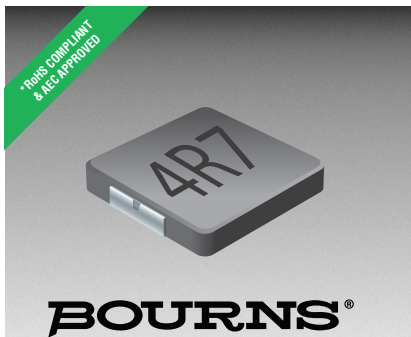




Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Low profile - 1.0 mm
- Inductance range: 0.10 to 10 μ H
- AEC-Q200 qualified
- RoHS compliant* and halogen free**

Applications

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

SRP4012TA Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

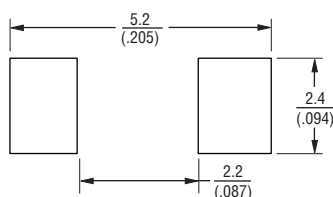
Bourns Part Number	Inductance @ 100 KHz / 1 V		Q (Min.) @ 100 KHz / 1 V	SRF (MHz) Typ.	DCR (m Ω) Typ.	DCR (m Ω) Max.	I _{rms} (A)	Isat (A)	Terminal Type
	L (μ H)	Tol. (%)							
SRP4012TA-R10Y	0.10	±30	5	400	4.3	5.5	11.5	25	Lead Frame
SRP4012TA-R22M	0.22	±20	5	200	6.6	8	8.5	20	
SRP4012TA-R36M	0.36	±20	10	143	15.5	18	6.5	8.5	
SRP4012TA-R47M	0.47	±20	10	120	18	20	6.0	6.5	
SRP4012TA-R60M	0.60	±20	10	117	22.5	26	5.3	6	
SRP4012TA-1R0M	1.0	±20	10	80	41	47	4.0	6	
SRP4012TA-1R2M	1.2	±20	10	70	48	56	3.5	5	
SRP4012TA-1R5M	1.5	±20	10	62	55	63.3	3.0	4	
SRP4012TA-2R2M	2.2	±20	10	58	69.2	80	2.8	3.5	
SRP4012TA-3R3M	3.3	±20	10	41	84	97	2.3	3	
SRP4012TA-4R7M	4.7	±20	10	35	128	145	2.0	2.5	
SRP4012TA-5R6M	5.6	±20	10	30	180	208	1.7	2.3	
SRP4012TA-6R8M	6.8	±20	10	28	300	360	1.5	1.7	
SRP4012TA-8R2M	8.2	±20	10	25	313	376	1.4	1.6	
SRP4012TA-100M	10.0	±20	10	23	410	463	1.3	1.4	

How to Order

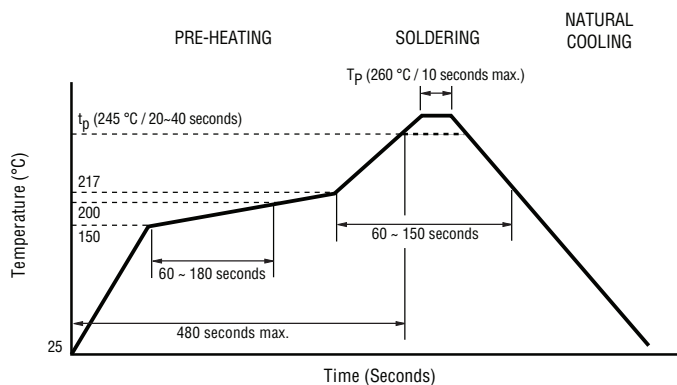
SRP4012TA - 100M

Model _____
Value Code (see table) _____

Recommended Layout



Soldering Profile



REFLOW TIMES: 3 MAX.

