



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

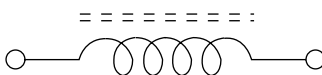
BOURNS®

SDR1005 Series - SMD Power Inductors

Electrical Specifications

Bourns Part Number	Inductance 1 kHz		Q Ref.	Test Frequency Q (MHz)	SRF Min. (MHz)	RDC Max. (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



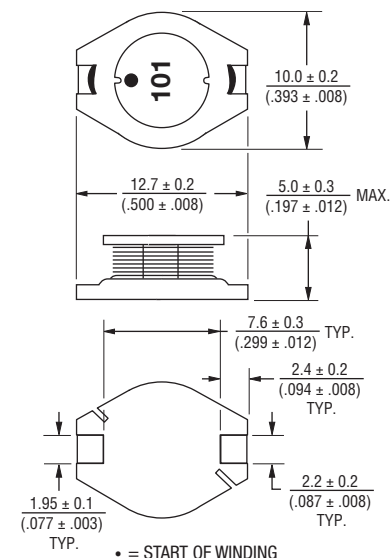
General Specifications

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.
 Moisture Sensitivity Level 1
 ESD Classification (HBM)..... N/A

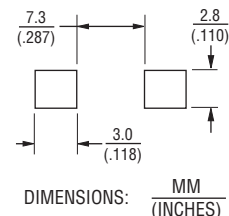
Materials

Core Ferrite DR
 Wire Enamelled 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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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 process is divided into four distinct areas:

- Temperature Rising Area:** The temperature rises at a maximum rate of $+4.0^{\circ}\text{C} / \text{sec. max.}$ from approximately 25°C to 150°C.
- Preheat Area:** The temperature is held between $150\text{--}200^{\circ}\text{C}$ for a duration of $60\text{--}120\text{ sec.}$.
- Reflow Area:** The temperature rises at a maximum rate of $+3.0^{\circ}\text{C} / \text{sec. max.}$ from approximately 200°C to a peak of 245°C . The duration of this area is $60\text{--}150\text{ sec.}$ with a maximum rate of 60 sec. max. .
- Forced Cooling Area:** The temperature is cooled at a maximum rate of $-(1.0\text{--}5.0)^{\circ}\text{C} / \text{sec. max.}$ from the peak temperature down to 217°C .

Technical drawing of a 12-hole punch tape. The drawing includes three views: a top view, a side view, and a detail view of the embossed carrier.

Top View Dimensions:

- Overall width: 330 ± 0.5 (12.99) DIA.
- Inner hole diameter: 21.0 ± 0.8 (.827 $\pm$.031)
- Outer hole diameter: 13.0 ± 0.5 (.512 $\pm$.020) DIA.
- Distance between hole centers: 13.0 ± 0.5 (.512 $\pm$.020) DIA.
- Distance from edge to hole center: 30.4 (1.20)
- Distance from hole center to edge: 50.0 (1.969)
- Distance from hole center to edge: 26 (1.02)

Side View Dimensions:

- Overall thickness: 2.0 ± 0.5 (.079 $\pm$.020)
- Distance from edge to hole center: 30.4 (1.20)
- Distance from hole center to edge: 50.0 (1.969)
- Distance from hole center to edge: 26 (1.02)

Detail View Dimensions:

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

Bottom View Dimensions:

- Overall length: 11200 (440.945)
- Distance from edge to hole center: 13.2 ± 0.1 (.520 $\pm$.004)
- Distance from hole center to edge: 1.55 ± 0.05 (.061 $\pm$.002) DIA.
- Distance from hole center to edge: 4.0 ± 0.1 (.157 $\pm$.004)
- Distance from hole center to edge: 16.0 ± 0.1 (.630 $\pm$.004)
- Distance from hole center to edge: 11.5 ± 0.1 (.453 $\pm$.004)
- Distance from hole center to edge: 4.4 ± 0.1 (.173 $\pm$.004)
- Distance from hole center to edge: 1.5 (.059) MIN.
- Distance from hole center to edge: 10.4 ± 0.1 (.409 $\pm$.004)
- Distance from hole center to edge: 5.3 ± 0.1 (.153 $\pm$.004)
- Distance from hole center to edge: 24.0 ± 0.3 (.945 $\pm$.012)
- Distance from hole center to edge: 0.4 ± 0.05 (.016 $\pm$.002)

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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