BOURNS®

Features

- Shielded construction for low radiation
- Metal alloy powder core for high saturation current
- Wide side terminal for enhanced mechanical strength
- High vibration resistance (15 G typical, 30 G peak)
- High operating temperature
- Low buzz noise
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SRP1050WA Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

Bourns Part No.	Inductance @ 100 kHz / 1 V		Q Typ. @ 100 kHz	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	I_{rms} (A) Typ.	I_{sat} (A) Typ.
	L (µH)	Tol. %						
SRP1050WA-1R0M	1.0	20	20	38	2.3	2.76	30	37
SRP1050WA-1R2M	1.2	20	20	33	3	3.6	27	29
SRP1050WA-1R5M	1.5	20	20	31	3.6	4.3	25	28
SRP1050WA-1R8M	1.8	20	20	28	3.9	4.6	24	26
SRP1050WA-2R2M	2.2	20	20	25	4.1	4.9	23	25
SRP1050WA-3R3M	3.3	20	20	20	6.2	7.2	18.7	20
SRP1050WA-4R7M	4.7	20	20	15	9	10	14.5	17
SRP1050WA-5R6M	5.6	20	20	14	10.2	11.7	13.2	16.2
SRP1050WA-6R8M	6.8	20	20	12	12.4	14	12.3	15.3
SRP1050WA-8R2M	8.2	20	20	11	17.8	20.5	10.3	14
SRP1050WA-100M	10	20	20	10	20	23	9	13
SRP1050WA-120M	12	20	20	9	23	26.4	8.3	9.8
SRP1050WA-150M	15	20	20	8	26.3	30.3	7.6	9.2
SRP1050WA-180M	18	20	20	8	33	38	7	9
SRP1050WA-220M	22	20	20	7	43	50	6	8.8
SRP1050WA-330M	33	20	20	5	66	75.3	5	7.6
SRP1050WA-470M	47	20	20	5	89	103	4.2	5.5
SRP1050WA-680M	68	20	20	4	130	150	3.5	4.8
SRP1050WA-101M	100	20	20	3	233	268	2.7	4

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

General Specifications

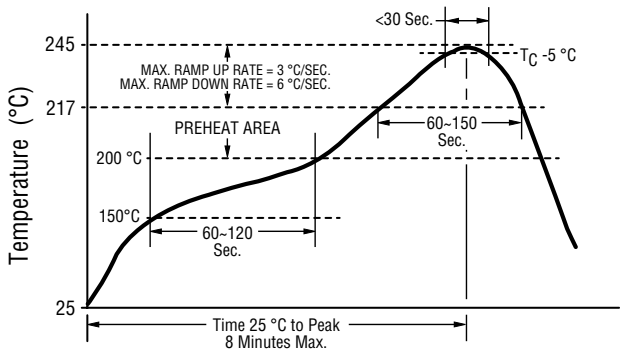
Operating Temperature
..... -55 °C to +165 °C
(Temperature rise included)
Storage Temperature (Component)
..... -55 °C to +165 °C
Temperature Rise .....40 °C at rated I_{rms}[1]
Rated Current
..... Inductance drops 30 % at I_{sat}
Moisture Sensitivity Level.....1
ESD Classification (HBM).....N/A

[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.....Metal alloy powder
Wire .....Enameled copper
Terminal Finish ..... Sn
Packaging..... 500 pcs. per 13-inch reel

Soldering Profile



Time (Seconds)

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)	245 °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.

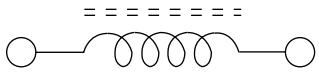
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

* 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.

