



**THE DATASHEET OF  
SRN6045TA-181M**





### Features

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

## 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 $\Omega$ ) $\pm$ 20 %	I <sub>rms</sub> (A) Typ.	I <sub>sat</sub> (A) Typ.
	L ( $\mu$ H)	Tol. %					
SRN6045TA-1R0Y	1.0	$\pm$ 30	15	110	10	8.00	13.50
SRN6045TA-1R2Y	1.2	$\pm$ 30	15	90	10.5	7.50	12.5
SRN6045TA-1R5Y	1.5	$\pm$ 30	15	75	11.7	7.00	12.0
SRN6045TA-2R2Y	2.2	$\pm$ 30	15	55	15	6.00	9.50
SRN6045TA-3R3Y	3.3	$\pm$ 30	15	45	21	5.00	7.80
SRN6045TA-3R6Y	3.6	$\pm$ 30	15	42	22.5	4.90	7.40
SRN6045TA-4R7M	4.7	$\pm$ 20	15	40	26	4.50	6.80
SRN6045TA-6R3M	6.3	$\pm$ 20	15	35	33	3.80	5.90
SRN6045TA-6R8M	6.8	$\pm$ 20	15	30	34	3.60	5.70
SRN6045TA-8R2M	8.2	$\pm$ 20	15	27	46	3.40	5.10
SRN6045TA-100M	10	$\pm$ 20	15	25	52	3.20	4.60
SRN6045TA-120M	12	$\pm$ 20	15	22	65	3.00	4.00
SRN6045TA-150M	15	$\pm$ 20	15	20	71	2.80	3.80
SRN6045TA-220M	22	$\pm$ 20	15	17	96	2.30	3.30
SRN6045TA-330M	33	$\pm$ 20	15	13	145	1.80	2.50
SRN6045TA-470M	47	$\pm$ 20	15	12	200	1.60	2.00
SRN6045TA-560M	56	$\pm$ 20	15	11	230	1.40	1.80
SRN6045TA-680M	68	$\pm$ 20	15	10	305	1.10	1.60
SRN6045TA-820M	82	$\pm$ 20	15	9	365	0.98	1.50
SRN6045TA-101M	100	$\pm$ 20	15	8.5	456	0.92	1.33
SRN6045TA-121M	120	$\pm$ 20	15	7	500	0.85	1.20
SRN6045TA-151M	150	$\pm$ 20	15	6.5	626	0.75	1.10
SRN6045TA-181M	180	$\pm$ 20	15	6	745	0.68	1.00
SRN6045TA-221M	220	$\pm$ 20	15	5	900	0.60	0.88
SRN6045TA-331K	330	$\pm$ 10	15	4	1400	0.55	0.60
SRN6045TA-471K	470	$\pm$ 10	15	3	2050	0.40	0.50

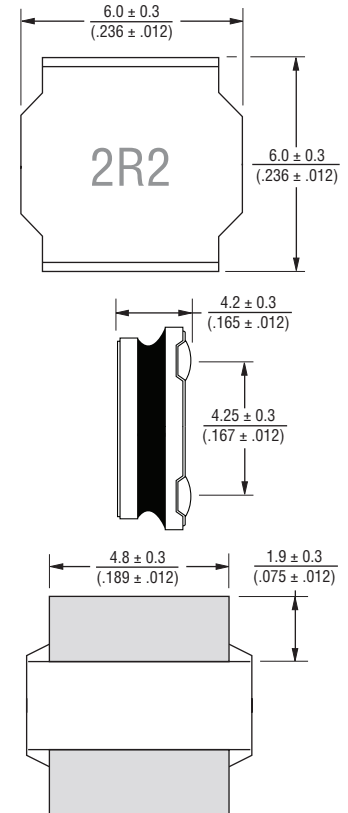
### General Specifications

Operating Temp. .... -55 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .. -55 °C to +125 °C  
 Temperature Rise ..... 40 °C at rated I<sub>rms</sub>  
 Rated Current  
 ..... Inductance drops 30 % at I<sub>sat</sub>  
 Failure In Time (FIT) ..... 24.7/10<sup>9</sup> hours  
 Mean Time Between Failures (MTBF)  
 ..... 40.4 x 10<sup>6</sup> hours  
 Moisture Sensitivity Level ..... 1  
 ESD Classification ..... N/A

