



### Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.33 to 68  $\mu$ H
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

### Applications

- Automotive systems:
  - Driver assistant
  - Information
  - Entertainment
  - Lighting
- DC/DC converters
- Power supplies

## SRP7050TA Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 100 KHz / 1 V		Q (Min.) @ 100 KHz / 1 V	SRF (MHz) Typ.	DCR (m $\Omega$ ) Typ.	DCR (m $\Omega$ ) Max.	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	Terminal Type
	L ( $\mu$ H)	Tol. (%)							
SRP7050TA-R33M	0.33	$\pm 20$	10	100	2.5	3	25	32	Lead Frame
SRP7050TA-R40M	0.40	$\pm 20$	10	100	3.1	3.7	23	31	
SRP7050TA-R47M	0.47	$\pm 20$	10	95	3.5	3.9	22	30	
SRP7050TA-R56M	0.56	$\pm 20$	10	80	3.6	4.2	20	27	
SRP7050TA-R60M	0.60	$\pm 20$	10	80	3.8	4.3	19	25	
SRP7050TA-R68M	0.68	$\pm 20$	10	75	4	4.5	18	24	
SRP7050TA-R82M	0.82	$\pm 20$	10	70	4.6	4.9	16.5	22	
SRP7050TA-1R0M	1.0	$\pm 20$	10	50	6.1	6.5	15	20	
SRP7050TA-1R2M	1.2	$\pm 20$	15	45	6.7	7.5	14	18	
SRP7050TA-1R5M	1.5	$\pm 20$	15	43	8.6	9	12	16.5	
SRP7050TA-1R8M	1.8	$\pm 20$	15	38	9.5	11	12	15	
SRP7050TA-2R2M	2.2	$\pm 20$	15	30	11.2	12	10	14	
SRP7050TA-3R3M	3.3	$\pm 20$	15	26	19	20.9	8	12	
SRP7050TA-4R7M	4.7	$\pm 20$	15	22	28	30.8	6.5	10	
SRP7050TA-5R6M	5.6	$\pm 20$	15	20	43.5	49	6	9	
SRP7050TA-6R8M	6.8	$\pm 20$	15	18	46	51.5	5.5	8.5	
SRP7050TA-8R2M	8.2	$\pm 20$	15	16	56	63	5	8	
SRP7050TA-100M	10	$\pm 20$	15	15	60	69	4	7.5	
SRP7050TA-150M	15	$\pm 20$	15	12	81	92	3.5	6	
SRP7050TA-220M	22	$\pm 20$	15	9	140	170	2.5	5.5	
SRP7050TA-470M	47	$\pm 20$	15	8	290	330	1.9	2.7	
SRP7050TA-560M	56	$\pm 20$	15	7	342	396	1.6	2.1	
SRP7050TA-680M	68	$\pm 20$	15	6	386	445	1.2	2	

### General Specifications

Operating Temperature .....-40 °C to +150 °C  
 (Temperature rise included)  
 Storage Temperature .....-40 °C to +125 °C  
 Rated Current ..... Inductance drops 20 % at I<sub>sat</sub>  
 Temperature Rise ..... 40 °C at rated I<sub>rms</sub>  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

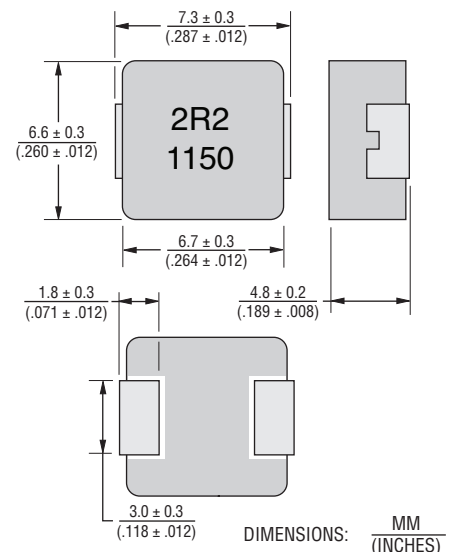
1 Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### Materials

