



## Features

- High saturation current - up to 8 A
- Inductance range: 1.5 to 820  $\mu$ H
- Heating current up to 7.2 A
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

**BOURNS®**

## SDE1006A Series - SMD Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance		Test Freq./Voltage	SRF (MHz) Typ.	DCR ( $\Omega$ ) Max.	I rms (A)	I sat (A)
	L ( $\mu$ H)	Tol. (%)					
SDE1006A-1R5M	1.5	20	1 MHz / 1 V	69.6	0.018	7.2	8.0
SDE1006A-2R2M	2.2	20	1 MHz / 1 V	57.7	0.021	6.0	6.6
SDE1006A-3R3M	3.3	20	1 MHz / 1 V	48.8	0.024	5.4	6.0
SDE1006A-3R9M	3.9	20	1 MHz / 1 V	40.6	0.027	5.2	5.7
SDE1006A-4R7M	4.7	20	1 MHz / 1 V	37.4	0.036	4.7	5.2
SDE1006A-5R6M	5.6	20	1 MHz / 1 V	35.6	0.04	4.5	5.0
SDE1006A-6R8M	6.8	20	1 MHz / 1 V	32.1	0.044	4.2	4.6
SDE1006A-8R2M	8.2	20	1 MHz / 1 V	27.9	0.048	4.1	4.3
SDE1006A-100M	10	20	1 MHz / 1 V	25	0.06	3.8	4.0
SDE1006A-120M	12	20	1 MHz / 1 V	23	0.07	3.6	3.8
SDE1006A-150M	15	20	1 MHz / 1 V	19.8	0.08	3.4	3.6
SDE1006A-180M	18	20	1 MHz / 1 V	19.3	0.09	2.8	3.0
SDE1006A-220M	22	20	1 MHz / 1 V	16	0.1	2.6	2.8
SDE1006A-270M	27	20	1 MHz / 1 V	13.3	0.11	2.3	2.5
SDE1006A-330M	33	20	1 MHz / 1 V	12.1	0.12	2.2	2.4
SDE1006A-390M	39	20	1 MHz / 1 V	12	0.14	1.9	2.1
SDE1006A-470K	47	10	1 MHz / 1 V	11	0.17	1.8	1.95
SDE1006A-560K	56	10	1 MHz / 1 V	10.2	0.19	1.7	1.8
SDE1006A-680K	68	10	1 MHz / 1 V	9.4	0.22	1.6	1.7
SDE1006A-820K	82	10	1 MHz / 1 V	8.8	0.25	1.5	1.6
SDE1006A-101K	100	10	1 KHz / 1 V	7.3	0.35	1.3	1.4
SDE1006A-121K	120	10	1 KHz / 1 V	6.6	0.4	1.2	1.3
SDE1006A-151K	150	10	1 KHz / 1 V	6.6	0.47	1.1	1.2
SDE1006A-181K	180	10	1 KHz / 1 V	6.1	0.63	1.0	1.1
SDE1006A-221K	220	10	1 KHz / 1 V	5.3	0.73	0.85	1.0
SDE1006A-271K	270	10	1 KHz / 1 V	4.3	0.97	0.75	0.85
SDE1006A-331K	330	10	1 KHz / 1 V	4.3	1.15	0.7	0.75
SDE1006A-391K	390	10	1 KHz / 1 V	3.3	1.3	0.65	0.7
SDE1006A-471K	470	10	1 KHz / 1 V	3.3	1.48	0.6	0.65
SDE1006A-561K	560	10	1 KHz / 1 V	3.3	1.9	0.55	0.6
SDE1006A-681K	680	10	1 KHz / 1 V	2.8	2.25	0.5	0.55
SDE1006A-821K	820	10	1 KHz / 1 V	2.2	2.55	0.45	0.5

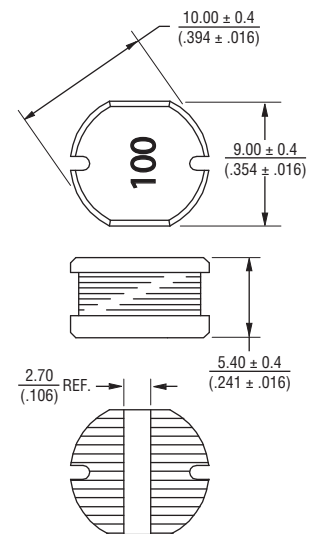
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Resistance to Soldering Heat ..... +245 °C for 10 sec.  
 Temperature Rise ..... 40 °C typ. at rated I rms  
 Inductance Drop ..... 10 % typ. at I sat

### Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Ag/Ni/Sn  
 Packaging ..... 800 pcs. per reel

### Product Dimensions

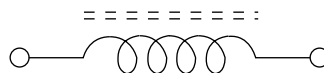


### How to Order

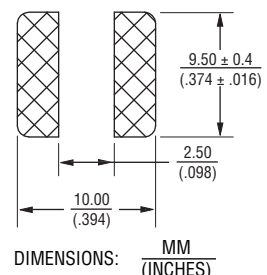
**SDE1006A - 100M**

Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

### Electrical Schematic



### Recommended Layout



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://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.

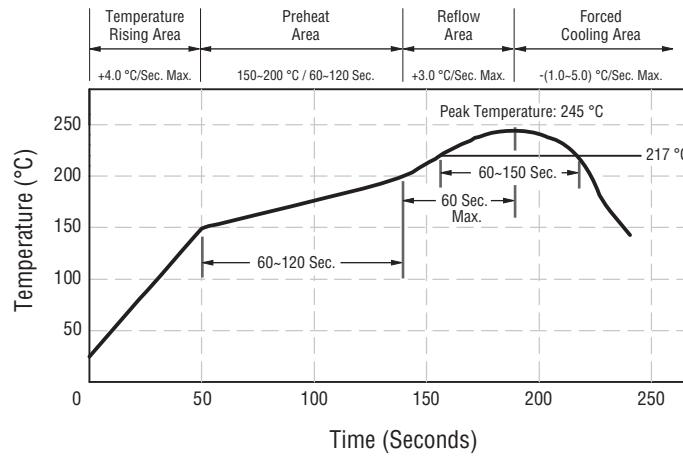
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# SDE1006A Series - SMD Power Inductors

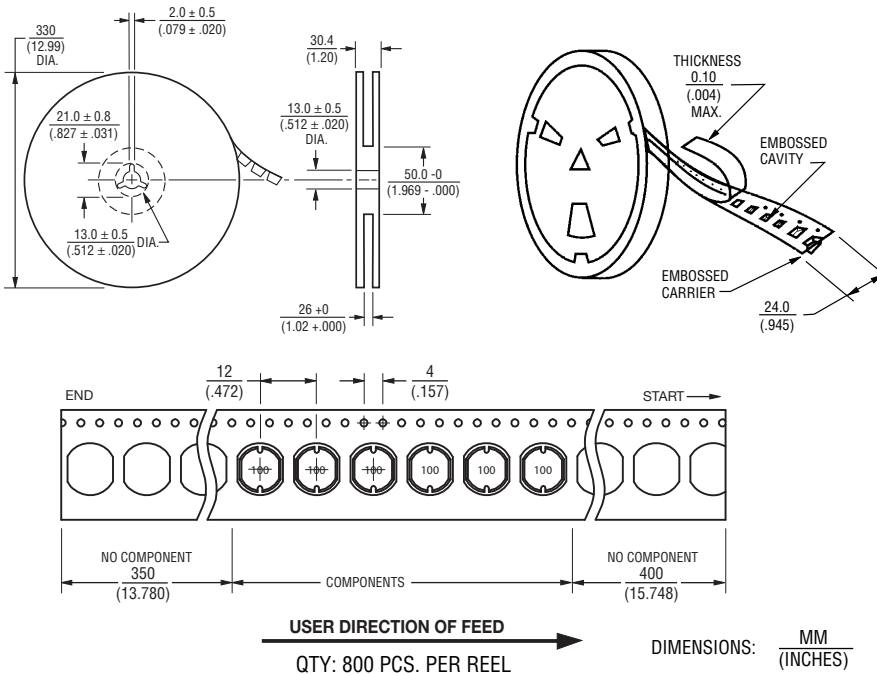
**BOURNS®**

## Soldering Profile

Peak Temperature: 245 °C max.  
 Max. Peak Temperature -5 °C: 30 sec. max.  
 Max. Time Above 217 °C: 60~150 sec. max.



## Packaging Specifications



**BOURNS®**

**Asia-Pacific:**  
 Tel: +886-2 2562-4117  
 Fax: +886-2 2562-4116

**Europe:**  
 Tel: +41-41 768 5555  
 Fax: +41-41 768 5510

**The Americas:**  
 Tel: +1-951 781-5500  
 Fax: +1-951 781-5700

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REV. 09/13

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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