SRP1050WA Series - Shielded Power Inductors

BOURNS®

Electrical Schematic



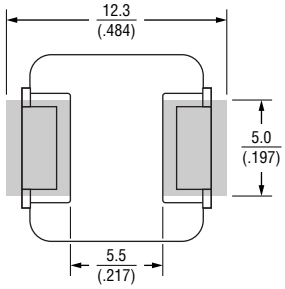
How to Order

SRP1050WA - 1R0M

Model

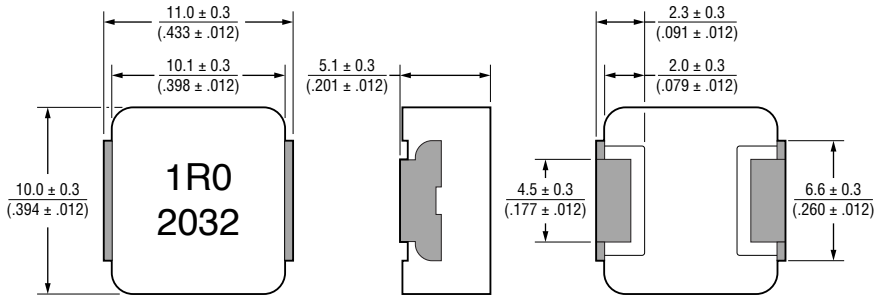
Value Code (see table)

Recommended Layout



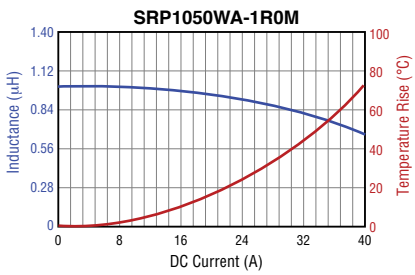
DIMENSIONS: MM / (INCHES)

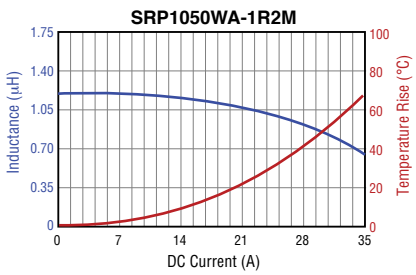
Product Dimensions

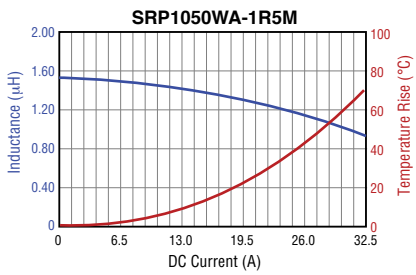


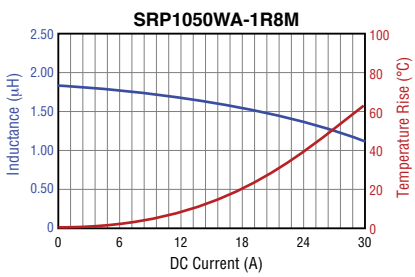
DIMENSIONS: MM / (INCHES)

