



## Features

- Available in E6 series
- Low profile of only 5.0 mm
- Inductance as low as 0.68  $\mu$ H
- RoHS compliant\*

## Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TVs
  - Car radios

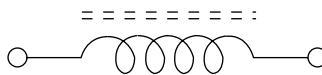
**BOURNS®**

## SDR1005 Series - SMD Power Inductors

### Electrical Specifications

Bourns Part Number	Inductance 1 kHz		Q Ref.	Test Frequency Q (MHz)	SRF Min. (MHz)	RDC Max. ( $\Omega$ )	I rms Max. (A)	I sat Typ. (A)
	( $\mu$ H)	Tol. %						
SDR1005-R68ML	0.68	$\pm 20$	26	7.960	160	0.006	8.50	9.50
SDR1005-1R0ML	1	$\pm 20$	55	2.600	137	0.007	7.50	9.00
SDR1005-1R5ML	1.5	$\pm 20$	50	3.000	95	0.009	6.50	8.00
SDR1005-2R2ML	2.2	$\pm 20$	51	2.470	65	0.012	6.10	7.00
SDR1005-2R5ML	2.5	$\pm 20$	49	3.000	56	0.012	5.50	7.00
SDR1005-3R3ML	3.3	$\pm 20$	45	2.520	54	0.015	5.00	6.40
SDR1005-4R7ML	4.7	$\pm 20$	46	2.700	42	0.019	4.50	5.40
SDR1005-6R8ML	6.8	$\pm 20$	56	2.000	31	0.030	3.40	4.50
SDR1005-100ML	10	$\pm 20$	43	4.000	26	0.050	2.90	3.70
SDR1005-150ML	15	$\pm 20$	42	2.700	22	0.060	2.50	3.00
SDR1005-220ML	22	$\pm 20$	29	2.520	18	0.10	2.00	2.50
SDR1005-330KL	33	$\pm 10$	29	2.200	14	0.12	1.80	2.00
SDR1005-470KL	47	$\pm 10$	30	2.200	12	0.19	1.40	1.60
SDR1005-680KL	68	$\pm 10$	24	2.200	11	0.24	1.20	1.40
SDR1005-101KL	100	$\pm 10$	41	0.056	8	0.33	1.00	1.20
SDR1005-151KL	150	$\pm 10$	58	0.087	6	0.59	0.80	1.00
SDR1005-221KL	220	$\pm 10$	50	0.068	5	0.78	0.70	0.80
SDR1005-331KL	330	$\pm 10$	56	0.070	4	1.15	0.55	0.60
SDR1005-471KL	470	$\pm 10$	60	0.081	4	1.70	0.45	0.50
SDR1005-681KL	680	$\pm 10$	72	0.096	3	2.60	0.35	0.40
SDR1005-102KL	1000	$\pm 10$	78	0.122	2	3.90	0.30	0.35
SDR1005-152KL	1500	$\pm 10$	97	0.131	2	6.30	0.25	0.30
SDR1005-222KL	2200	$\pm 10$	85	0.128	2	8.20	0.20	0.24
SDR1005-332KL	3300	$\pm 10$	106	0.128	1	14.00	0.16	0.18
SDR1005-472KL	4700	$\pm 10$	96	0.125	1	17.00	0.15	0.16
SDR1005-682KL	6800	$\pm 10$	105	0.171	1	30.00	0.11	0.12
SDR1005-822KL	8200	$\pm 10$	102	0.145	1	34.00	0.11	0.12
SDR1005-103KL	10000	$\pm 10$	102	0.138	1	39.00	0.10	0.11

### Electrical Schematic



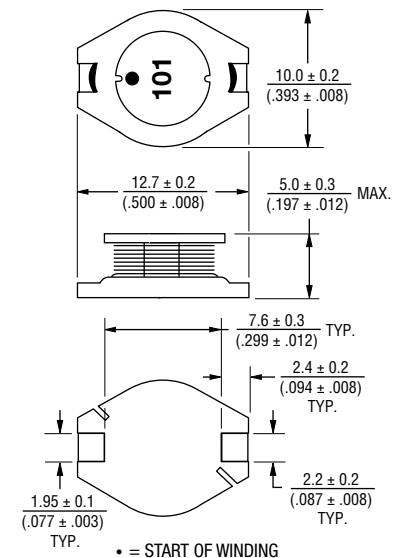
### General Specifications

Test Voltage ..... 0.1 V, 100 KHz  
 Reflow Soldering .. 250 °C, 10 sec. max.  
 (in compliance with JEDEC, J-STD-020C, Table 4-2)  
 Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Resistance to Soldering Heat ..... +250 °C, 10 sec. max.