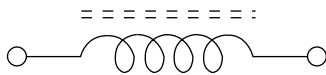
### Materials

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

### Product Dimensions



### Electrical Schematic

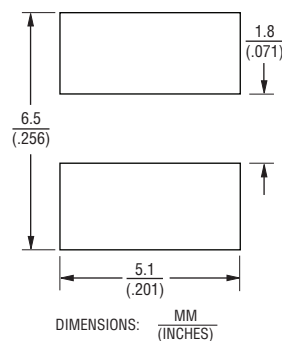


### How to Order

SRN6045TA - 100M

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

### Recommended Layout



**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.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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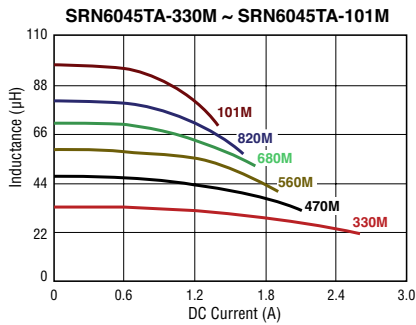
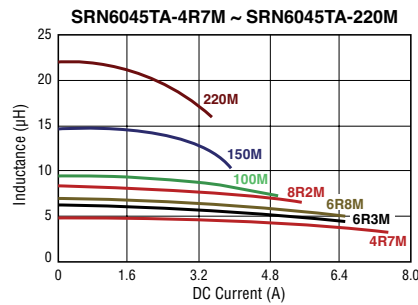
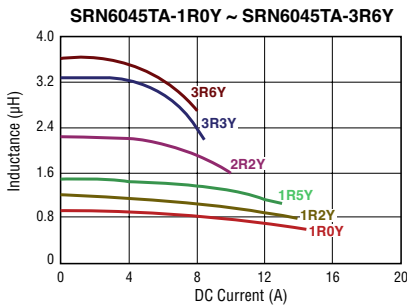
# SRN6045TA Series - Semi-shielded Power Inductors



## Temperature Rise vs. Current



## Inductance vs. Current



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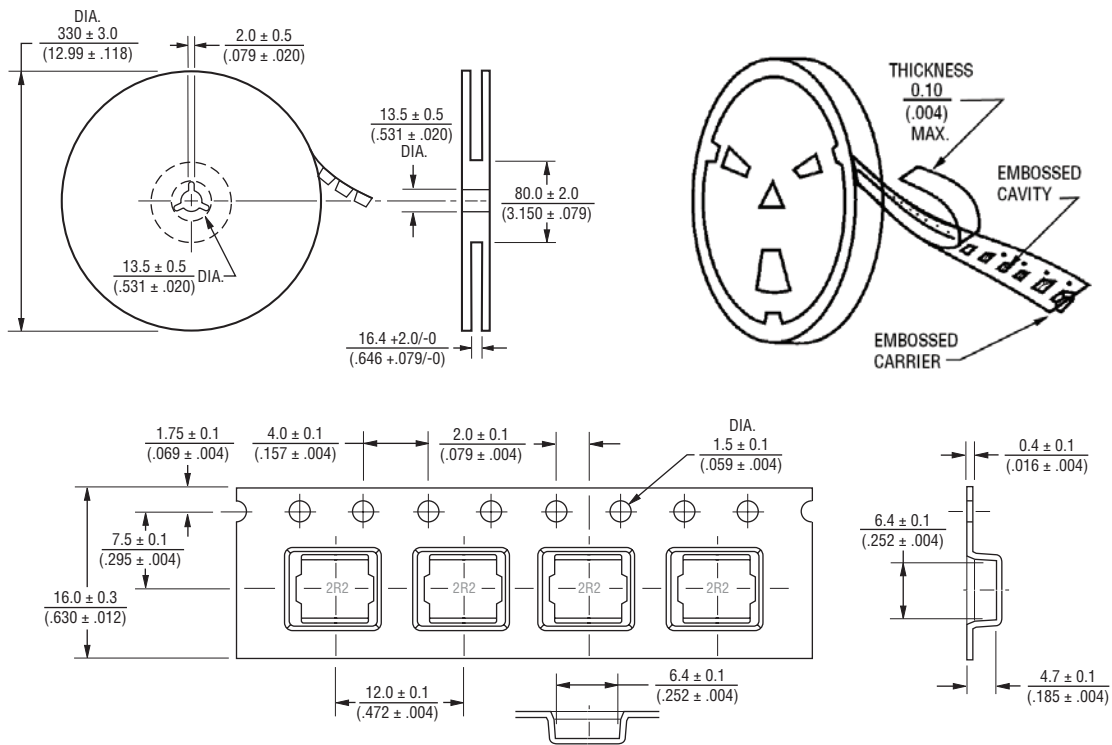
# SRN6045TA Series - Semi-shielded Power Inductors

**BOURNS®**

## Soldering Profile



## Packaging Specifications



USER DIRECTION OF FEED →  
QTY: 1000 PCS. PER REEL

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

REV. 04/20

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