



## Features

- Shielded construction
- Inductance range: 4.7 to 1000  $\mu$ H
- Heating current up to 8.2 A
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

## Applications

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

## SRR1280A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

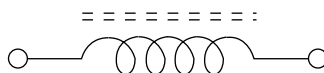
Bourns Part Number	Inductance			Q (Ref.)	Test Freq. (MHz)	SRF (MHz) Typ.	DCR (m $\Omega$ ) Max.	I rms (A)	I sat (A)
	L ( $\mu$ H)	Tol. (%)	Test Frequency/Voltage						
SRR1280A-4R7Y	4.7	$\pm 30$	100 KHz/1 V	22	7.96	30	15.5	8.20	8.80
SRR1280A-6R8Y	6.8	$\pm 30$	100 KHz/1 V	20	7.96	22	18.5	7.60	8.00
SRR1280A-8R2Y	8.2	$\pm 30$	100 KHz/1 V	22	7.96	20	20.5	6.20	6.80
SRR1280A-100M	10	$\pm 20$	1 KHz/1 V	24	2.52	17	19.5	6.00	6.30
SRR1280A-120M	12	$\pm 20$	1 KHz/1 V	26	2.52	15	28.0	5.60	6.00
SRR1280A-150M	15	$\pm 20$	1 KHz/1 V	26	2.52	13	28.5	5.20	5.00
SRR1280A-180M	18	$\pm 20$	1 KHz/1 V	24	2.52	12	35.0	4.80	4.60
SRR1280A-220M	22	$\pm 20$	1 KHz/1 V	20	2.52	11	38.6	4.30	4.10
SRR1280A-270M	27	$\pm 20$	1 KHz/1 V	26	2.52	10	52.0	3.90	3.70
SRR1280A-330M	33	$\pm 20$	1 KHz/1 V	28	2.52	9.5	57.0	3.50	3.30
SRR1280A-390M	39	$\pm 20$	1 KHz/1 V	24	2.52	8.5	70.0	3.20	3.10
SRR1280A-470M	47	$\pm 20$	1 KHz/1 V	24	2.52	7.5	80.0	2.90	2.80
SRR1280A-560M	56	$\pm 20$	1 KHz/1 V	24	2.52	7	100.0	2.60	2.50
SRR1280A-680M	68	$\pm 20$	1 KHz/1 V	20	2.52	6.5	120.0	2.40	2.30
SRR1280A-820M	82	$\pm 20$	1 KHz/1 V	20	2.52	5	130.0	2.30	2.20
SRR1280A-101M	100	$\pm 20$	1 KHz/1 V	18	0.796	4.5	150.0	2.10	2.00
SRR1280A-121K	120	$\pm 10$	1 KHz/1 V	16	0.796	4.3	200.0	1.95	1.95
SRR1280A-151K	150	$\pm 10$	1 KHz/1 V	24	0.796	4.1	270.0	1.85	1.90
SRR1280A-181K	180	$\pm 10$	1 KHz/1 V	24	0.796	4	300.0	1.75	1.88
SRR1280A-221K	220	$\pm 10$	1 KHz/1 V	24	0.796	3.4	400.0	1.60	1.70
SRR1280A-271K	270	$\pm 10$	1 KHz/1 V	20	0.796	3.1	450.0	1.20	1.60
SRR1280A-331K	330	$\pm 10$	1 KHz/1 V	18	0.796	2.9	600.0	1.10	1.40
SRR1280A-391K	390	$\pm 10$	1 KHz/1 V	20	0.796	2.7	680.0	1.00	1.40
SRR1280A-471K	470	$\pm 10$	1 KHz/1 V	20	0.796	2.2	880.0	0.90	1.25
SRR1280A-561K	560	$\pm 10$	1 KHz/1 V	20	0.796	2	960.0	0.80	1.15
SRR1280A-681K	680	$\pm 10$	1 KHz/1 V	26	0.796	1.7	1300.0	0.75	0.97
SRR1280A-821K	820	$\pm 10$	1 KHz/1 V	20	0.796	1.4	1500.0	0.70	0.94
SRR1280A-102K	1000	$\pm 10$	1 KHz/1 V	40	0.252	1.3	1700.0	0.68	0.80

