



### Features

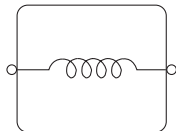
- Shielded construction for low radiation
- Metal powder core
- High saturation current
- Low buzz noise
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## 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

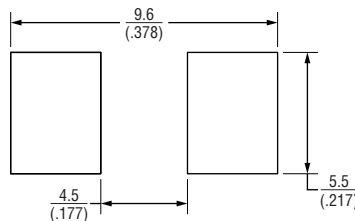


### How to Order

**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

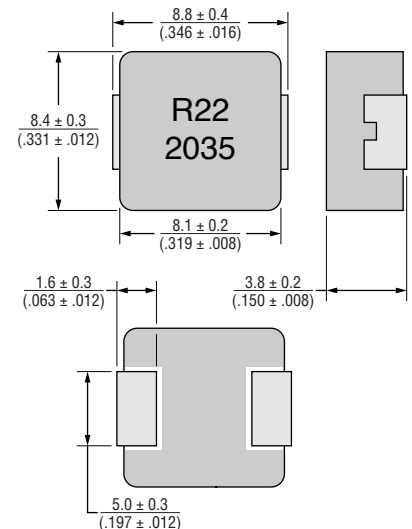
Operating Temperature ..... -55 °C to +150 °C  
 (Temperature rise included)  
 Storage Temperature ..... -55 °C to +150 °C  
 Rated Current ..... Inductance drops 30 % at Isat  
 Temperature Rise .... 40 °C at rated Irms<sup>1</sup>  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... 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:  $\frac{\text{MM}}{\text{(INCHES)}}$



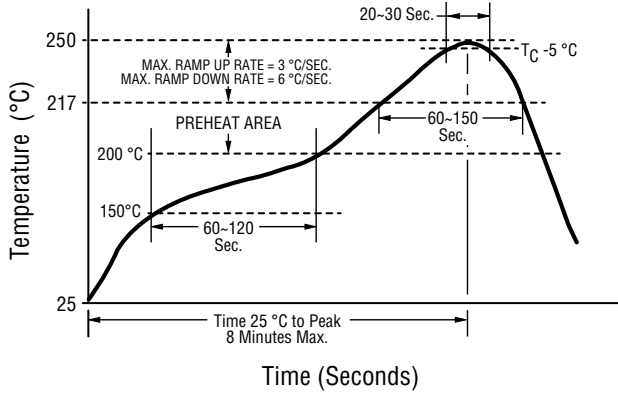
**WARNING Cancer and Reproductive Harm** [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* 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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# SRP8540A Series - Shielded Power Inductors



