



Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Flat wire
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

Applications

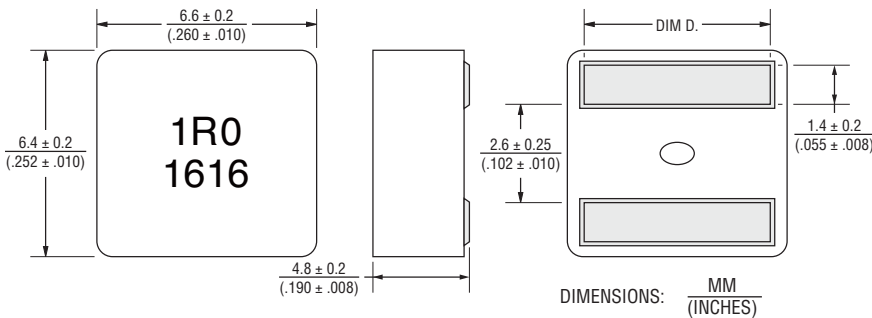
- Selected automotive applications:
 - Driver assistant
 - Infotainment
 - Lighting
- DC/DC converters
- Power supplies

SRP6050CA Series – Shielded Power Inductors

Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 100 kHz / 0.1 V		SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	I rms (A) Typ.		I sat (A) Typ.	D Dim. (mm) ± 0.3 mm
	L (μH)	Tol. %				20 °C Temp. Rise	40 °C Temp. Rise		
SRP6050CA-1R0M	1.0	± 20 %	50	4.1	4.52	15	20	23.0	5.3
SRP6050CA-1R2M	1.2	± 20 %	43	5.3	5.83	14	18	22.0	5.3
SRP6050CA-1R5M	1.5	± 20 %	40	5.7	6.3	13	17	19.5	5.3
SRP6050CA-1R8M	1.8	± 20 %	33	6.4	7.1	12	16	18.5	5.3
SRP6050CA-2R2M	2.2	± 20 %	30	7.7	8.5	10	13	16.0	5.2
SRP6050CA-3R3M	3.3	± 20 %	25	11.2	12.5	8.5	11	12.5	5.2
SRP6050CA-4R3M	4.3	± 20 %	23	15.1	16.2	7.0	9.0	11.0	5.2
SRP6050CA-4R7M	4.7	± 20 %	22	16.7	18.4	6.5	8.5	10.5	5.2

Product Dimensions



General Specifications

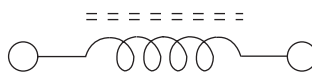
Operating Temperature -55 °C to +155 °C
 (Temperature rise included)
 Storage Temperature (Component) -55 °C to +155 °C
 Rated Current Inductance drops 30 % at Isat
 Temperature Rise 20 or 40 °C at rated Irms¹
 MSL 1
 ESD Classification (HBM) N/A

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.

How to Order

SRP6050CA - 1R0M
 Model _____
 Value Code (see table) _____

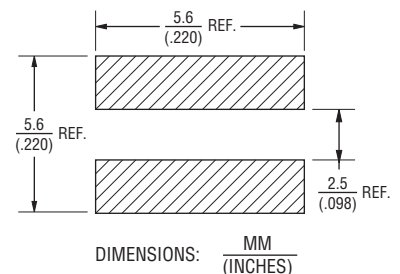
Schematic



Materials

Core Metal alloy powder
 Wire Enameled copper
 Terminal Finish Sn
 Packaging 800 pcs. per 13-inch reel

Recommended Layout



Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 520 390 • Email: eurocus@bourns.com

The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

www.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.

