# THE DATASHEET OF

# SRN8040TA-151M

## Features

- Semi-shielded construction
- Inductance range: 0.5 to 330 µH
- Rated current up to 12 A
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

# SRN8040TA Series - Semi-shielded Power Inductors

## Electrical Specifications @ 25 °C

| Bourns Part No. | Inductance @ 1 MHz / 1 V L (µH) | Tol. % | Q (Min.) @ 1 MHz | SRF (MHz) Typ. | DCR (mΩ) ±20 % | Irms (A) Typ. | Isat (A) Typ. |
|---|---|---|---|---|---|---|---|
| SRN8040TA-R50Y | 0.5 | ± 30 | 20 | 165 | 5.5 | 12.00 | 17.00 |
| SRN8040TA-1R0Y | 1.0 | ± 30 | 15 | 85 | 8.2 | 8.50 | 13.80 |
| SRN8040TA-1R4Y | 1.4 | ± 30 | 15 | 78 | 10 | 8.20 | 11.80 |
| SRN8040TA-1R5Y | 1.5 | ± 30 | 15 | 66 | 10 | 8.00 | 11.50 |
| SRN8040TA-2R0Y | 2.0 | ± 30 | 15 | 61 | 11 | 7.50 | 10.20 |
| SRN8040TA-2R2Y | 2.2 | ± 30 | 15 | 57 | 11.5 | 7.40 | 9.80 |
| SRN8040TA-3R3Y | 3.3 | ± 30 | 15 | 48 | 15 | 6.60 | 8.00 |
| SRN8040TA-4R7M | 4.7 | ± 20 | 15 | 38 | 19.5 | 5.80 | 6.70 |
| SRN8040TA-5R6M | 5.6 | ± 20 | 15 | 33 | 22 | 5.40 | 6.20 |
| SRN8040TA-6R8M | 6.8 | ± 20 | 15 | 29 | 25 | 5.10 | 5.60 |
| SRN8040TA-100M | 10 | ± 20 | 15 | 25 | 33 | 4.60 | 5.00 |
| SRN8040TA-150M | 15 | ± 20 | 12 | 20 | 50 | 3.60 | 4.00 |
| SRN8040TA-220M | 22 | ± 20 | 12 | 18 | 73 | 2.90 | 3.10 |
| SRN8040TA-330M | 33 | ± 20 | 12 | 15 | 100 | 2.30 | 2.60 |
| SRN8040TA-470M | 47 | ± 20 | 12 | 12 | 135 | 2.00 | 2.20 |
| SRN8040TA-560M | 56 | ± 20 | 12 | 10.5 | 160 | 1.75 | 1.90 |
| SRN8040TA-680M | 68 | ± 20 | 12 | 9.5 | 205 | 1.65 | 1.75 |
| SRN8040TA-820M | 82 | ± 20 | 12 | 8.5 | 230 | 1.40 | 1.60 |
| SRN8040TA-101M | 100 | ± 20 | 10 | 8 | 300 | 1.20 | 1.45 |
| SRN8040TA-121M | 120 | ± 20 | 10 | 7.5 | 350 | 1.10 | 1.30 |
| SRN8040TA-151M | 150 | ± 20 | 10 | 7 | 410 | 0.98 | 1.20 |
| SRN8040TA-181M | 180 | ± 20 | 10 | 6.5 | 490 | 0.91 | 1.04 |
| SRN8040TA-221M | 220 | ± 20 | 10 | 5.5 | 610 | 0.85 | 0.99 |
| SRN8040TA-331M | 330 | ± 20 | 10 | 5 | 850 | 0.70 | 0.75 |