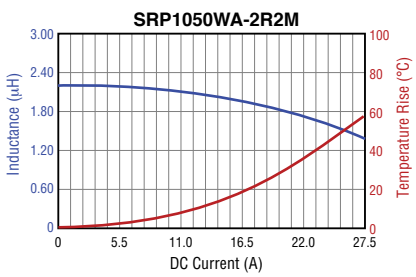
L vs. I Charts

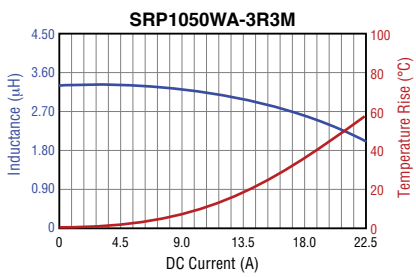




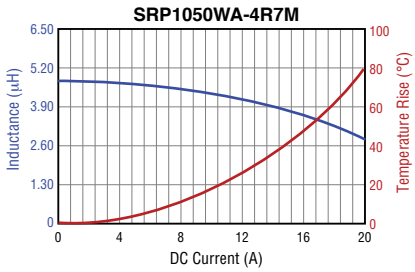


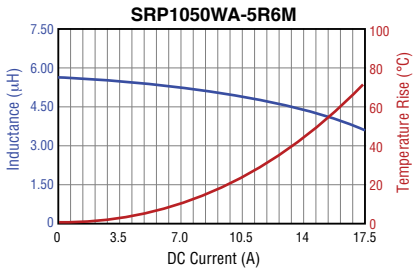


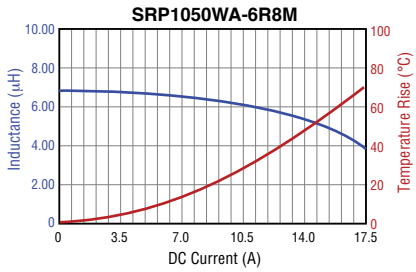


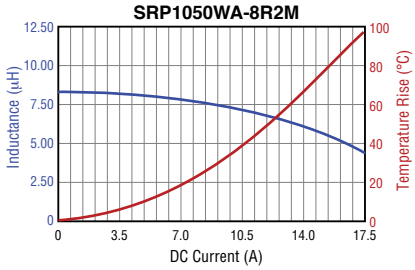


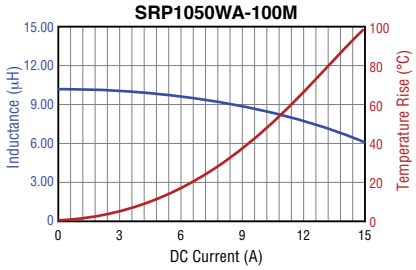
L vs. I Charts (Continued)

