

Features

- Shielded construction for low radiation
- Metal alloy powder core for high saturation current
- Developed for use with Texas Instruments' Model BQ25638
- RoHS compliant* and halogen free**

Applications

- Wearable devices
- Laptops
- Smartphones

SRP3212 Series - Shielded Power Inductors

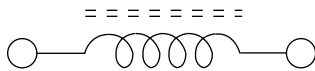
Electrical Specifications @ 25 °C

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. %						
SRP3212-R33M	0.33	20	3	132	10	13	8.5	9.1
SRP3212-R47M	0.47	20	3	100	16	19.2	7.0	8.2
SRP3212-R68M	0.68	20	5	83	20	24	6.2	7.3
SRP3212-1R0M	1.0	20	5	63	26	32	5.5	6.5
SRP3212-1R5M	1.5	20	5	43	44	53	4.4	5.0
SRP3212-2R2M	2.2	20	5	41	61	73	4.0	4.8
SRP3212-3R3M	3.3	20	5	28	87	101	3.1	3.4
SRP3212-4R7M	4.7	20	5	25	122	146	2.2	2.8

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	L (μH)	Tol. %						
SRP3212-1R0MR21 ¹	1.0	20	15	50	19	21	5.5	7.7

¹IC reference design TI BQ25638

Electrical Schematic



How to Order

SRP3212 - R33M

Model _____
Value Code (see table) _____

Additional Information

Click these links for more information:



General Specifications

Operating Temperature -40 °C to +125 °C
(Temperature rise included)
Storage Temperature (Component) -40 °C to +125 °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 Ag/Ni/Sn
Packaging 2000 pcs. per 7-inch reel



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

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

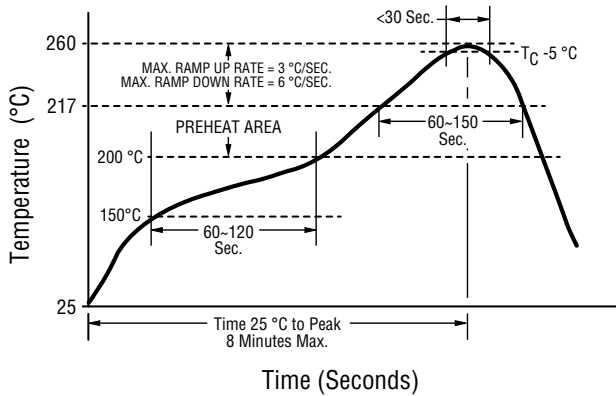
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

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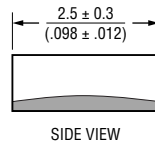
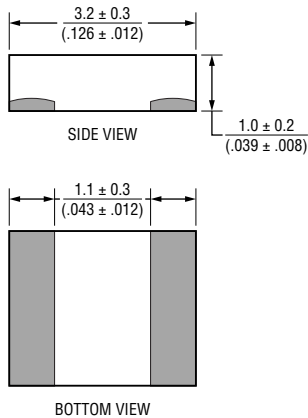
Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

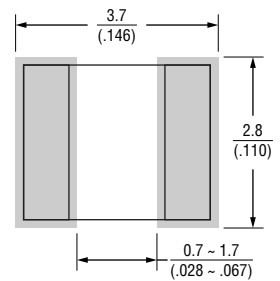
Profile Feature	Pb Free Assembly
Preheat	
- Temperature Min. (T_{smin})	150 °C
- Temperature Max. (T_{smax})	200 °C
- Time(t_s) from T_{smin} to T_{smax}	60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L)	217 °C
Time (t_L) maintained above T_L	60-150 seconds
Peak package 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.