### How to Order

**SRR1280A - 100M**

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

### Electrical Schematic



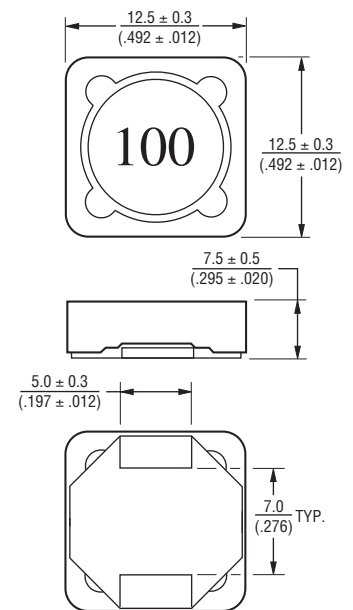
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
(Temperature rise included)  
Storage Temperature ..... -40 °C to +125 °C  
Resistance to Soldering Heat ..... +245 °C for 10 sec.  
Temperature Rise ..... 40 °C typ. at rated I rms  
Inductance Drop ..... 25 % typ. at I sat

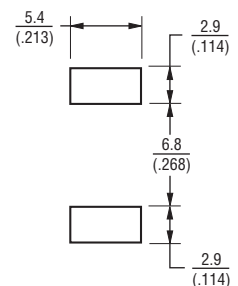
### Materials

Core ..... Ferrite  
Wire ..... Enameled copper  
Terminal Finish ..... Sn  
Packaging ..... 400 pcs. per reel

### Product Dimensions



### Recommended Layout



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

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

\*\* Bourns follows the prevailing definition of "halogen free" in the industry. 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.

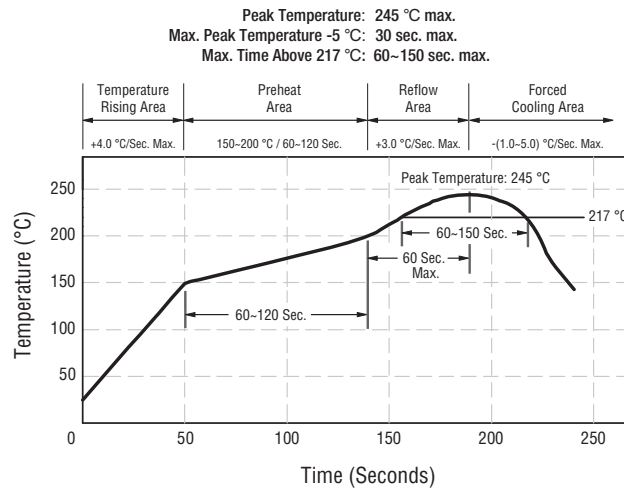
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