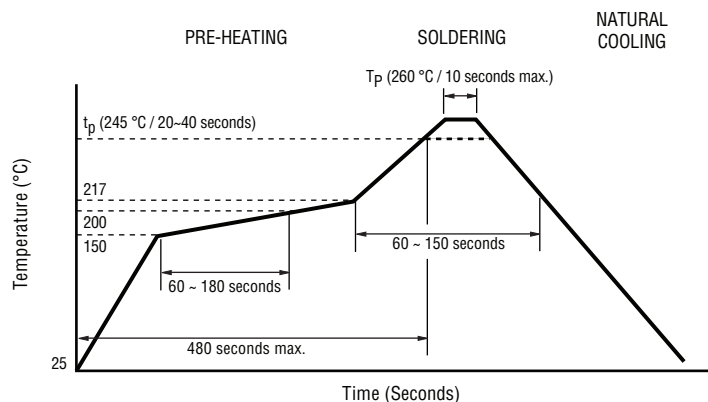
Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

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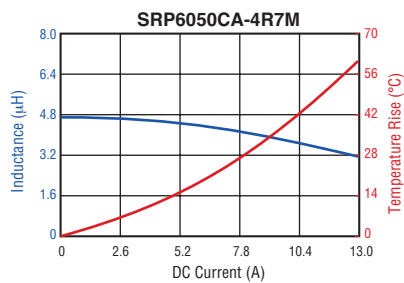
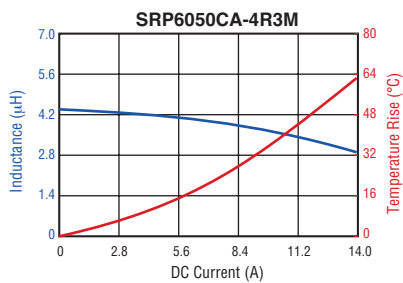
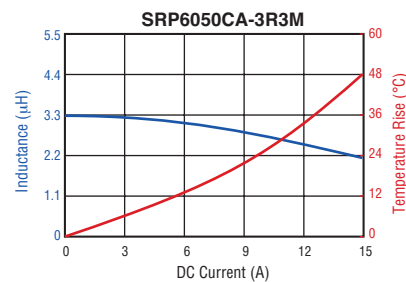
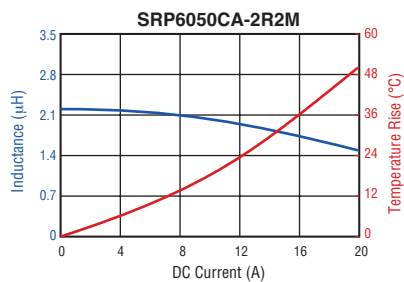
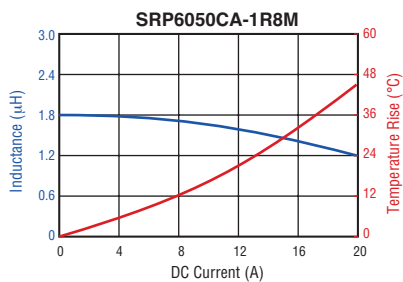
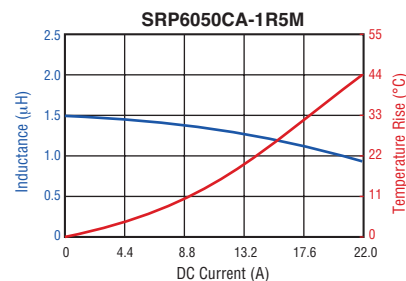
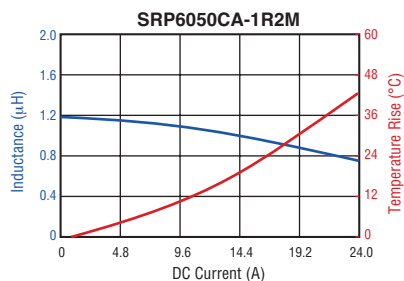
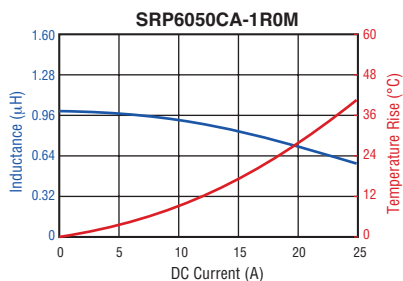
Soldering Profile



REFLOW TIMES: 3 MAX.

NOTE: 0.15 mm thick solder paste recommended.

L vs. I Charts



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Packaging Specifications