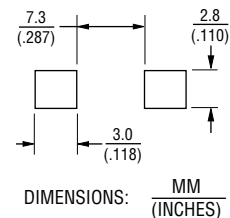
### Materials

Core ..... Ferrite DR  
 Wire ..... Enameled copper  
 Base ..... DAP  
 Terminal ..... Cu/Sn  
 Rated Current ..... Ind. drop 10 % typ. at Isat  
 Temperature Rise ..... 15 °C max. at rated I rms  
 Packaging ..... 600 pcs. per reel

### Product Dimensions



### Recommended Layout

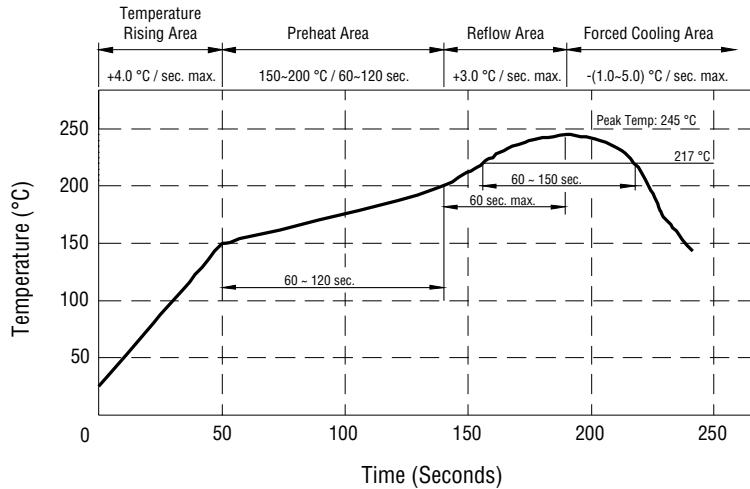


\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
 Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.

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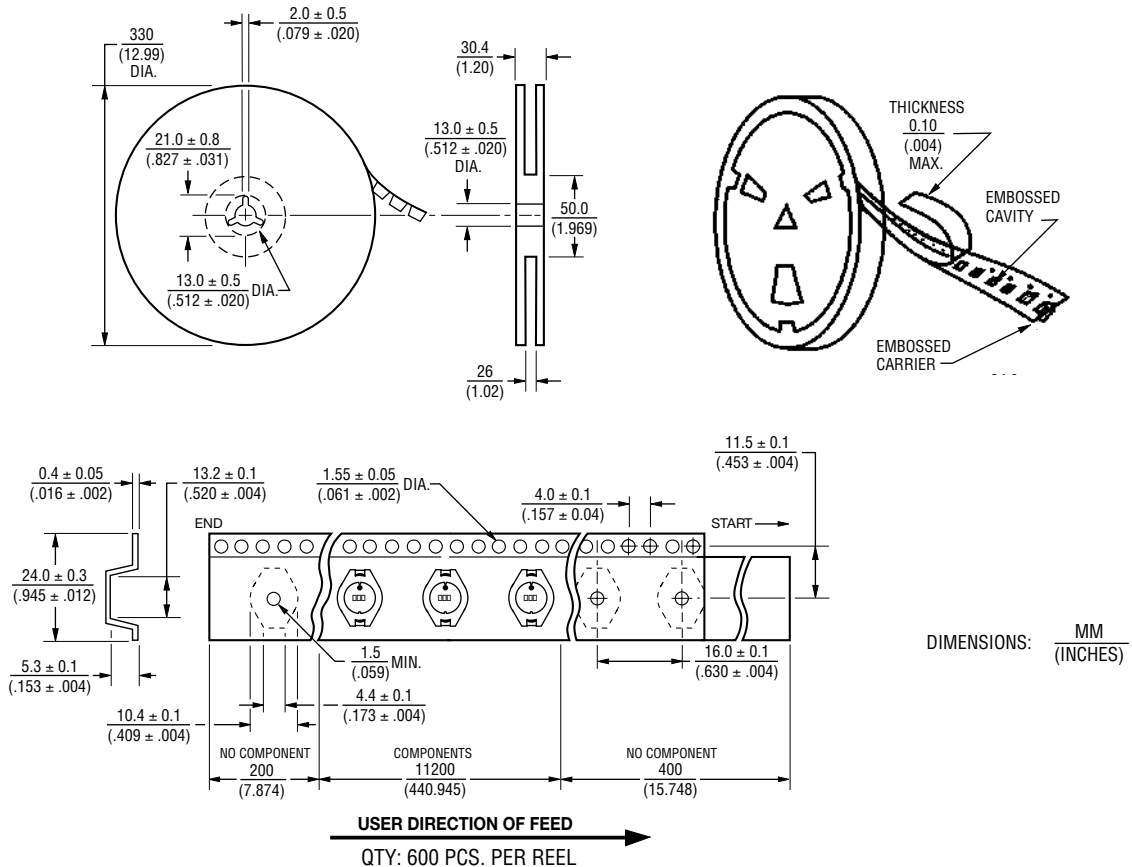
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## Soldering Profile



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

## Packaging Specifications



REV. 05/17

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