



Features

- Shielded construction for low radiation
- Metal alloy powder core
- High saturation current
- Low profile
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

Applications

- Automotive systems
- DC-DC converters
- Miniature electronic devices

Sustainability

- ISO 14001, low-impact energy
- Responsibly sourced and produced
- Meets EU 94/62/EC standards

Product Overview

The Bourns® SRP2512PA Series Shielded Power Inductors feature a metal alloy powder core and shielded construction to minimize magnetic field radiation while supporting tight component placement on densely packed automotive

PCBs. These power inductors deliver saturation currents up to 9 A in a low profile design and operate across a -40 to +145 °C temperature range.

Electrical Specifications (@ T_A = 25 °C Unless Otherwise Noted)

Bourns Part Number	Inductance @ 1 MHz/1 V		Q Typ.	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	I _{rms} (A) Typ.	I _{sat} (A) Typ.
	L (μH)	Tolerance (%)						
SRP2512PA-R22M	0.22	±20	30	>120	8	13	8.5	9.0
SRP2512PA-R33M	0.33	±20	30	>120	13	18	6.6	7.8
SRP2512PA-R47M	0.47	±20	30	>120	16	22	5.8	6.8
SRP2512PA-R68M	0.68	±20	30	>120	26	34	4.7	5.4
SRP2512PA-1R0M	1.00	±20	30	70	36	42	3.9	4.8
SRP2512PA-1R5M	1.50	±20	30	60	54	60	2.9	4.0
SRP2512PA-2R2M	2.20	±20	30	50	74	89	2.5	3.5
SRP2512PA-3R3M	3.30	±20	30	40	116	130	2.1	2.8

General Specifications

Operating Temperature .. -40 °C to +145 °C (Temperature rise included)
 Storage Temperature -50 °C to +145 °C (On-board)
 Temperature Rise 40 °C at rated I_{rms}
 Inductance Drop 30 % typ. at I_{sat}
 Weight 0.036 g
 Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A

Materials

Core Metal alloy powder
 Wire Enameled Copper
 Terminal Finish Cu/Ni/Sn
 Packaging 3,000 pcs. per 7-inch reel

Contact Information

	Phone	Email
Asia-Pacific	+886-2 2562-4117	asiacus@bourns.com
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The Americas	+1-951 781-5500	americus@bourns.com

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

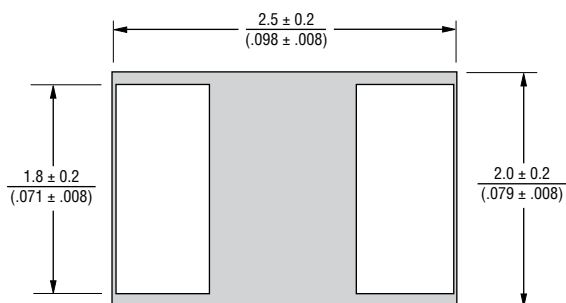
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice.

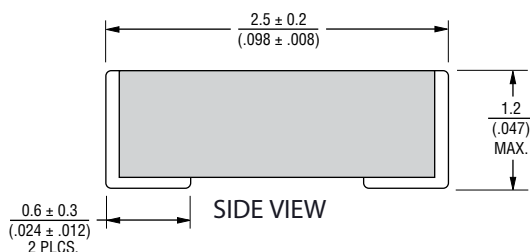
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Product Dimensions



