Features

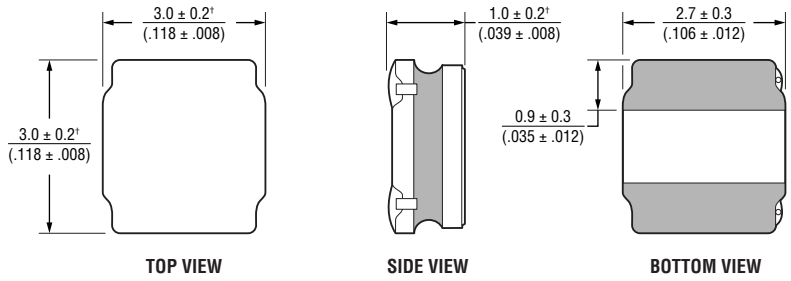
- Semi-shielded construction
- Enhanced product reliability with soldered lead-wire
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SRN3012BTA Series - Semi-shielded Power Inductors

Electrical Specifications @ 25 °C

Bourns Part No.	Inductance @ 100 kHz / 1 V		Q @ 1 MHz Min.	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	I_{rms} (A) Typ.	I_{sat} (A) Typ.
	L (µH)	Tol. %						
SRN3012BTA-R22M	0.22	20	10	410	15	19	6.2	8.0
SRN3012BTA-R47M	0.47	20	10	190	24	29	5.2	4.8
SRN3012BTA-R68M	0.68	20	10	175	31	37	4.8	4.3
SRN3012BTA-1R0M	1.0	20	10	120	40	48	4.2	3.6
SRN3012BTA-1R2M	1.2	20	10	110	47	56	4.0	3.3
SRN3012BTA-1R5M	1.5	20	10	102	52	62	3.6	3.0
SRN3012BTA-2R2M	2.2	20	10	95	75	90	2.9	2.4
SRN3012BTA-3R3M	3.3	20	10	71	108	130	2.4	1.8
SRN3012BTA-4R7M	4.7	20	10	60	140	168	2.1	1.5
SRN3012BTA-5R6M	5.6	20	10	55	200	240	1.9	1.4
SRN3012BTA-6R8M	6.8	20	10	50	210	252	1.7	1.3
SRN3012BTA-100M	10	20	10	40	288	345	1.5	1.1
SRN3012BTA-150M	15	20	10	30	400	480	1.2	0.8
SRN3012BTA-220M	22	20	10	26	700	840	0.9	0.7
SRN3012BTA-330M	33	20	10	23	1100	1320	0.8	0.61
SRN3012BTA-470M	47	20	10	16	1500	1800	0.65	0.52

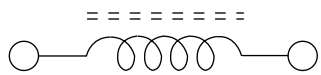
Product Dimensions



† Dimension does not include termination. For maximum overall dimensions with termination, add 0.1 mm (.004 in.).

DIMENSIONS: MM (INCHES)

Electrical Schematic



How to Order

SRN3012BTA - R22M

Model

Value Code (see table)

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

General Specifications

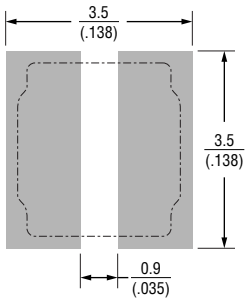
Operating Temperature
..... -55 °C to +125 °C
(Temperature rise included)
Storage Temperature
(Component on board)
..... -55 °C to +125 °C
(In tape and reel package)
..... -10 °C to +40 °C, 50-60 % RH
Temperature Rise .....40 °C at rated I_{rms}[1]
Rated Current
..... Inductance drops 30 % at I_{sat}
Moisture Sensitivity Level.....1
ESD Classification (HBM).....N/A

Note 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..... Ferrite
Wire .....Enameled copper
Terminal Finish .....Ag/Ni/Sn
Coating ..... Magnetic resin
Packaging..... 3000 pcs. per 7-inch reel