General Specifications

Test Voltage 1.0 V
Test Frequency 100 KHz
Operating Temperature
..... -40 °C to +150 °C
(Temperature rise included)
Storage Temperature
..... -40 °C to +125 °C
Rated Current
..... Inductance drops 20 % at Isat
Temperature Rise 40 °C at rated I_{rms}
Resistance to Soldering Heat
..... +260 °C, 40 sec. max.
Moisture Sensitivity Level 1
ESD Classification (HBM) N/A

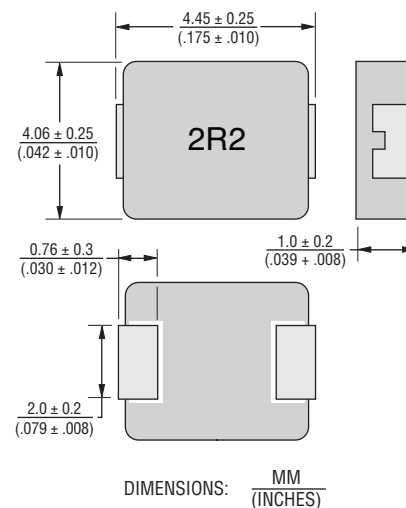
1 Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

Materials

Core Carbonyl powder
Wire Enameled copper
Terminal Finish Sn
Packaging 4000 pcs. per 13-inch reel

Product Dimensions

Lead Frame Terminal



* 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.

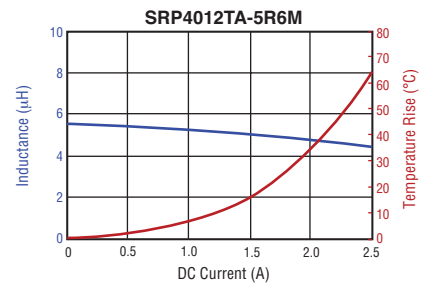
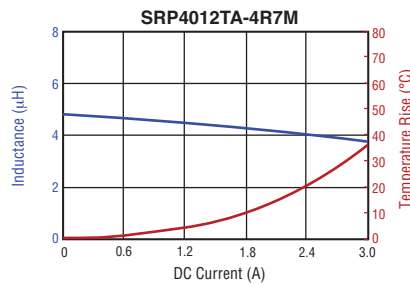
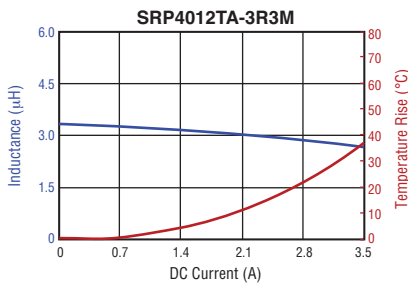
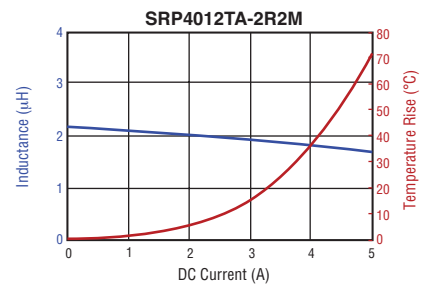
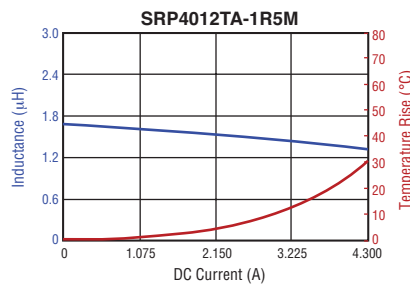
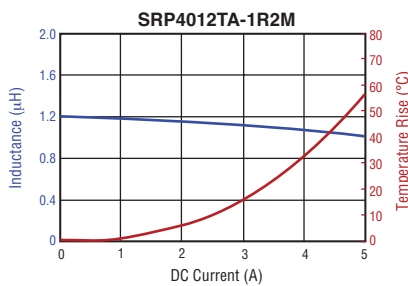
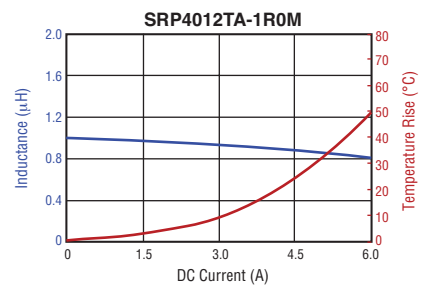
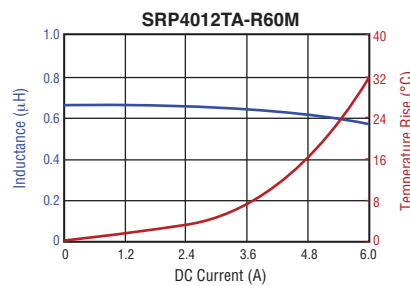
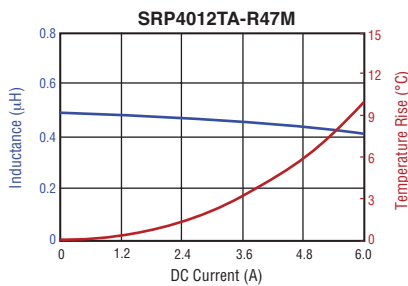
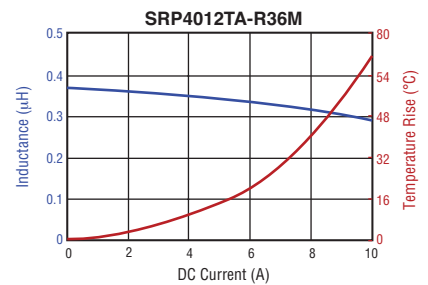
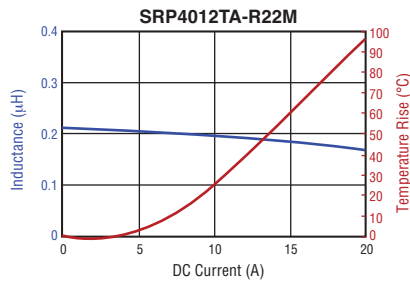
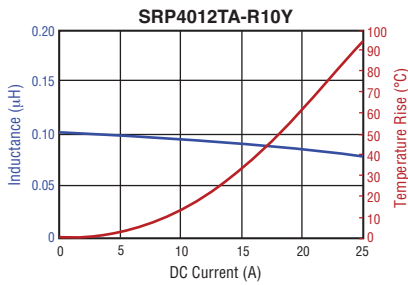
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