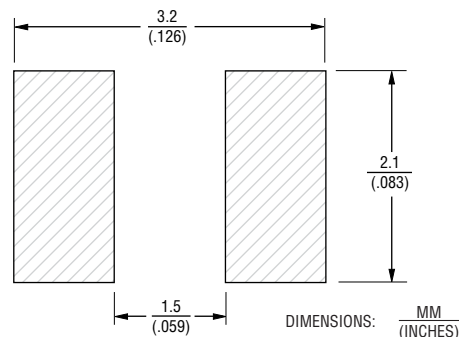
TOP VIEW



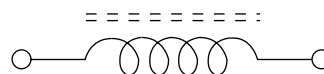
SIDE VIEW

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

Recommended Layout



Electrical Schematic

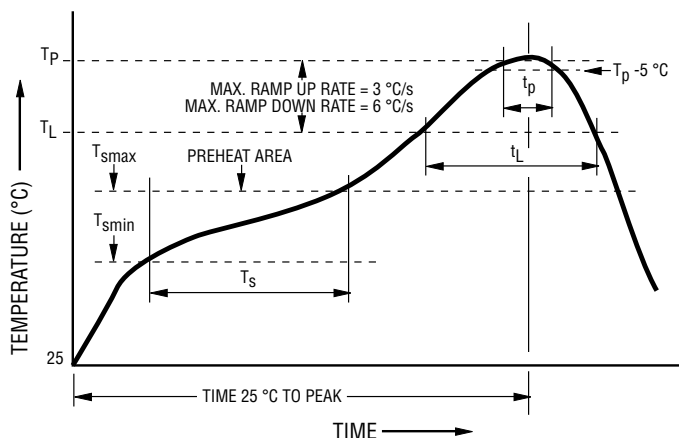


How to Order

SRP2512PA - R22 M

Series _____
Value Code _____
Tolerance _____
M = ±20 %

Soldering Profile

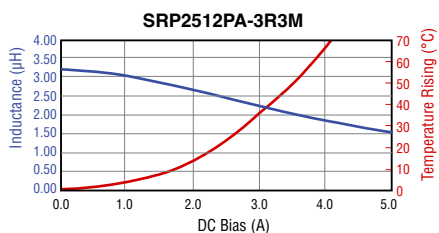
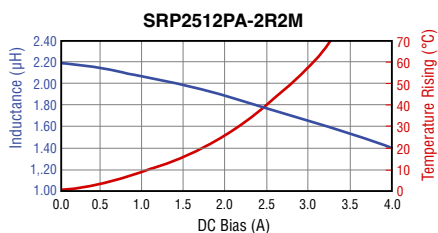
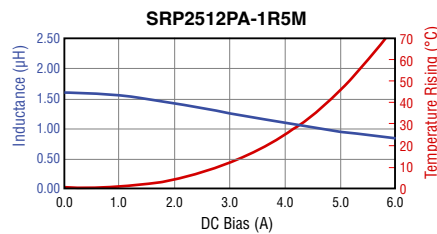
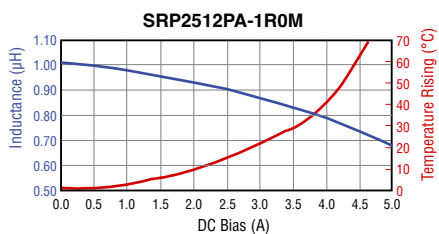
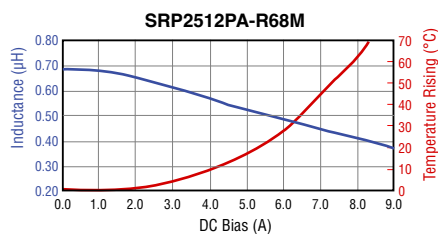
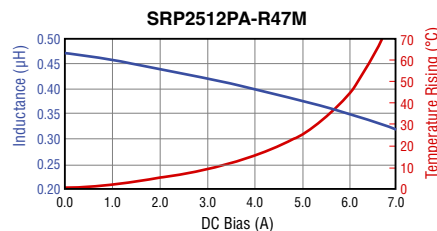
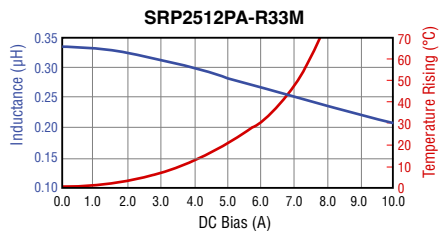
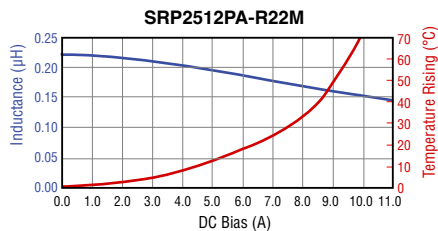