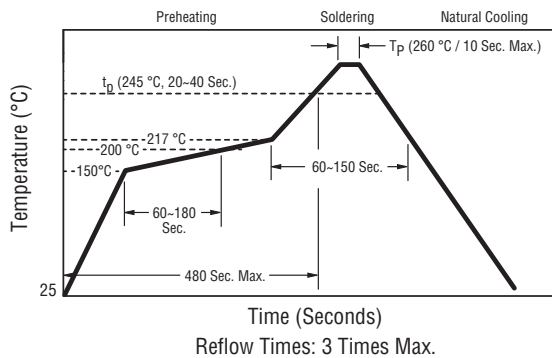
Core ..... Carbonyl powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 800 pcs. per 13-inch reel

### Product Dimensions

#### Lead Frame Terminal



### Soldering Profile

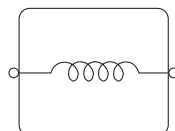


### How to Order

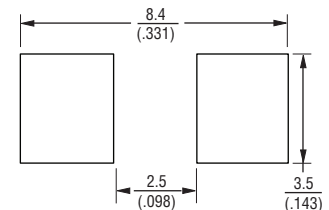
SRP7050TA - 100 M

Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_  
 Tolerance Code \_\_\_\_\_

### Schematic



### Recommended Layout



\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

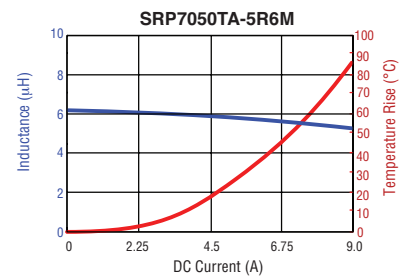
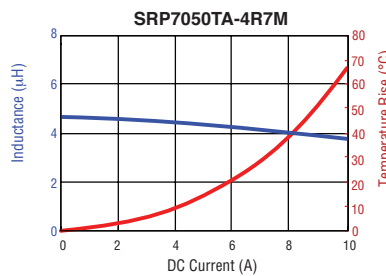
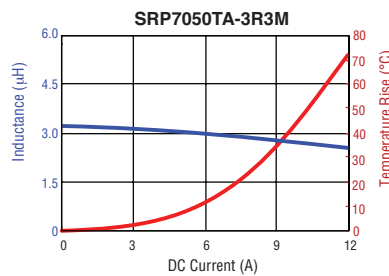
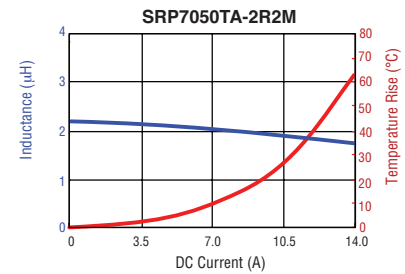
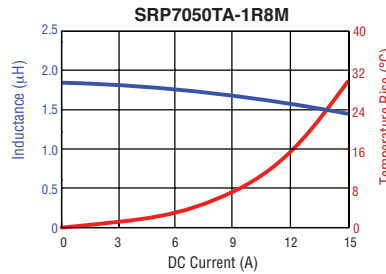
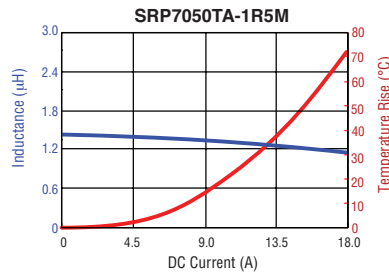
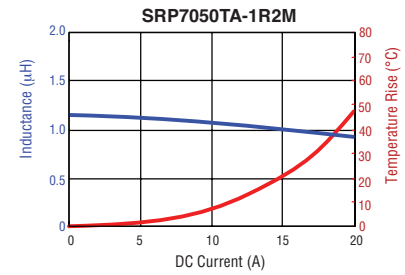
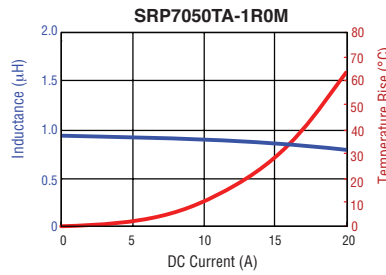
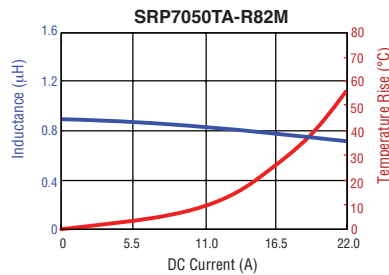
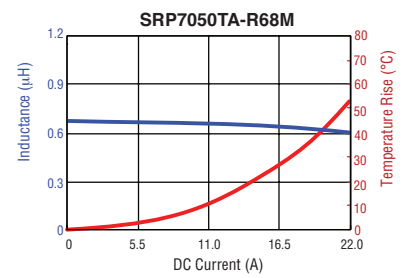
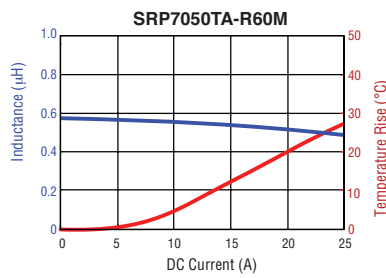
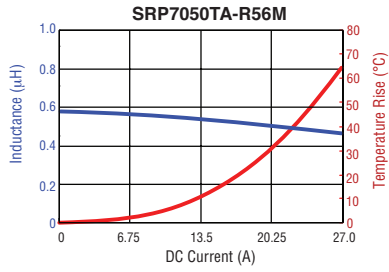
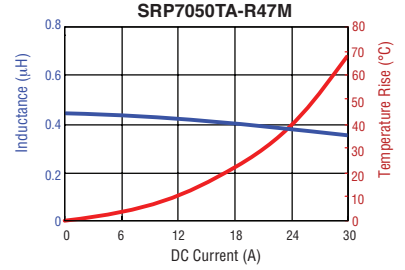
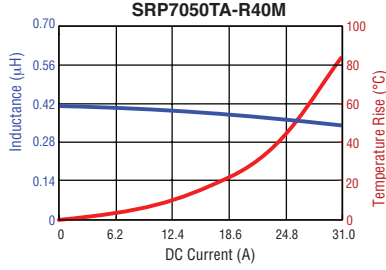
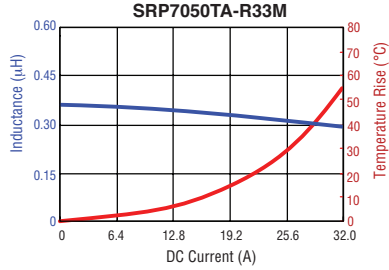
\*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less. Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# SRP7050MTA Series - Shielded Power Inductors

