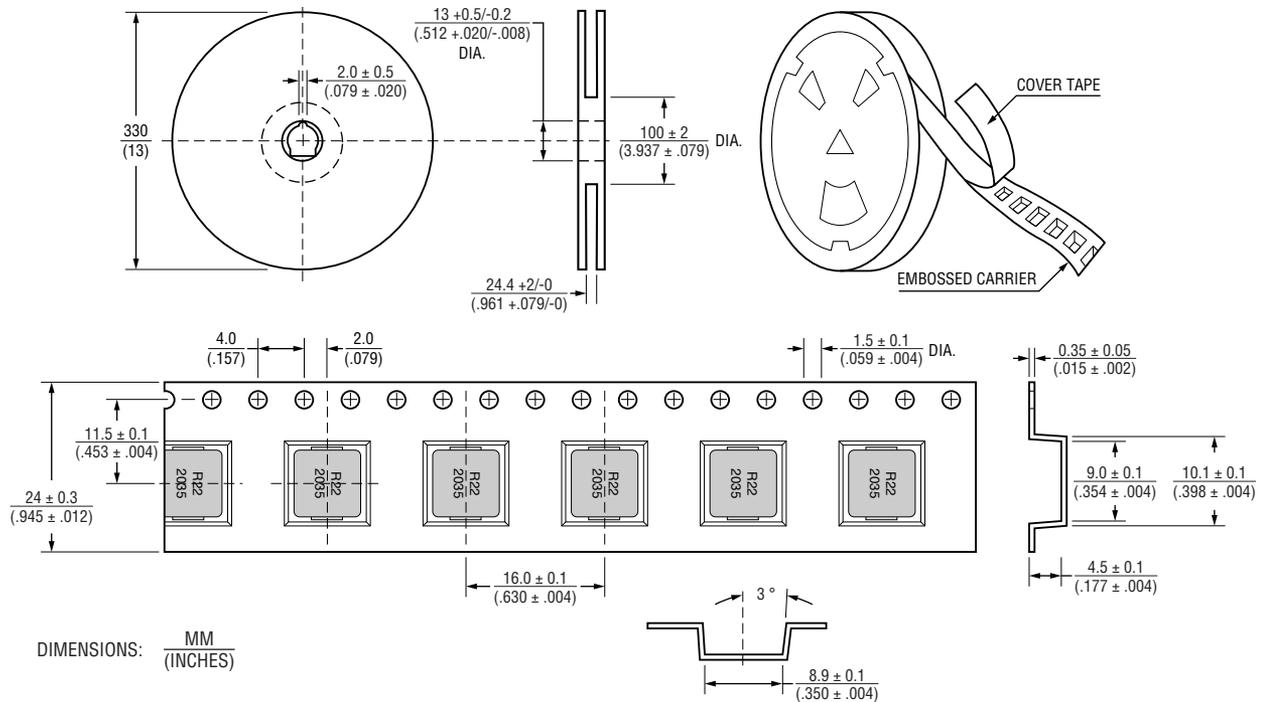
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BOURNS®

Packaging Specifications



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Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com

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

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