



## Features

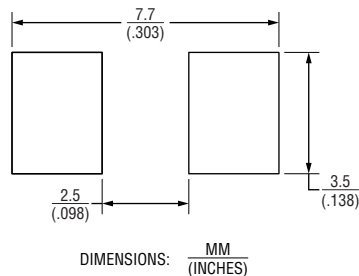
- Shielded construction for low radiation
- Metal powder core
- High saturation current
- Low buzz noise
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRP7020TA Series - Shielded Power Inductors

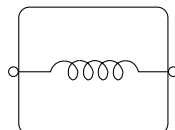
### Electrical Specifications @ 25 °C

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. (%)						
SRP7020TA-R10Y	0.10	± 30	6	180	2	2.4	21	40
SRP7020TA-R20Y	0.20	± 30	15	165	2.5	3	18	35
SRP7020TA-R33M	0.33	± 20	15	100	4.5	5	14	25
SRP7020TA-R47M	0.47	± 20	15	83	7.1	8.3	11.7	20
SRP7020TA-R68M	0.68	± 20	15	66	8.3	10	10.5	16
SRP7020TA-1R0M	1.0	± 20	15	58	16.5	18	8	14
SRP7020TA-1R5M	1.5	± 20	15	46	23	27	7	12
SRP7020TA-2R2M	2.2	± 20	15	36	32	37	6	10
SRP7020TA-3R3M	3.3	± 20	15	26	43	48	5	8
SRP7020TA-4R7M	4.7	± 20	15	22	53	60	4.5	7
SRP7020TA-5R6M	5.6	± 20	15	20	59	68	4	6
SRP7020TA-6R8M	6.8	± 20	15	19	63	73	4	5.5
SRP7020TA-8R2M	8.2	± 20	15	17	101	116	3.2	5
SRP7020TA-100M	10.0	± 20	15	13	134	154	2.8	4

### Recommended Layout



### Schematic



### How to Order

**SRP7020TA - 100 M**

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

### 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 20 % 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

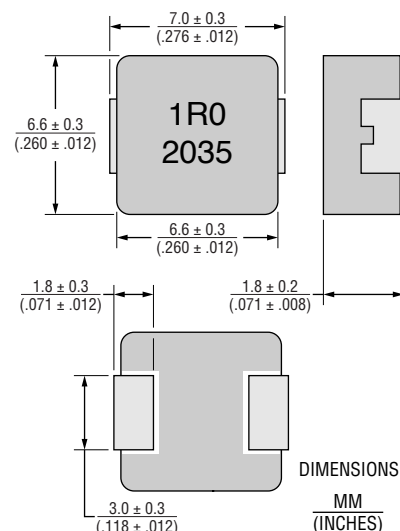
Core.....Metal alloy powder

Wire .....Enameled copper

Terminal Finish ..... Sn

Packaging..... 1500 pcs. per 13-inch reel

### Product Dimensions



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

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

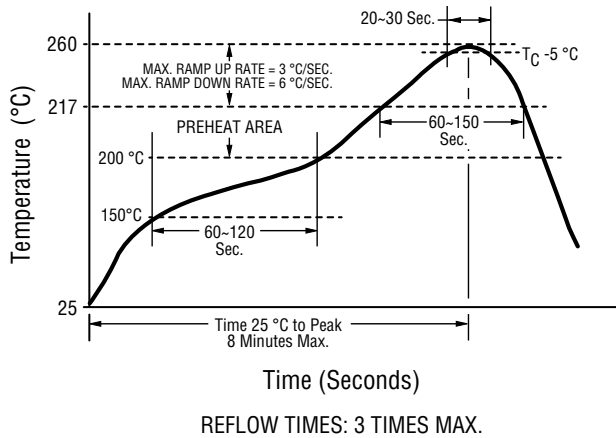
\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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## SRP7020TA Series - Shielded Power Inductors

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### Soldering Profile



Profile Feature	Pb Free Assembly
Preheat <ul style="list-style-type: none"> <li>- Temperature Min. (<math>T_{smin}</math>)</li> <li>- Temperature Max. (<math>T_{smax}</math>)</li> <li>- Time(<math>t_s</math>) from <math>T_{smin}</math> to <math>T_{smax}</math></li> </ul>	150 °C 200 °C 60-120 seconds
Ramp-up Rate ( $T_L$ to $T_P$ )	3 °C/second max.
Liquidous temperature ( $T_L$ ) Time ( $t_L$ ) maintained above $T_L$	217 °C 60-150 seconds
Peak package body temperature ( $T_P$ )	260 °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.