Recommended Layout

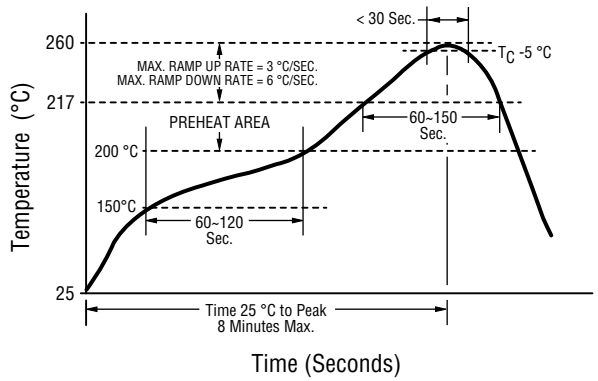


DIMENSIONS: MM (INCHES)

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.

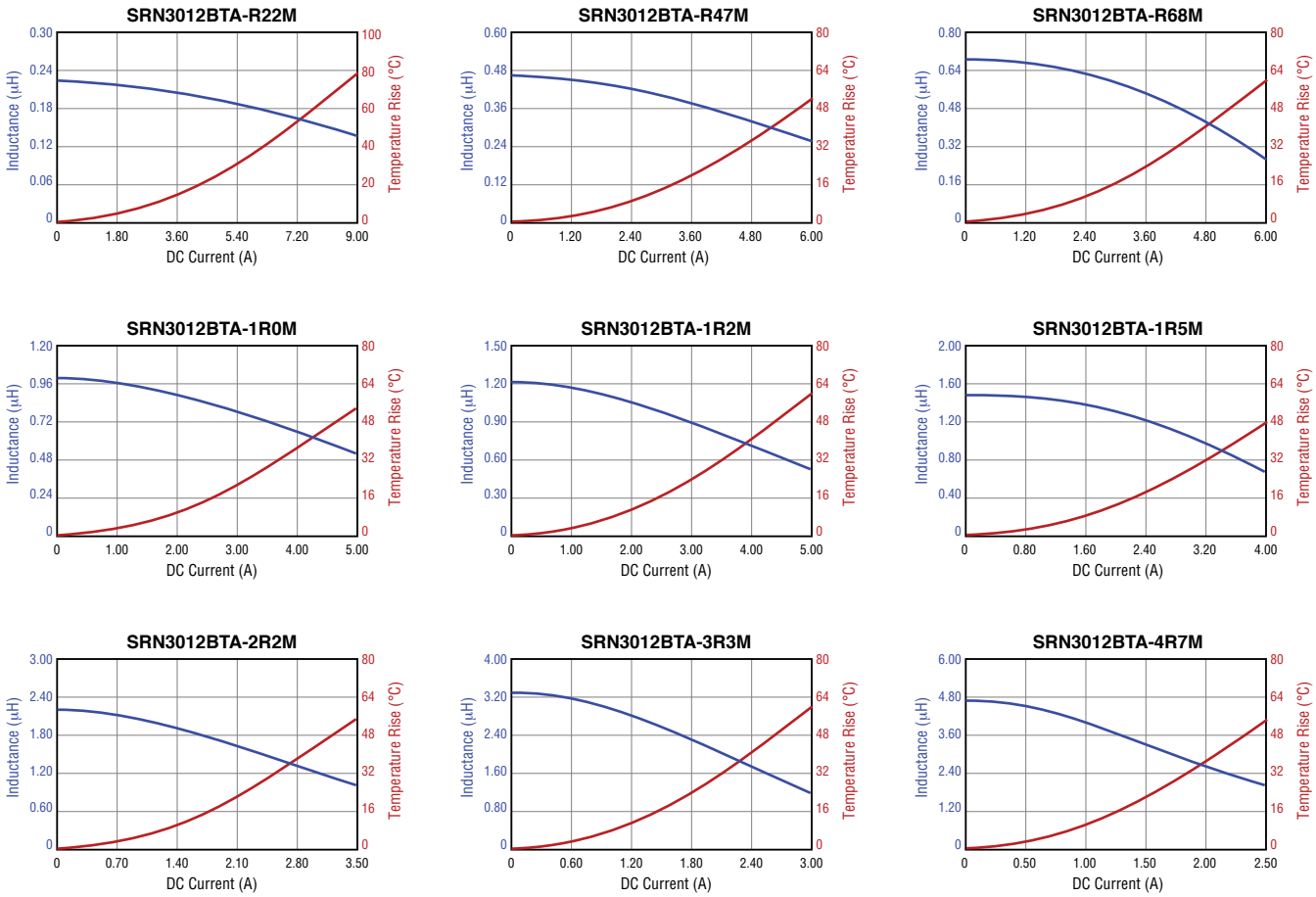
Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time(t_s) from T_{smin} to T_{smax}	 150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217 °C 60-150 seconds
Peak package body temperature (T_p)	260 °C
Time within 5 °C of Actual Peak Temperature (t_p)	< 30 seconds
Ramp-Down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