Product Dimensions



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

Recommended Layout



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

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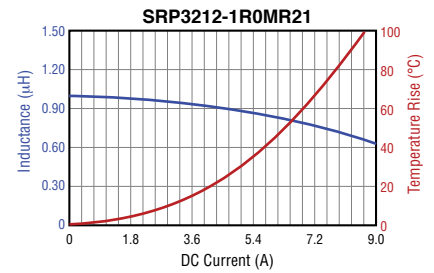
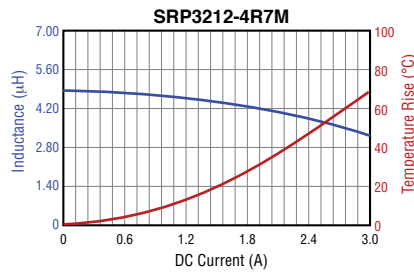
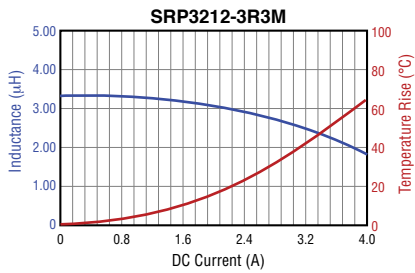
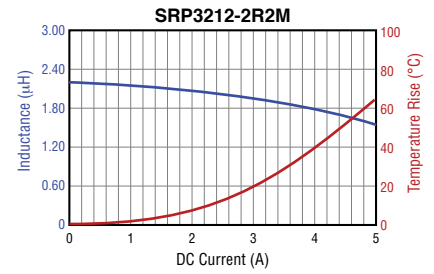
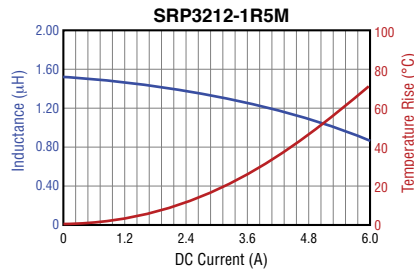
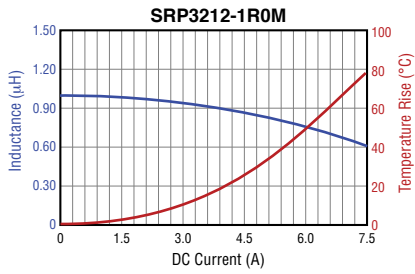
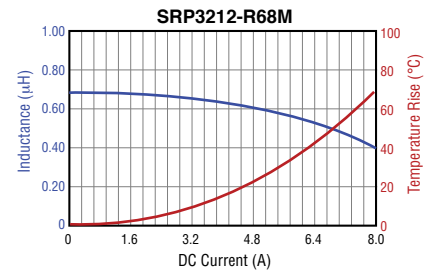
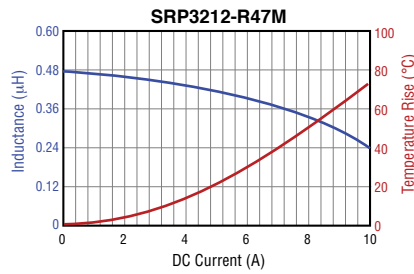
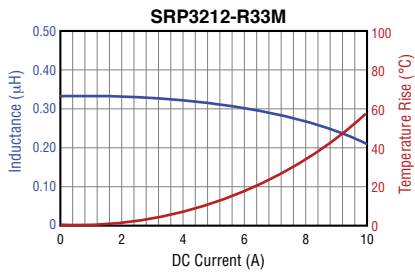
Users should verify actual device performance in their specific applications.

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L vs. I Charts



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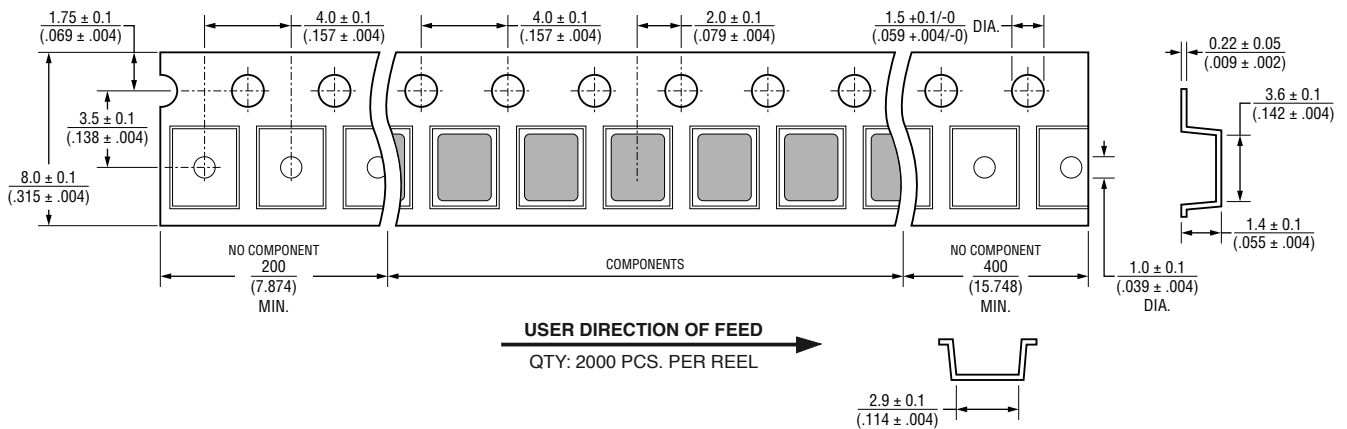
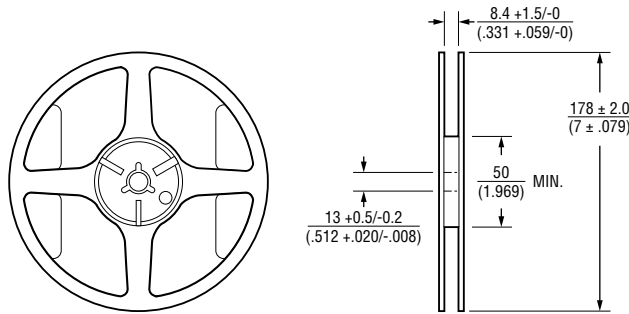
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BOURNS®

Packaging Specifications



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

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REV. 04/24

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