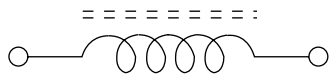
## General Specifications

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

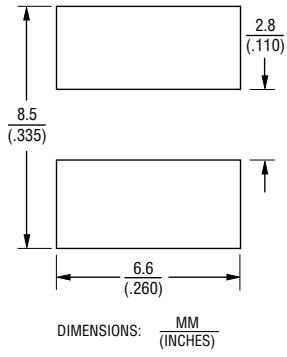
## Materials

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

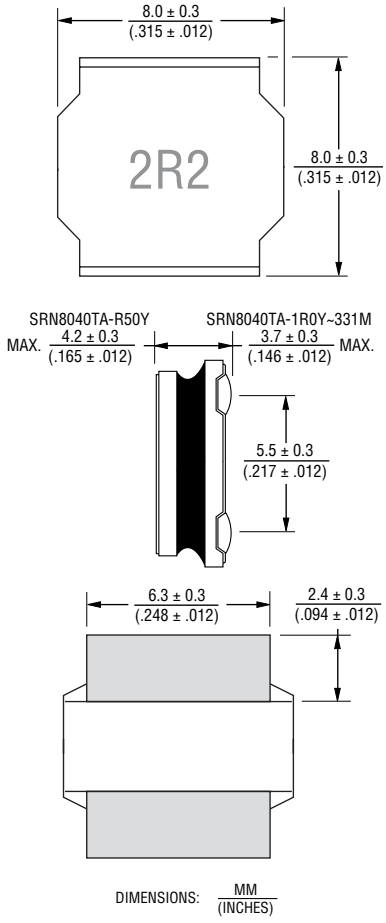
## Electrical Schematic



## Recommended Layout




## Product Dimensions




## How to Order

**SRN8040TA - 100M**

Model
Value Code (see table)

**WARNING Cancer and Reproductive Harm -** 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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Users should verify actual device performance in their specific applications.
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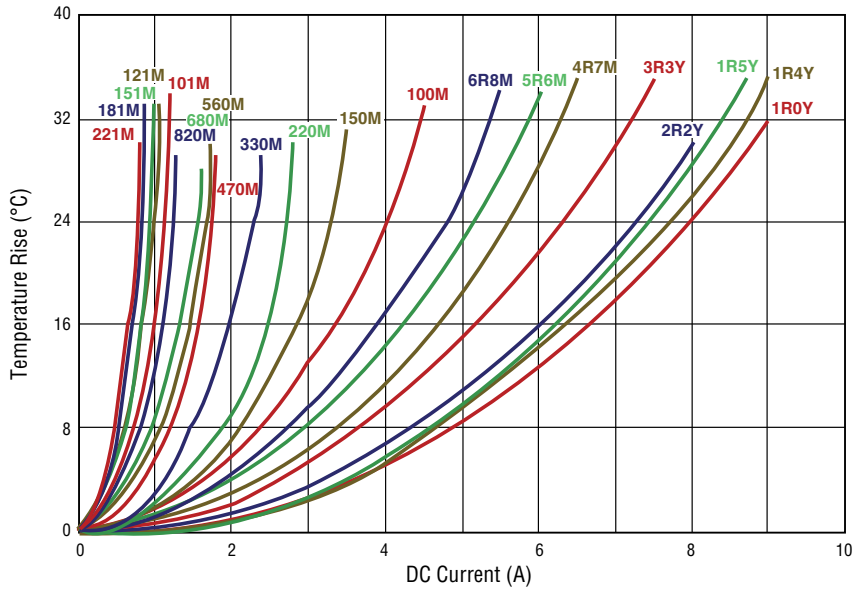
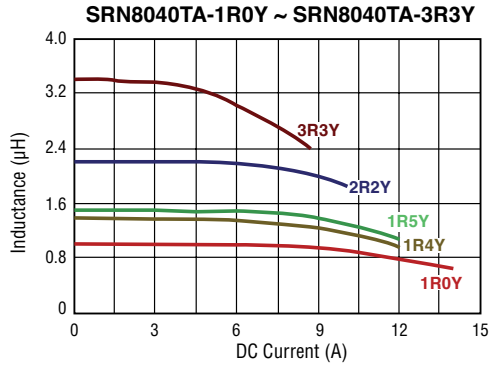
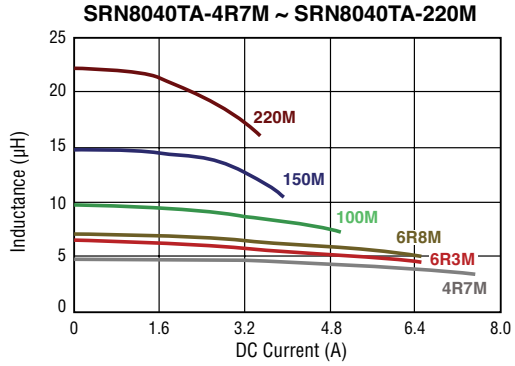
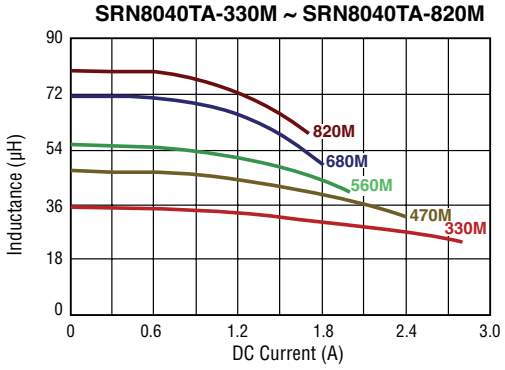
## Temperature Rise vs. Current