L vs. I Charts



Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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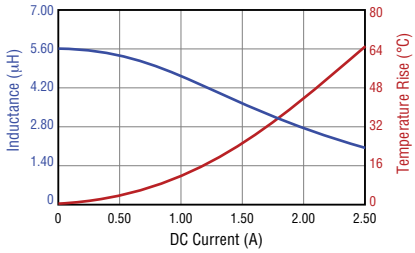
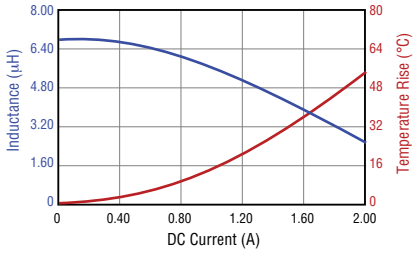
L vs. I Charts (continued)

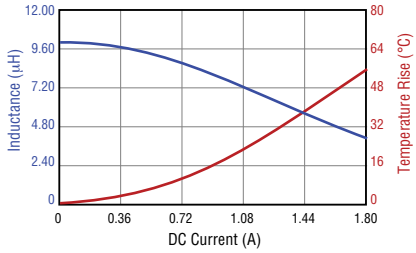
SRN3012BTA-5R6M



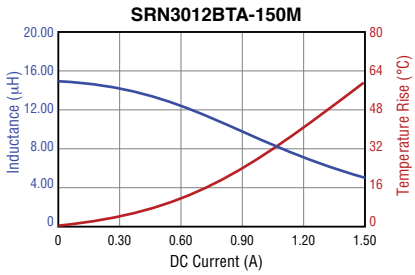
SRN3012BTA-6R8M



