



Features

- Semi-shielded construction
- Inductance range: 1 to 470 μ H
- Rated current up to 8 A
- AEC-Q200 qualified
- RoHS compliant* and halogen free**

Applications

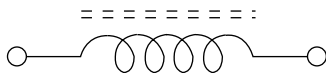
- Automotive systems:
 - Driver assistant
 - Infotainment
 - Lighting
- DC/DC converters
- Power supplies
- Digital video cameras
- HDDs
- Smartphones
- Televisions, LCD displays

SRN6045TA Series - Semi-shielded Power Inductors

Electrical Specifications @ 25 °C

Bourns Part No.	Inductance @ 1 MHz / 1 V		Q (Min.) @ 1 MHz	SRF (MHz) Typ.	DCR (m Ω) ± 20 %	I _{rms} (A) Typ.	I _{sat} (A) Typ.
	L (μ H)	Tol. %					
SRN6045TA-1R0Y	1.0	± 30	15	110	10	8.00	13.50
SRN6045TA-1R2Y	1.2	± 30	15	90	10.5	7.50	12.5
SRN6045TA-1R5Y	1.5	± 30	15	75	11.7	7.00	12.0
SRN6045TA-2R2Y	2.2	± 30	15	55	15	6.00	9.50
SRN6045TA-3R3Y	3.3	± 30	15	45	21	5.00	7.80
SRN6045TA-4R7M	4.7	± 20	15	40	26	4.50	6.80
SRN6045TA-6R3M	6.3	± 20	15	35	33	3.80	5.90
SRN6045TA-6R8M	6.8	± 20	15	30	34	3.60	5.70
SRN6045TA-8R2M	8.2	± 20	15	27	46	3.40	5.10
SRN6045TA-100M	10	± 20	15	25	52	3.20	4.60
SRN6045TA-120M	12	± 20	15	22	65	3.00	4.00
SRN6045TA-150M	15	± 20	15	20	71	2.80	3.80
SRN6045TA-220M	22	± 20	15	17	96	2.30	3.30
SRN6045TA-330M	33	± 20	15	13	145	1.80	2.50
SRN6045TA-470M	47	± 20	15	12	200	1.60	2.00
SRN6045TA-560M	56	± 20	15	11	230	1.40	1.80
SRN6045TA-680M	68	± 20	15	10	305	1.10	1.60
SRN6045TA-820M	82	± 20	15	9	365	0.98	1.50
SRN6045TA-101M	100	± 20	15	8.5	456	0.92	1.33
SRN6045TA-121M	120	± 20	15	7	500	0.85	1.20
SRN6045TA-151M	150	± 20	15	6.5	626	0.75	1.10
SRN6045TA-181M	180	± 20	15	6	745	0.68	1.00
SRN6045TA-221M	220	± 20	15	5	900	0.60	0.88
SRN6045TA-331K	330	± 10	15	4	1400	0.55	0.60
SRN6045TA-471K	470	± 10	15	3	2050	0.40	0.50

Electrical Schematic

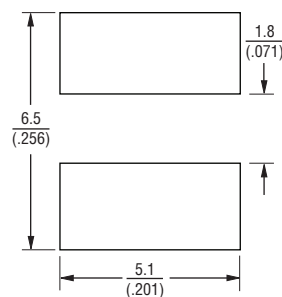


How to Order

SRN6045TA - 100M

Model _____
Value Code (see table) _____

Recommended Layout



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

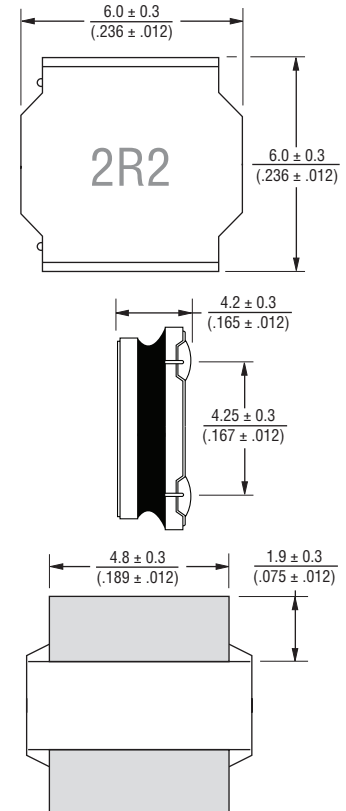
General Specifications

Operating Temp. -55 °C to +125 °C
(Temperature rise included)
Storage Temperature ... -55 °C to +125 °C
Temperature Rise 40 °C at rated I_{rms}
Rated Current
..... Inductance drops 30 % at I_{sat}
Failure In Time (FIT) 24.7/10⁹ hours
Mean Time Between Failures (MTBF)
..... 40.4 x 10⁶ hours
Moisture Sensitivity Level 1
ESD Classification N/A