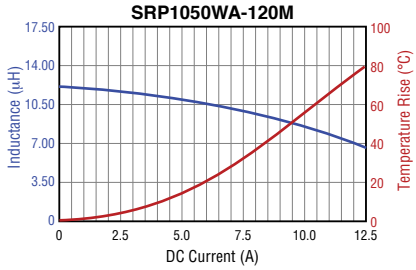


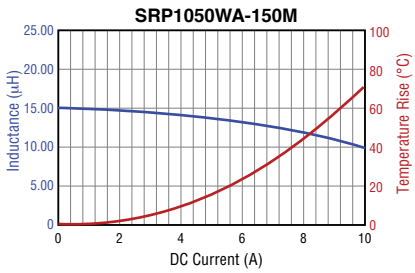


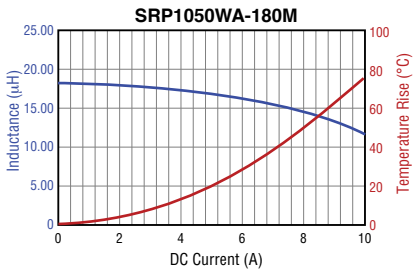


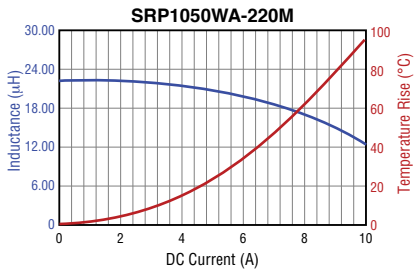


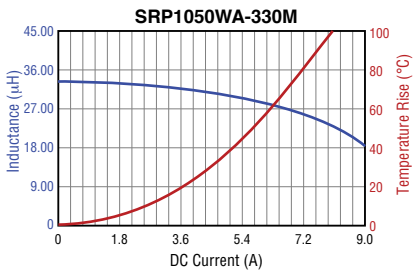


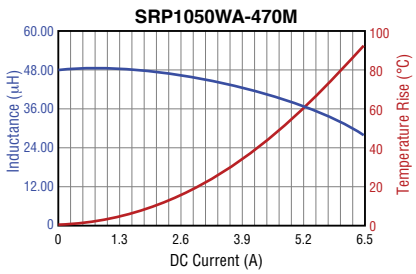


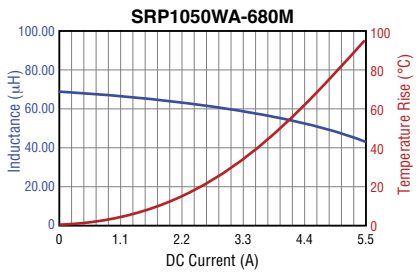


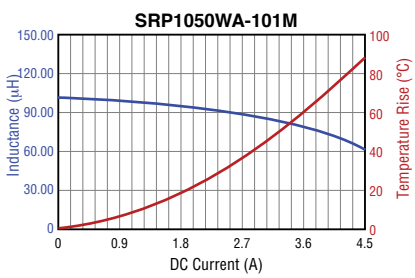




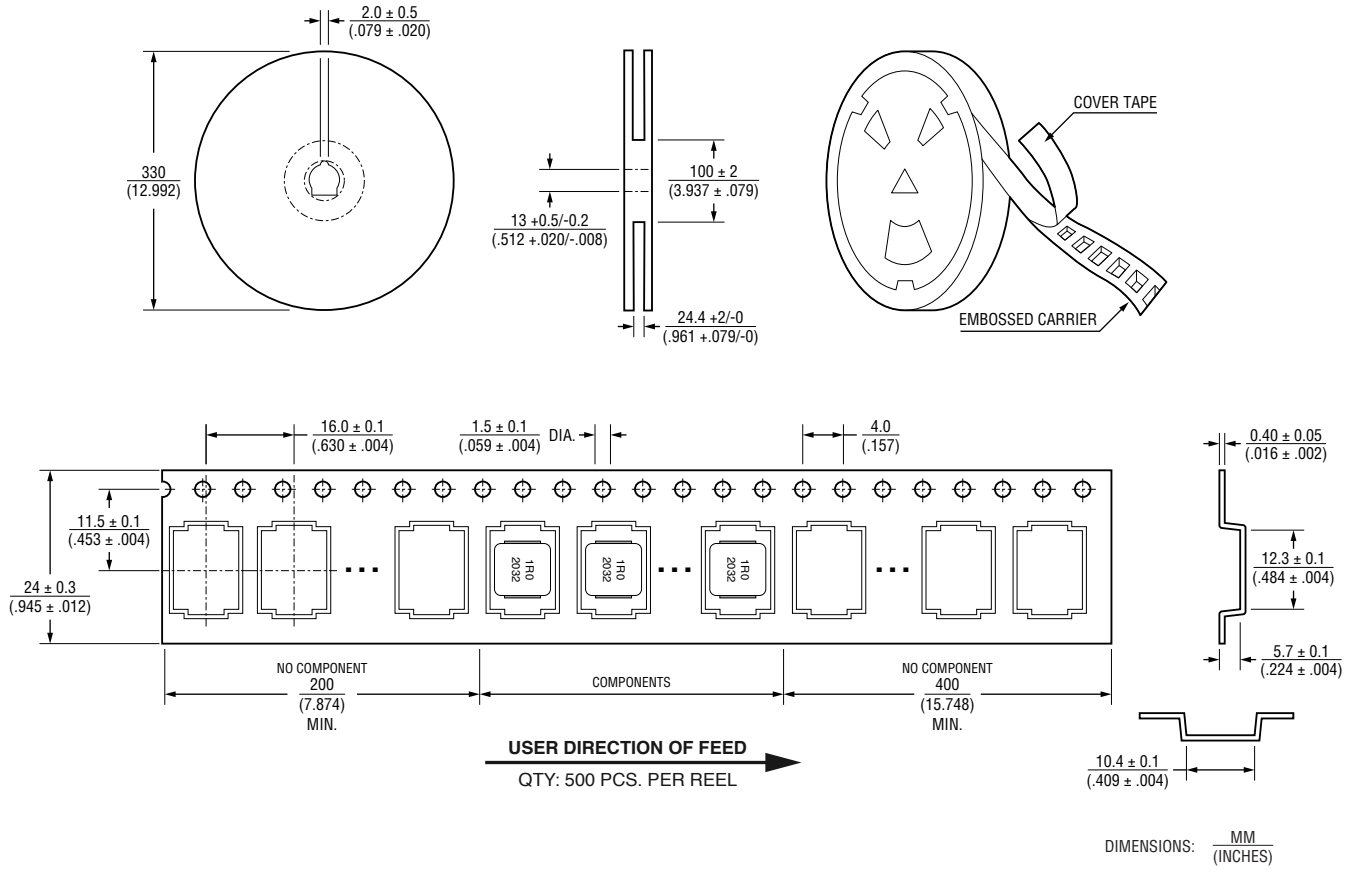








Packaging Specifications



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03/23

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