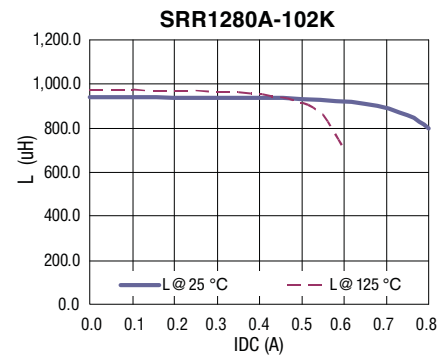
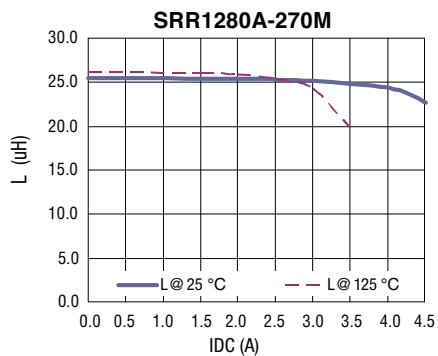
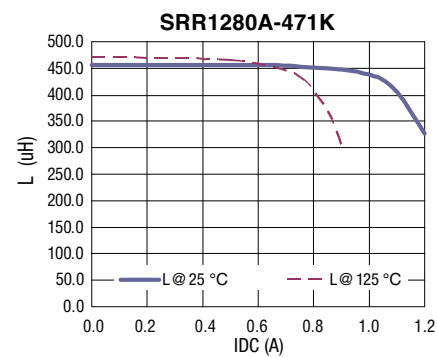
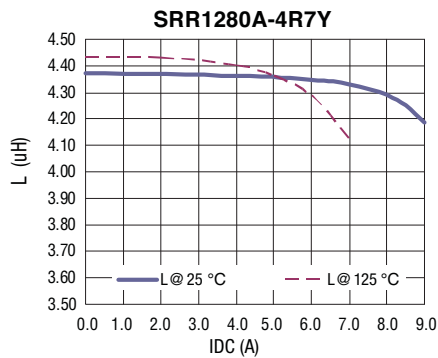
# SRR1280A Series - Shielded Power Inductors

**BOURNS®**

## Soldering Profile



## L vs. IDC



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**BOURNS®**

The figure consists of four subplots arranged in a 2x2 grid, each showing the relationship between the Input DC Current (IDC) in Amperes (A) and the temperature rise ( $\Delta T$ ) in degrees Celsius ( $^{\circ}\text{C}$ ) for a specific SRR model. The y-axis for all plots is  $\Delta T (^{\circ}\text{C})$ , and the x-axis is IDC (A). A legend in each plot indicates the data is for  $\Delta T @ 25^{\circ}\text{C}$ .

- SRR1280A-4R7Y (Top Left):** The x-axis ranges from 0.0 to 9.0 A. The y-axis ranges from 0.0 to 70.0  $^{\circ}\text{C}$ . The curve shows a non-linear increase in temperature rise with current.
- SRR1280A-471K (Top Right):** The x-axis ranges from 0.0 to 1.2 A. The y-axis ranges from 0.0 to 80.0  $^{\circ}\text{C}$ . The curve shows a non-linear increase in temperature rise with current.
- SRR1280A-270M (Bottom Left):** The x-axis ranges from 0.0 to 4.5 A. The y-axis ranges from 0.0 to 70.0  $^{\circ}\text{C}$ . The curve shows a non-linear increase in temperature rise with current.
- SRR1280A-102K (Bottom Right):** The x-axis ranges from 0.0 to 0.8 A. The y-axis ranges from 0.0 to 70.0  $^{\circ}\text{C}$ . The curve shows a non-linear increase in temperature rise with current.

Technical drawing of a 100mg tablet showing top, side, and longitudinal views with dimensions in mm and inches.

**Top View Dimensions:**

- Outer Diameter: 330 (12.99) DIA.
- Inner Diameter: 2.0 ± 0.5 (.079 ± .020)
- Central Hole Diameter: 21.0 ± 0.8 (.827 ± .031)
- Inner Ring Diameter: 13.0 (.512) DIA.

**Side View Dimensions:**

- Top Thickness: 30.4 (1.197)
- Bottom Thickness: 13.0 (.512) DIA.
- Overall Height: 50.0 -0 (1.97 -0)
- Bottom Flange Thickness: 26 +0 (1.024 +0)

**Longitudinal View Dimensions:**

- End Face Thickness: 4.0 (.157)
- Start Face Thickness: 20.0 (.787)
- Tablet Thickness: 24 (.945)
- Tablet Length: 200 (7.87)
- Component Length: 400 (15.75)
- No Component Length: 200 (7.87)

**Other Features:**

- THICKNESS: 0.10 (.004) MAX.
- EMBOSSED CAVITY
- EMBOSSED CARRIER
- 24.0 (.945)

**Dimensions:** MM (INCH)

**USER DIRECTION**

**QTY: 400 PCS. PE**

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