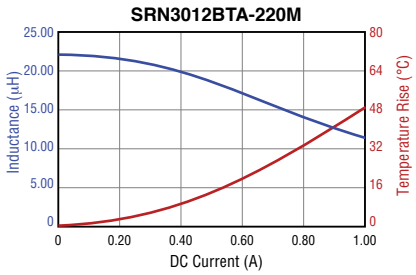
SRN3012BTA-100M



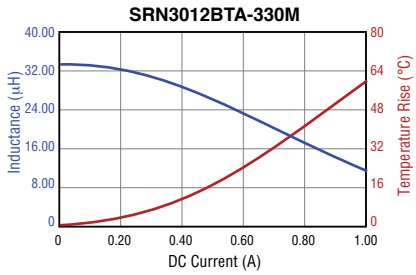
SRN3012BTA-150M



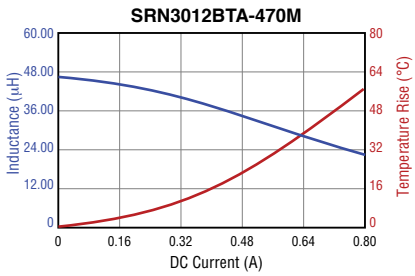
SRN3012BTA-220M



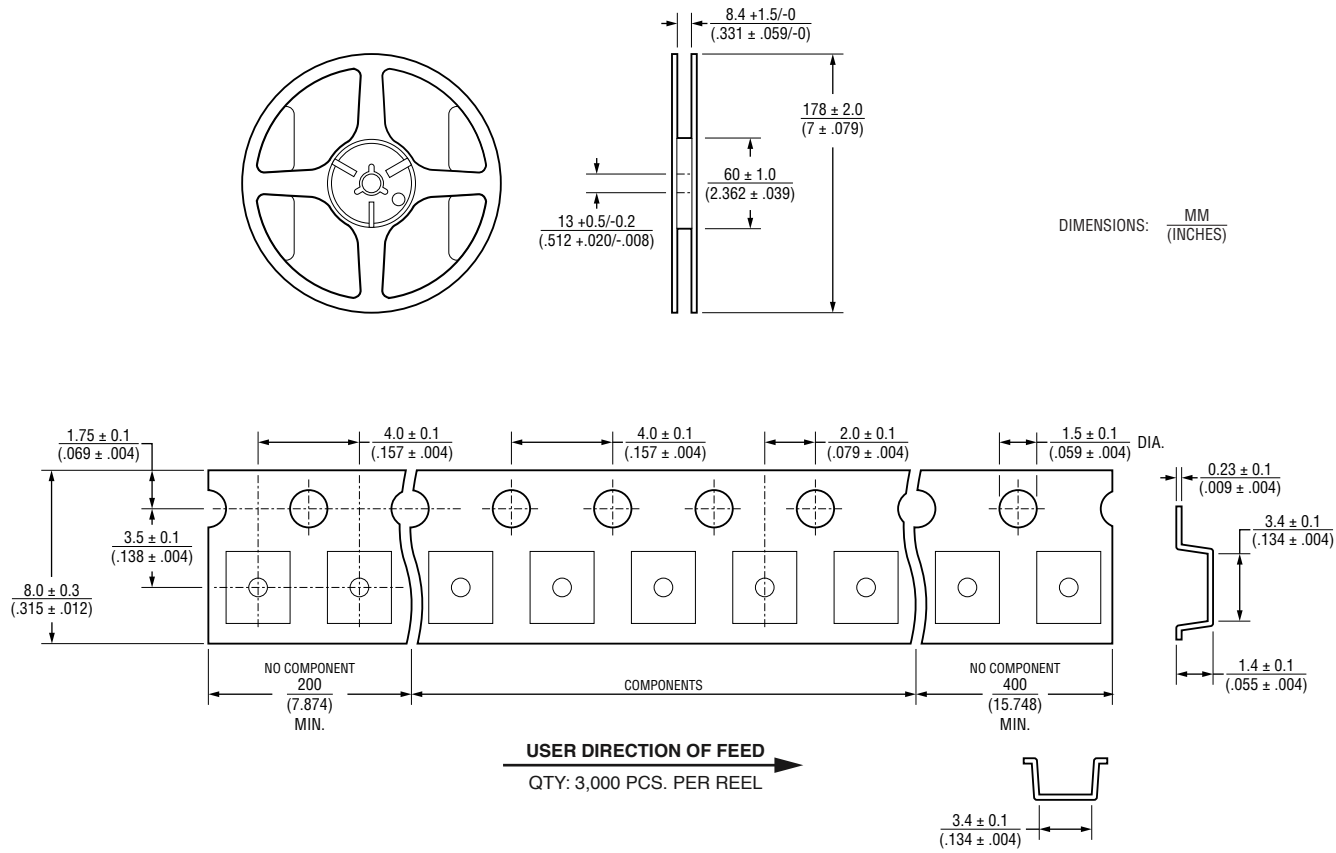
SRN3012BTA-330M



SRN3012BTA-470M



Packaging Specifications



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