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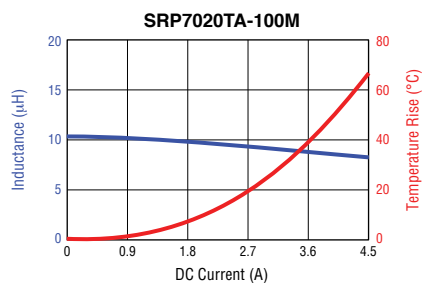
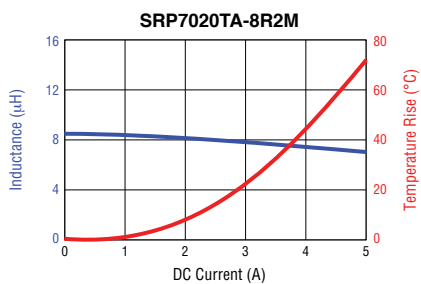
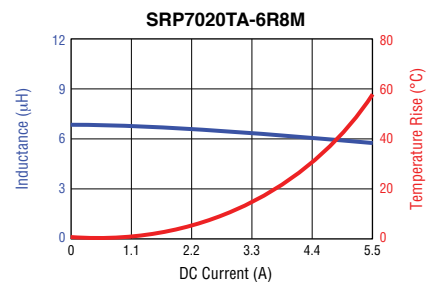
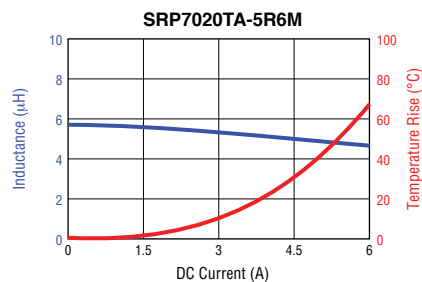
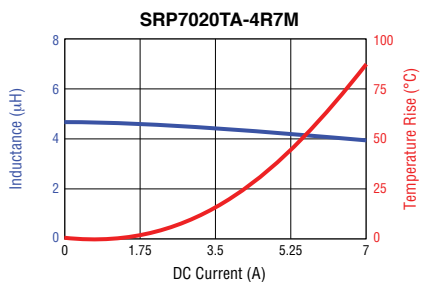
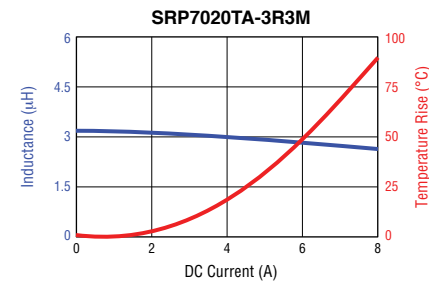
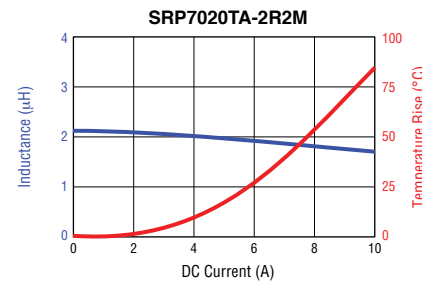
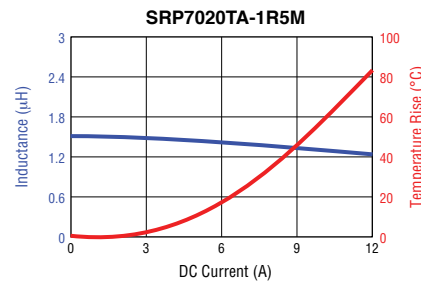
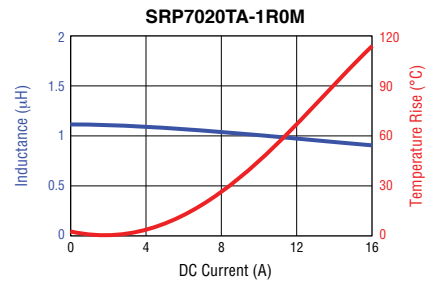
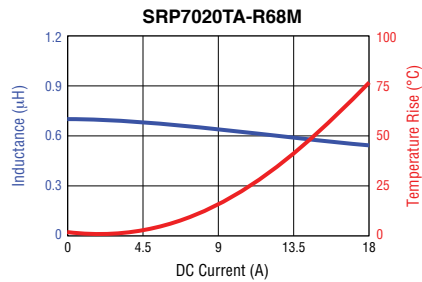
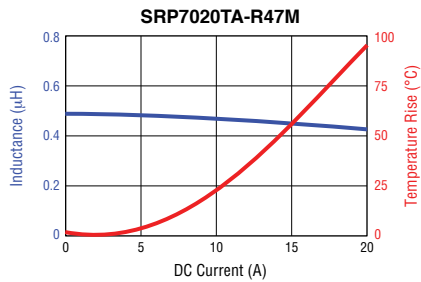
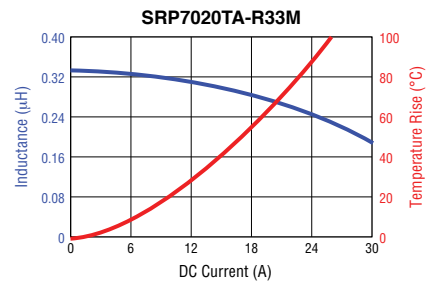
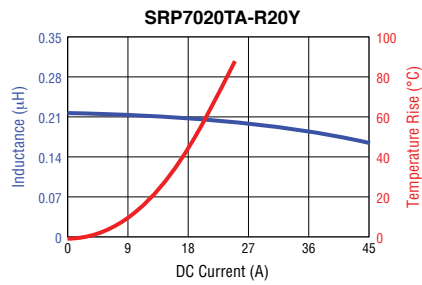
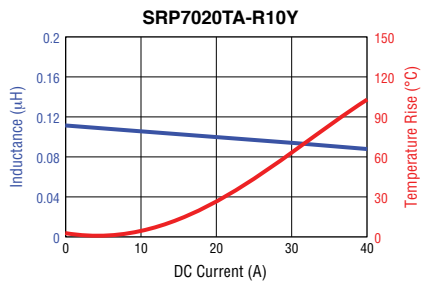
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# SRP7020TA Series - Shielded Power Inductors