**BOURNS®**

## L vs. I Charts

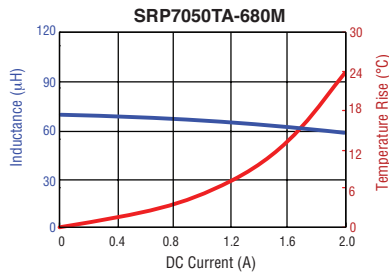
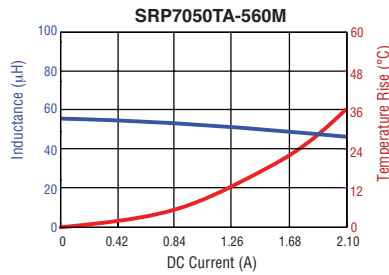
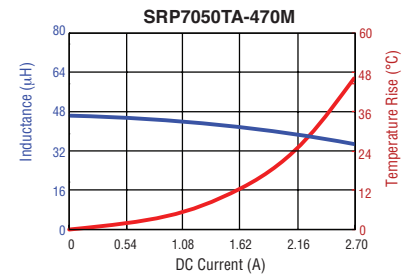
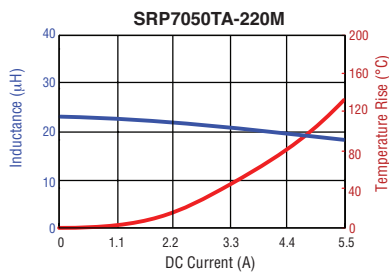
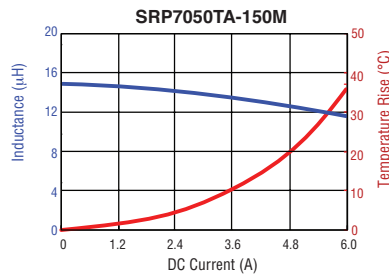
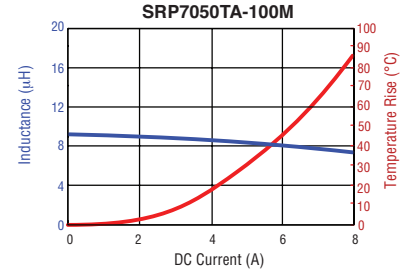
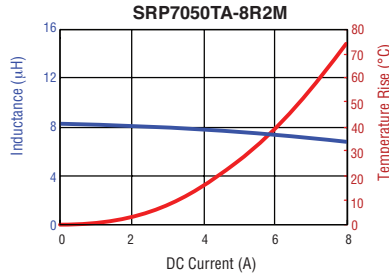
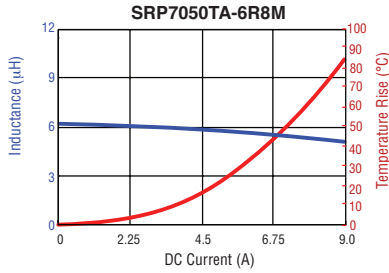


Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.

# SRP7050MTA Series - Shielded Power Inductors

**BOURNS®**

## L vs. I Charts (Continued)

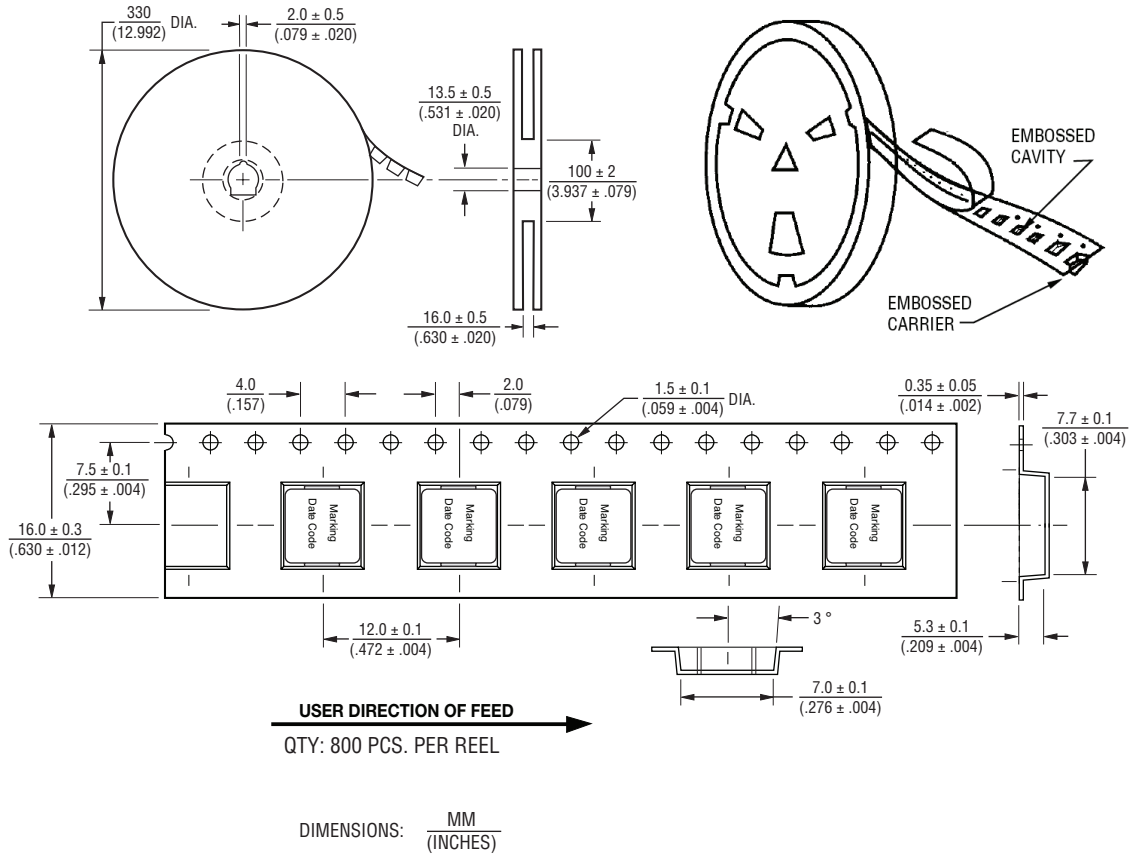


Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.

# SRP7050TA Series - Shielded Power Inductors

**BOURNS®**

## Packaging Specifications



REV. 09/17

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.