Materials

Core Ferrite
Wire Enameled copper
Terminal Finish Sn
Coating Magnetic epoxy resin
Packaging 1000 pcs. per 13-inch reel

Product Dimensions



*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.

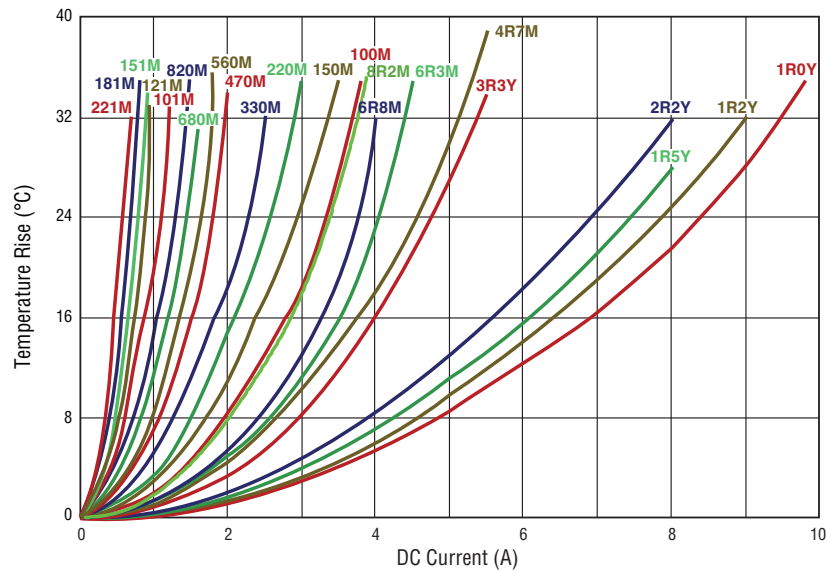
Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific disclaimers as set forth on the last page of this document, and at www.bourns.com/legal/disclaimer.pdf.

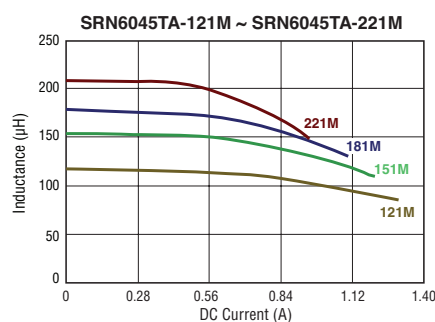
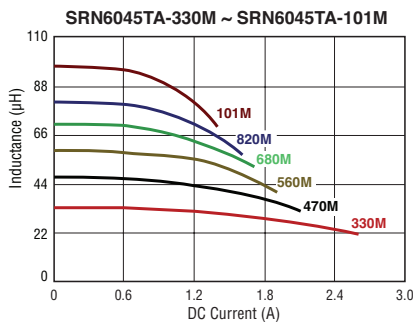
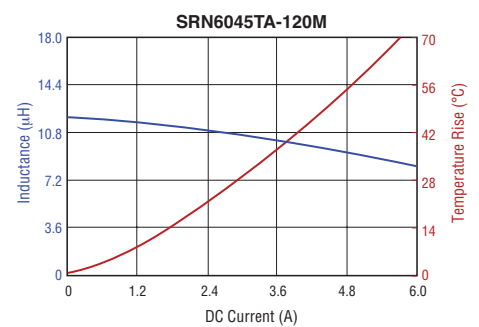
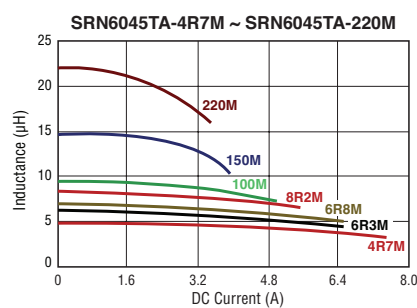
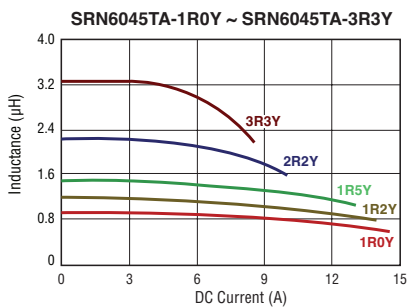
SRN6045TA Series - Semi-shielded Power Inductors

BOURNS®

Temperature Rise vs. Current



Inductance vs. Current



Specifications are subject to change without notice.