SRP4012TA Series - Shielded Power Inductors

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L vs. I Charts



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The figure contains three sub-graphs, each showing the relationship between DC Current (A) on the x-axis, Inductance (μH) on the left y-axis (blue line), and Temperature Rise (°C) on the right y-axis (red line).

- SRP4012TA-6R8M:** The x-axis ranges from 0 to 1.900 A. Inductance starts at approximately 6.8 μH and decreases slightly to about 5.5 μH at 1.900 A. Temperature rise starts at 0°C and increases to approximately 45°C at 1.900 A.
- SRP4012TA-8R2M:** The x-axis ranges from 0 to 1.80 A. Inductance starts at approximately 8.2 μH and decreases slightly to about 6.5 μH at 1.80 A. Temperature rise starts at 0°C and increases to approximately 40°C at 1.80 A.
- SRP4012TA-100M:** The x-axis ranges from 0 to 1.5 A. Inductance starts at approximately 9.5 μH and decreases slightly to about 8.0 μH at 1.5 A. Temperature rise starts at 0°C and increases to approximately 35°C at 1.5 A.

A circuit diagram showing a rectangular loop with a rounded bottom. A horizontal wire runs across the middle of the loop, containing a coiled inductor. The left end of the wire is connected to a small circle on the left vertical wire, and the right end is connected to a small circle on the right vertical wire.

[illegible]

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