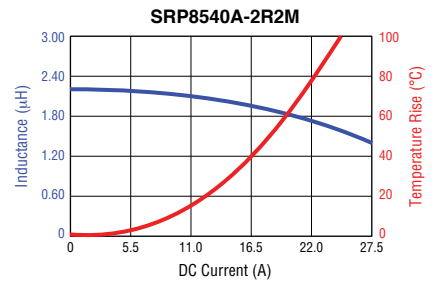
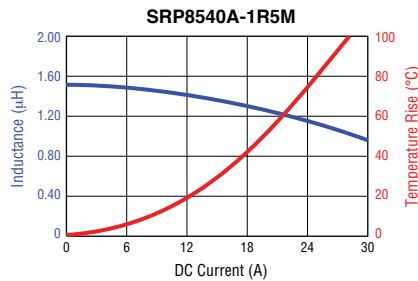
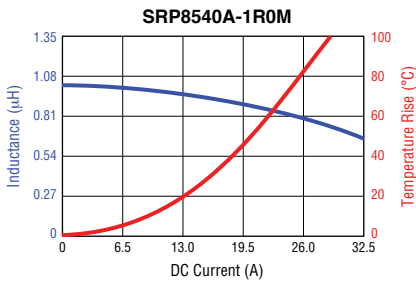
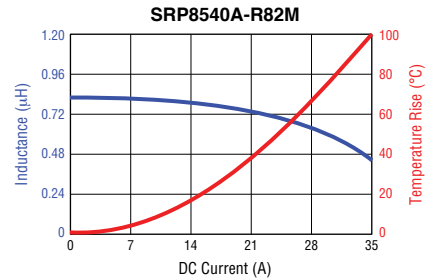
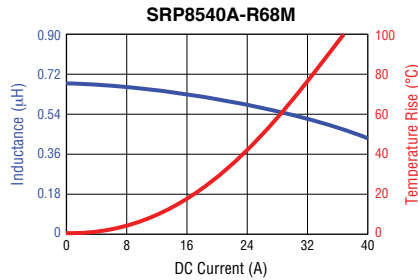
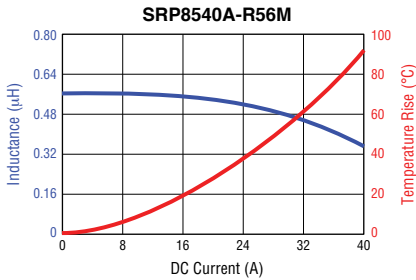
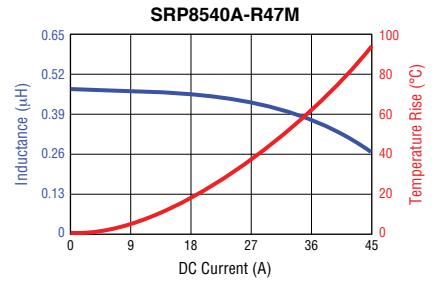
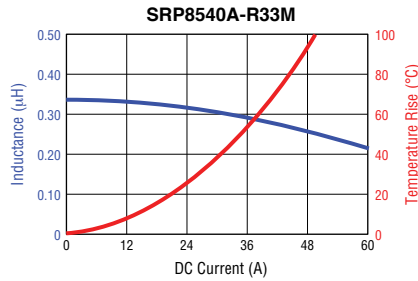
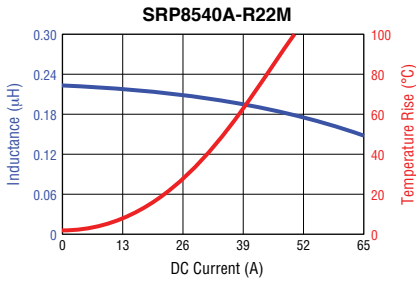
## Soldering Profile



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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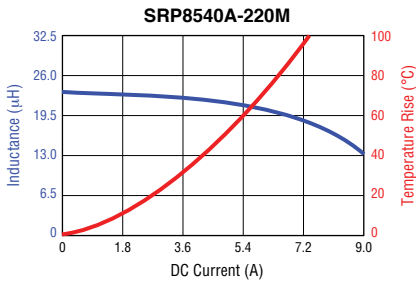
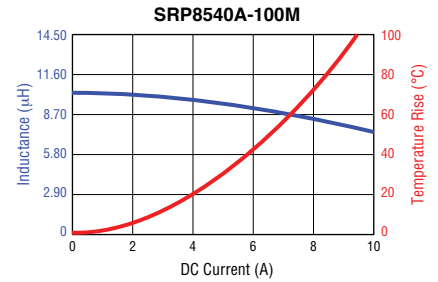
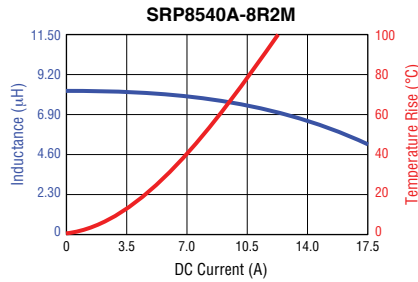
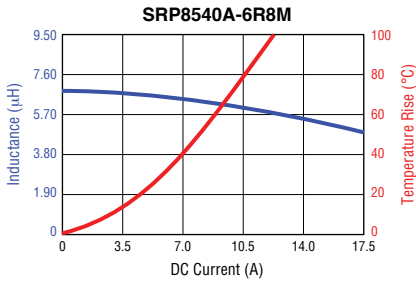
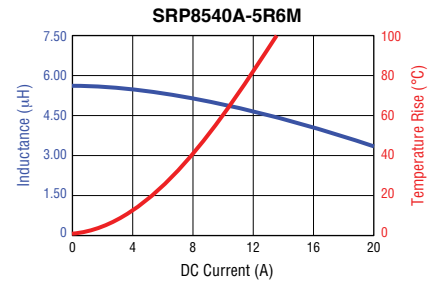
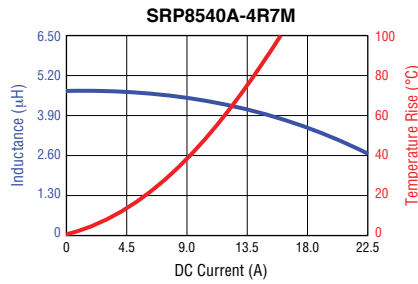
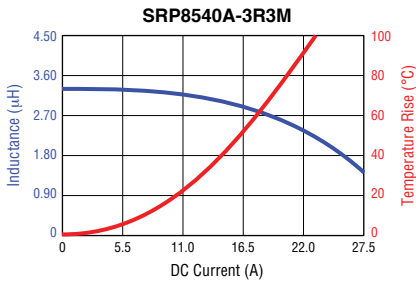
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# SRP8540A Series - Shielded Power Inductors