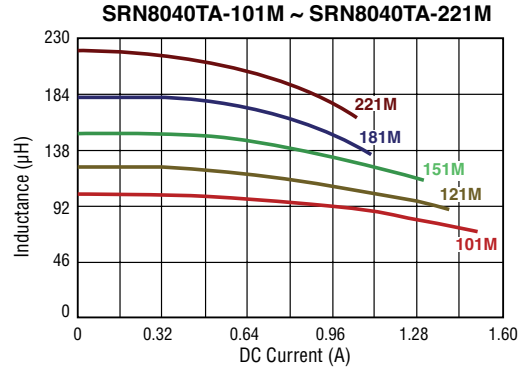



## Inductance vs. Current

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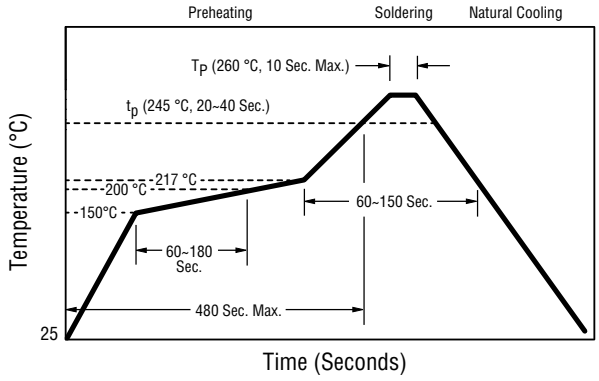
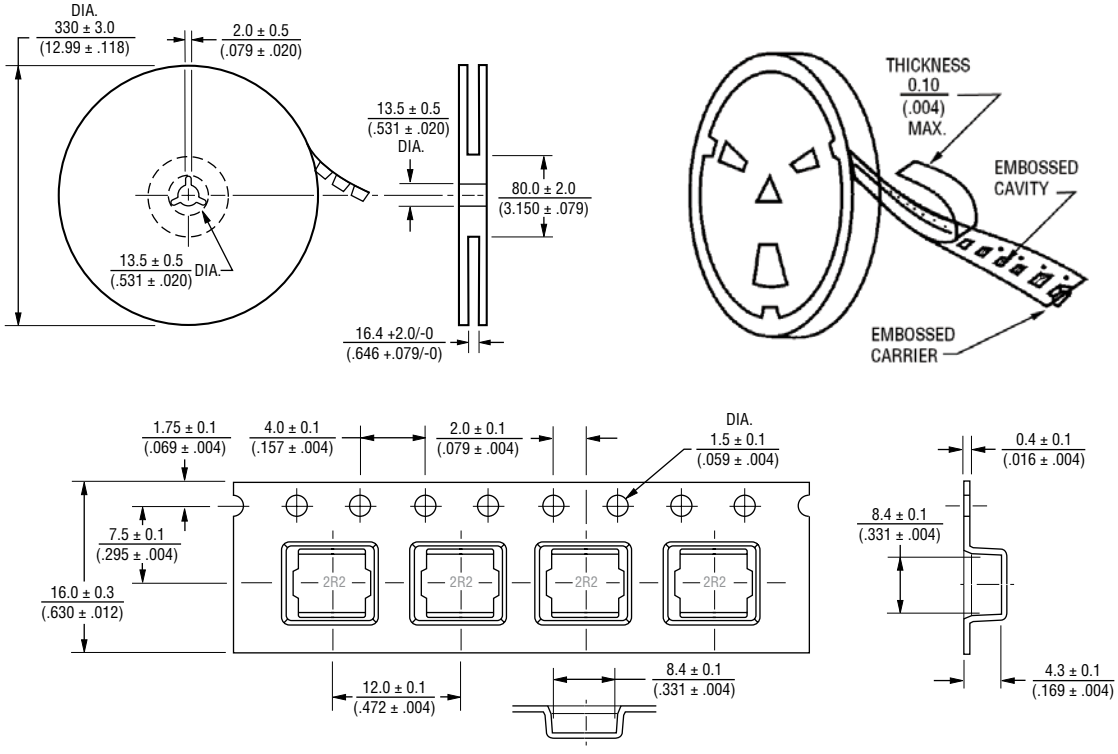
## Soldering Profile




## Packaging Specifications




**USER DIRECTION OF FEED**

QTY: 1000 PCS. PER REEL

DIMENSIONS: MM (INCHES)

REV. 06/19

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