



**THE DATASHEET OF  
SRN6045TA-221M**





### 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

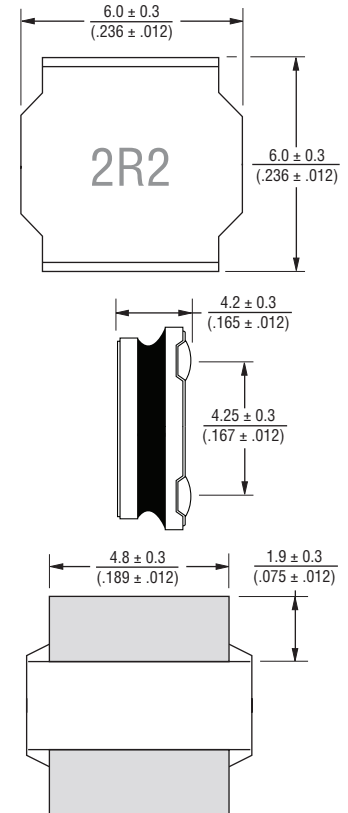
### General Specifications

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

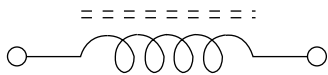
### Materials

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

### Product Dimensions



### Electrical Schematic

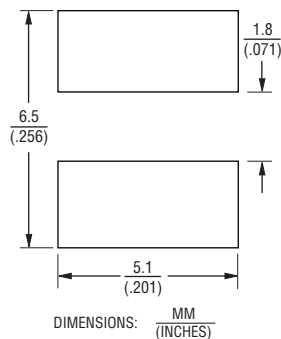


### How to Order

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.  
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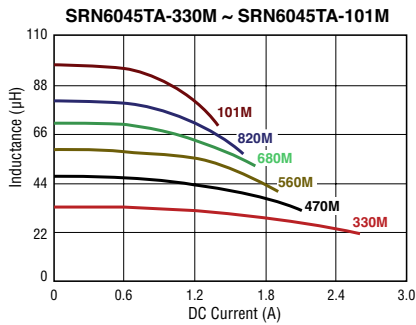
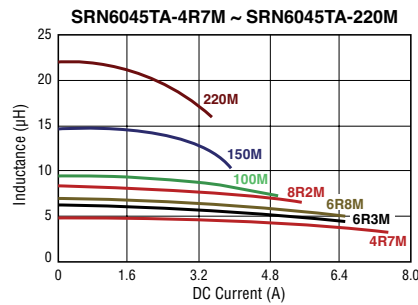
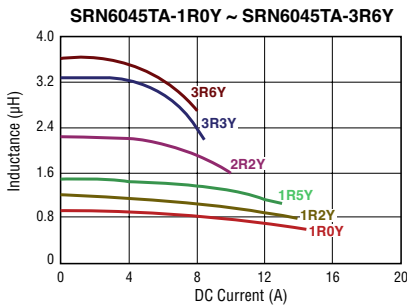
# SRN6045TA Series - Semi-shielded Power Inductors



## Temperature Rise vs. Current



## Inductance vs. Current



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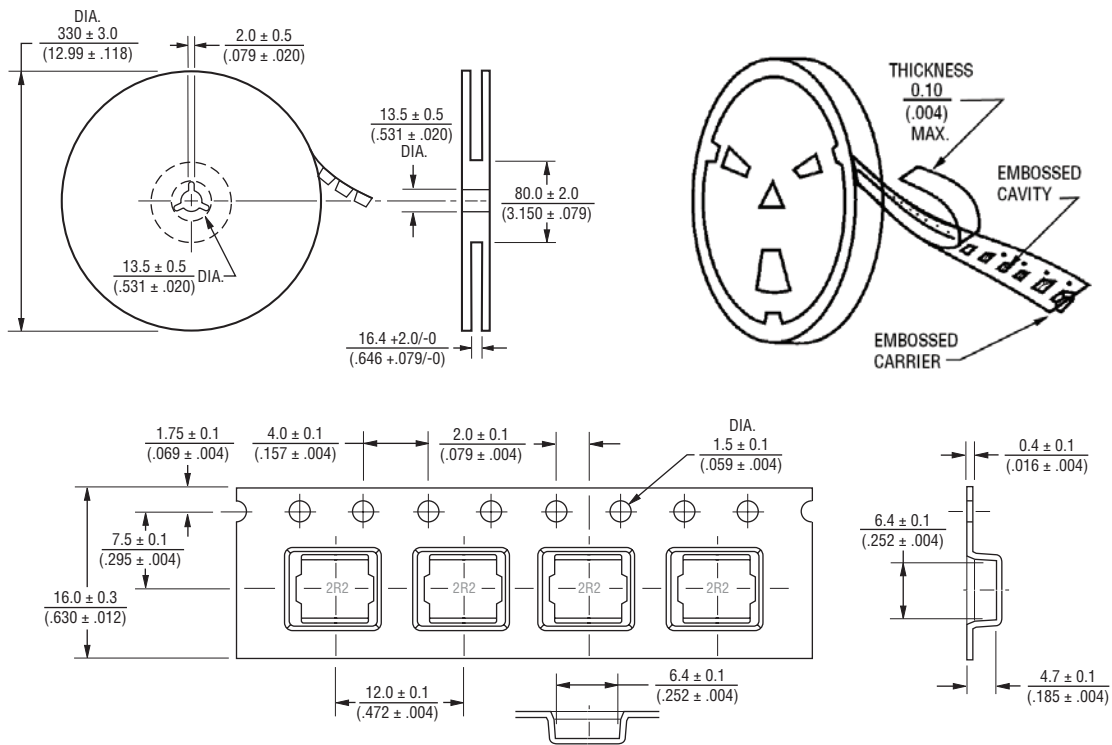
# SRN6045TA Series - Semi-shielded Power Inductors

**BOURNS®**

## Soldering Profile



## Packaging Specifications



USER DIRECTION OF FEED  
 QTY: 1000 PCS. PER REEL

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

REV. 04/20

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