NOTE: The product has been tested under this reflow condition. Deviations from this, especially higher temperatures or longer durations, could impact performance.

Profile Feature	Pb-Free Assembly
Preheat / Soak: 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 (t_p) within 5 °C of the 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.



Characteristic Changes vs. IDC

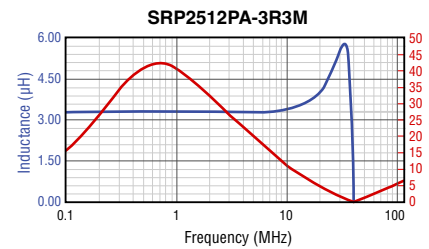
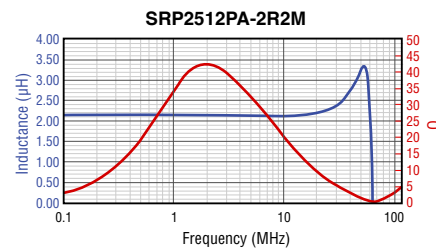
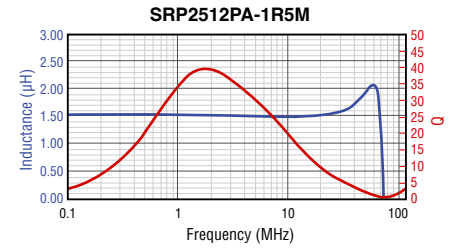
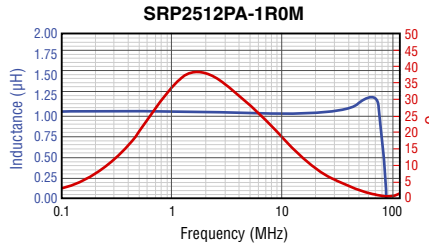
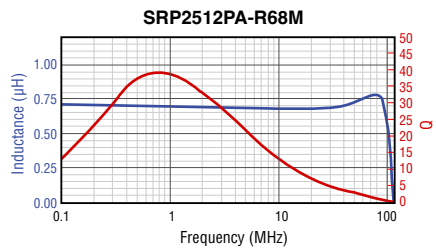
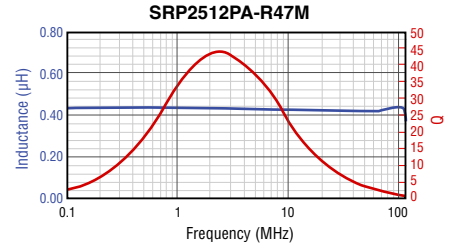
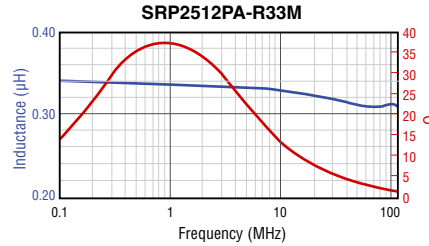
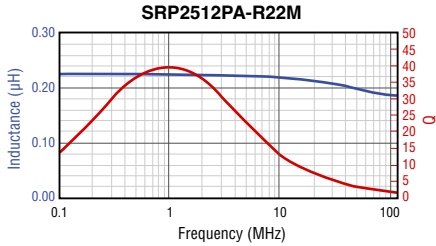


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Characteristic Changes vs. Frequency