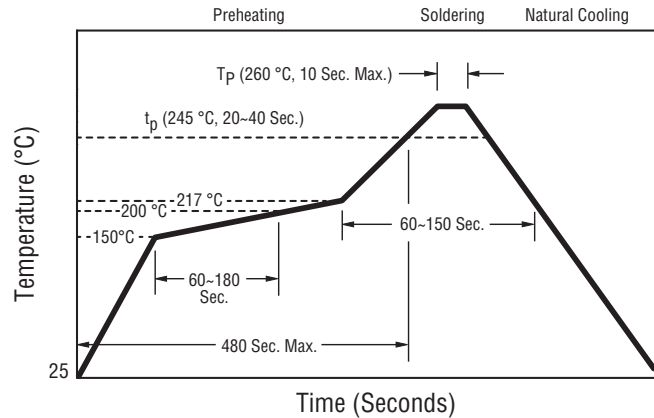
Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific disclaimers as set forth on the last page of this document, and at www.bourns.com/legal/disclaimer.pdf.

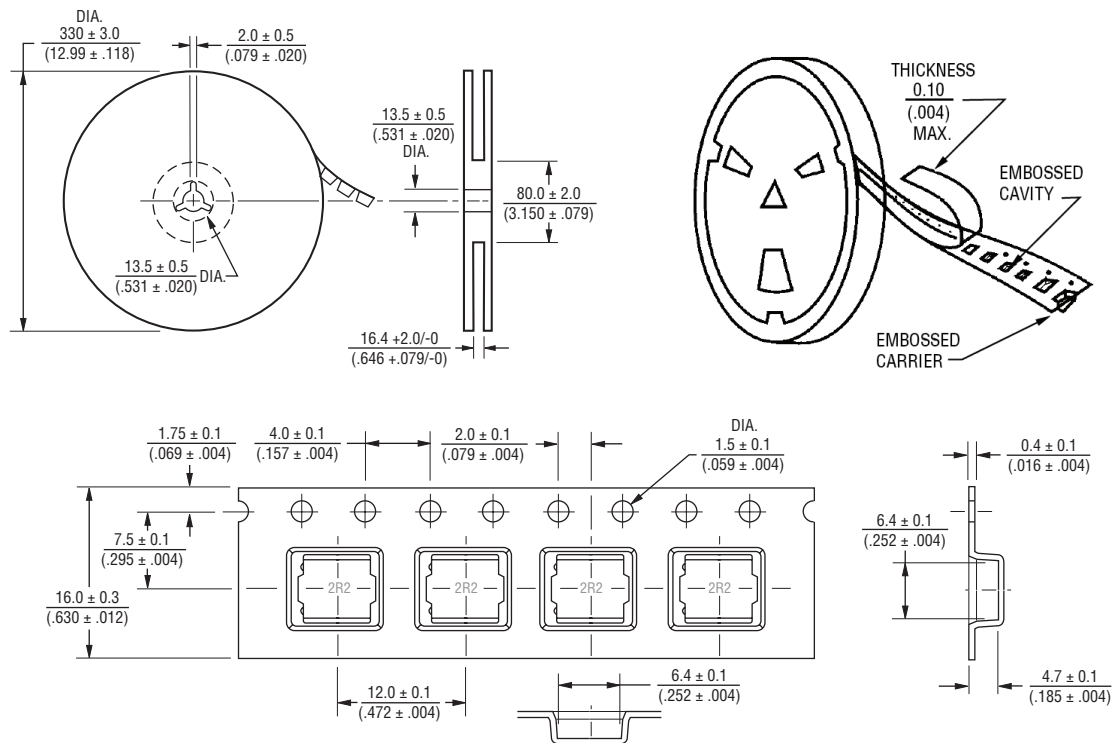
SRN6045TA Series - Semi-shielded Power Inductors

BOURNS®

Soldering Profile



Packaging Specifications



USER DIRECTION OF FEED

QTY: 1000 PCS. PER REEL

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

REV. 10/17

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific disclaimers as set forth on the last page of this document, and at www.bourns.com/legal/disclaimer.pdf.

