



Features

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

Applications

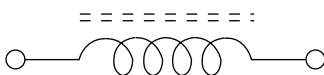
- Input/output of DC/DC converters
- Power supplies for:
 - Portable communications equipment
 - Camcorders
 - LCD TVs
 - Car radios

SDR1005 Series - SMD Power Inductors

Electrical Specifications

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

Electrical Schematic



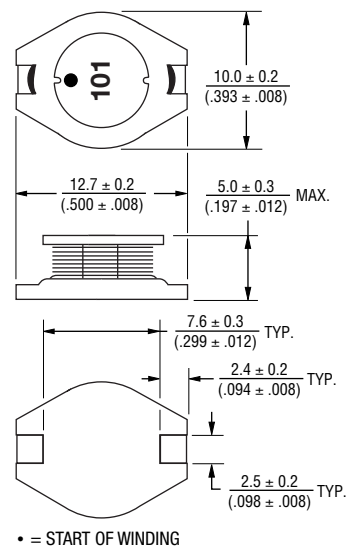
General Specifications

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.

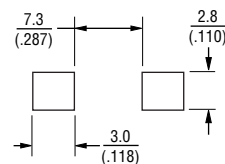
Materials

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



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

*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.
 Customers should verify actual device performance in their specific applications.

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The graph illustrates the temperature profile over time for a soldering process. The Y-axis represents Temperature in degrees Celsius (°C), ranging from 0 to 250. The X-axis represents Time in Seconds, ranging from 0 to 250. The profile is divided into four distinct regions:

- Temperature Rising Area:** The temperature rises at a maximum rate of $+4.0^{\circ}\text{C} / \text{sec. max.}$ from approximately 25°C at 0 seconds to 150°C at 50 seconds.
- Preheat Area:** The temperature continues to rise at a slower rate, reaching a plateau of 150°C between 50 and 120 seconds. The duration of this area is marked as 60 ~ 120 sec.
- Reflow Area:** The temperature rises to a peak of 245°C at approximately 190 seconds. The duration of this area is marked as 60 ~ 150 sec. The maximum temperature rise rate in this area is $+3.0^{\circ}\text{C} / \text{sec. max.}$. A specific time interval of 60 sec. max. is also indicated within this region.
- Forced Cooling Area:** The temperature decreases from the peak of 245°C to 217°C at approximately 230 seconds. The cooling rate is marked as $-(1.0-5.0)^{\circ}\text{C} / \text{sec. max.}$.

Technical drawing of a 101 Series 100% Conductive Paste Dispensing Tip. The drawing includes three views: a top view, a side view, and a perspective view. The top view shows a circular tip with a central hole and a diameter of 21.0 ± 0.8 (.827 $\pm$.031). The side view shows a rectangular tip with a width of 30.4 (1.20) and a height of 50.0 (1.969). The perspective view shows the tip mounted on an embossed carrier. Dimensions are given in both inches and millimeters. A note indicates that dimensions are in millimeters unless otherwise specified.

Top View Dimensions:

- Overall Diameter: 330 (12.99) DIA.
- Central Hole Diameter: 21.0 ± 0.8 (.827 $\pm$.031)
- Inner Hole Diameter: 13.0 ± 0.5 (.512 $\pm$.020) DIA.

Side View Dimensions:

- Tip Width: 30.4 (1.20)
- Tip Height: 50.0 (1.969)
- Tip Thickness: 2.0 ± 0.5 (.079 $\pm$.020)

Perspective View Labels:

- THICKNESS 0.10 (.004) MAX.
- EMBOSSED CAVITY
- EMBOSSED CARRIER

Bottom View Dimensions:

- Overall Length: 11200 (440.945)
- Tip Length: 16.0 ± 0.1 (.630 $\pm$.004)
- Tip Width: 4.0 ± 0.1 (.157 $\pm$.004)
- Tip Thickness: 1.55 ± 0.05 (.061 $\pm$.002) DIA.
- Tip Height: 13.2 ± 0.1 (.520 $\pm$.004)
- Tip Width: 10.4 ± 0.1 (.409 $\pm$.004)
- Tip Thickness: 5.3 ± 0.1 (.153 $\pm$.004)
- Tip Height: 24.0 ± 0.3 (.945 $\pm$.012)
- Tip Width: 0.4 ± 0.05 (.016 $\pm$.002)

Bottom View Labels:

- END
- START
- NO COMPONENT 200 (7.874)
- COMPONENTS 11200 (440.945)
- NO COMPONENT 400 (15.748)

USER DIRECTION OF FEED

QTY: 600 PCS. PER REEL

DIMENSIONS: MM (INCHES)

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