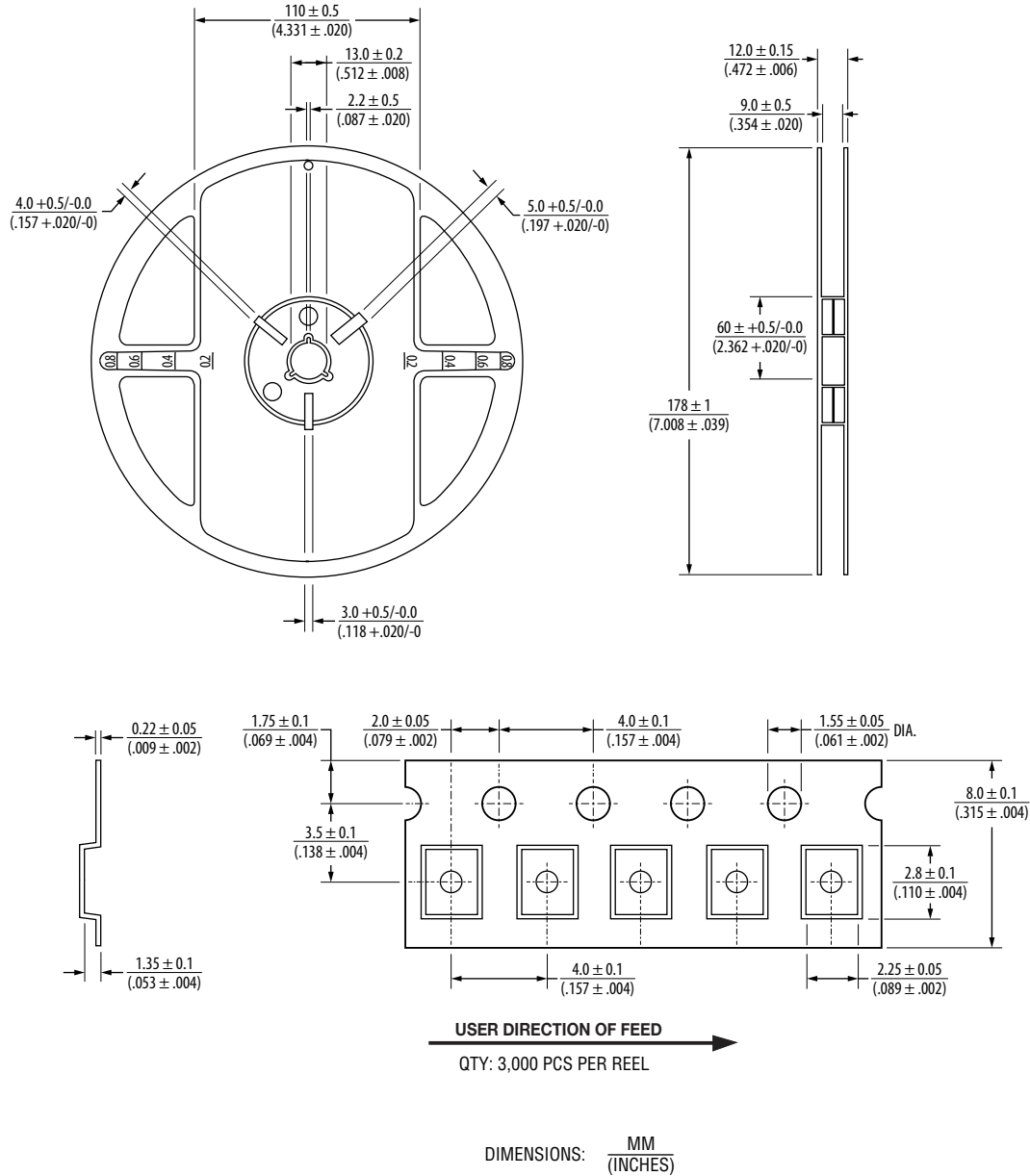


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Packaging Specifications



REV. 06/26

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