Legal Disclaimer Notice

BOURNS®

This legal disclaimer applies to purchasers and users of Bourns® products manufactured by or on behalf of Bourns, Inc. and its affiliates (collectively, "Bourns").

Unless otherwise expressly indicated in writing, Bourns® products and data sheets relating thereto are subject to change without notice. Users should check for and obtain the latest relevant information before placing orders and should verify that such information is current and complete.

The characteristics and parameters of a Bourns® product set forth in its data sheet are based on laboratory conditions, and statements regarding the suitability of products for certain types of applications are based on Bourns' knowledge of typical requirements in generic applications. The characteristics and parameters of a Bourns® product in a user application may vary from the data sheet characteristics and parameters due to a combination of the Bourns® product with other components in the user's application or due to the environment of the user application itself. Such characteristics and parameters also can and do vary in different applications and actual performance may vary over time. Users should always verify actual performance of the Bourns® product in their specific devices and applications, and make their own independent judgments about how much additional test margin to design in to compensate for differences between laboratory and real world conditions.

Unless Bourns has explicitly designated an individual Bourns® product as meeting the requirements of a particular industry standard (e.g., ISO/TS 16949) or a particular qualification (e.g., UL listed or recognized), Bourns is not responsible for any failure of an individual Bourns® product to meet requirements of such industry standard or such particular qualification. Users of Bourns® products are responsible for ensuring compliance with safety-related requirements and standards applicable to their applications.

Bourns® products are not recommended, authorized or intended for use in nuclear, lifesaving, life-critical or life-sustaining applications, nor in any other applications where failure or malfunction may result in personal injury, death, or severe property or environmental damage. Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any Bourns® products in such unauthorized applications is at the user's sole risk. Life-critical applications include devices identified by the U.S. Food and Drug Administration as Class III devices and generally equivalent classifications outside of the United States.

Bourns® standard products that are designed and tested for use in automotive applications will be described on the applicable data sheets as compliant with the applicable AEC-Q standard. Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any other Bourns® standard products in an automotive application is not recommended, authorized or intended and will be at the user's sole risk.

Bourns® standard products are not tested to comply with United States Federal Aviation Administration standards generally or any other generally equivalent governmental organization standard applicable to products designed or manufactured for use in aircraft or space applications. Bourns® standard products that are designed and tested for use in aircraft or space applications will be described on the applicable data sheets as compliant with the RTCA DO-160 standard. Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any other Bourns® standard product in an aircraft or space application is not recommended, authorized or intended and will be at the user's sole risk.

The use and level of testing applicable to Bourns® custom products shall be negotiated on a case-by-case basis by Bourns and the user for which such Bourns® custom products are specially designed. Absent a written agreement between Bourns and the user regarding the use and level of such testing, the provisions above applicable to Bourns® standard products shall also apply to such Bourns® custom products.

Users shall not sell, transfer, export or re-export any Bourns® products or technology for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor shall they use Bourns® products or technology in any facility which engages in activities relating to such devices. The foregoing restrictions apply to all uses and applications that violate national or international prohibitions, including embargos or international regulations. Further, Bourns® products, technology or technical data may not under any circumstance be exported or re-exported to countries subject to international sanctions or embargoes, and Bourns® products may not, without prior authorization from Bourns and/or the U.S. Government, be resold, transferred, or re-exported to any party not eligible to receive U.S. commodities, software, and technical data.

To the maximum extent permitted by applicable law, Bourns disclaims (i) any and all liability arising out of the application or use of any Bourns® standard product, (ii) any and all liability, including, without limitation, special, punitive, consequential or incidental damages, and (iii) any and all implied warranties, including implied warranties of fitness for particular purpose, non-infringement and merchantability.

For your convenience, copies of this Legal Disclaimer Notice with German, Spanish, Japanese, Traditional Chinese and Simplified Chinese bilingual versions are available at:

Web Page: <http://www.bourns.com/legal/disclaimers-terms-and-policies>

PDF: <http://www.bourns.com/docs/Legal/disclaimer.pdf>