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## L vs. I Charts



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Technical drawing of a 1R0 2035 component, showing top, side, and detail views with dimensions in inches and millimeters.

**Top View:**

- Overall diameter:  $330 \pm 0.13$  (13)
- Inner diameter:  $13 \pm 0.5/-0.2$  (.512  $\pm$  .020/- .008) DIA.
- Inner diameter tolerance:  $2.0 \pm 0.5$  (.079  $\pm$  .020)

**Side View:**

- Overall height:  $100 \pm 2$  (3.937  $\pm$  .079) DIA.
- Bottom flange height:  $16.4 \pm 2/-0$  (.646  $\pm$  .079/-0)

**Detail View (Right):**

- COVER TAPE
- EMBOSSED CARRIER

**Bottom View:**

- Overall width:  $16 \pm 0.3$  (.630  $\pm$  .012)
- Carrier width:  $7.5 \pm 0.1$  (.295  $\pm$  .004)
- Carrier height:  $4.0$  (.157)
- Carrier width:  $2.0$  (.079)
- Carrier height:  $1.5 \pm 0.1$  (.059  $\pm$  .004) DIA.
- Carrier height:  $0.35 \pm 0.05$  (.015  $\pm$  .002)
- Carrier width:  $7.7 \pm 0.1$  (.303  $\pm$  .004)
- Carrier height:  $2.3 \pm 0.1$  (.091  $\pm$  .004)
- Carrier width:  $12.0 \pm 0.1$  (.472  $\pm$  .004)
- Carrier height:  $7.0 \pm 0.1$  (.276  $\pm$  .004)
- Carrier width:  $3^\circ$

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

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