## L vs. I Charts



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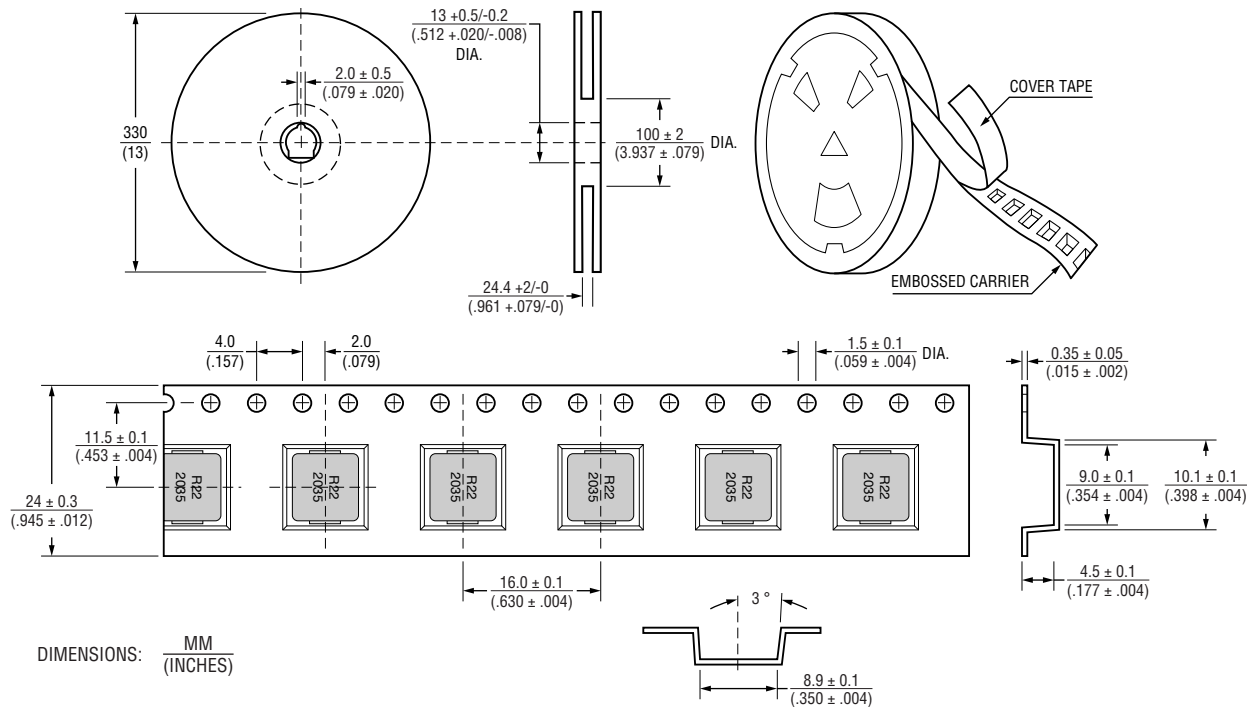
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# SRP8540A Series - Shielded Power Inductors

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