

## Data Sheet

**Customer:**

**Product:** SMD Flat Wire Coils

**Sizes.:** 0530

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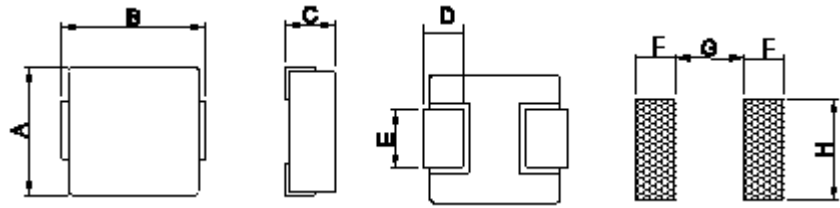
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## SMD Flat Wire Coils



### Features

- Large current adaptable
- Footprint compatible with most standard
- Lower temperature rise at large current
- Low profile, low DCR
- Available on tape and reel for auto surface mounting

### Applications

- Laptop / Desktop / Notebook Computers
- Terminals / Portable Servers / Workstation
- DC/DC Converter in Distributed Power Systems or VRM Applications
- Thin Type On-board Power Supply Module for Exchanger

### Dimensions

Unit: mm

Type	A	B	C max.	D	E	F	G	H
SDN0530	5.2±0.2	5.4±0.3	3.0	1.2±0.2	2.2±0.3	1.9	2.2	2.5

### Characteristics

- Saturation Rated Current would cause inductance to drop approximately 30%
- Temperature Rise Current would cause an approximately  $\Delta T$  of 40°C
- All test data is referred to 25°C ambient
- Test equipment:
  - L: HP4284A LCR meter
  - DCR: Milli-ohm meter
- Electrical specifications at 25°C
- Operating temperature rang: -55°C~+125°C(ambient plus self-temperature rise)
- The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

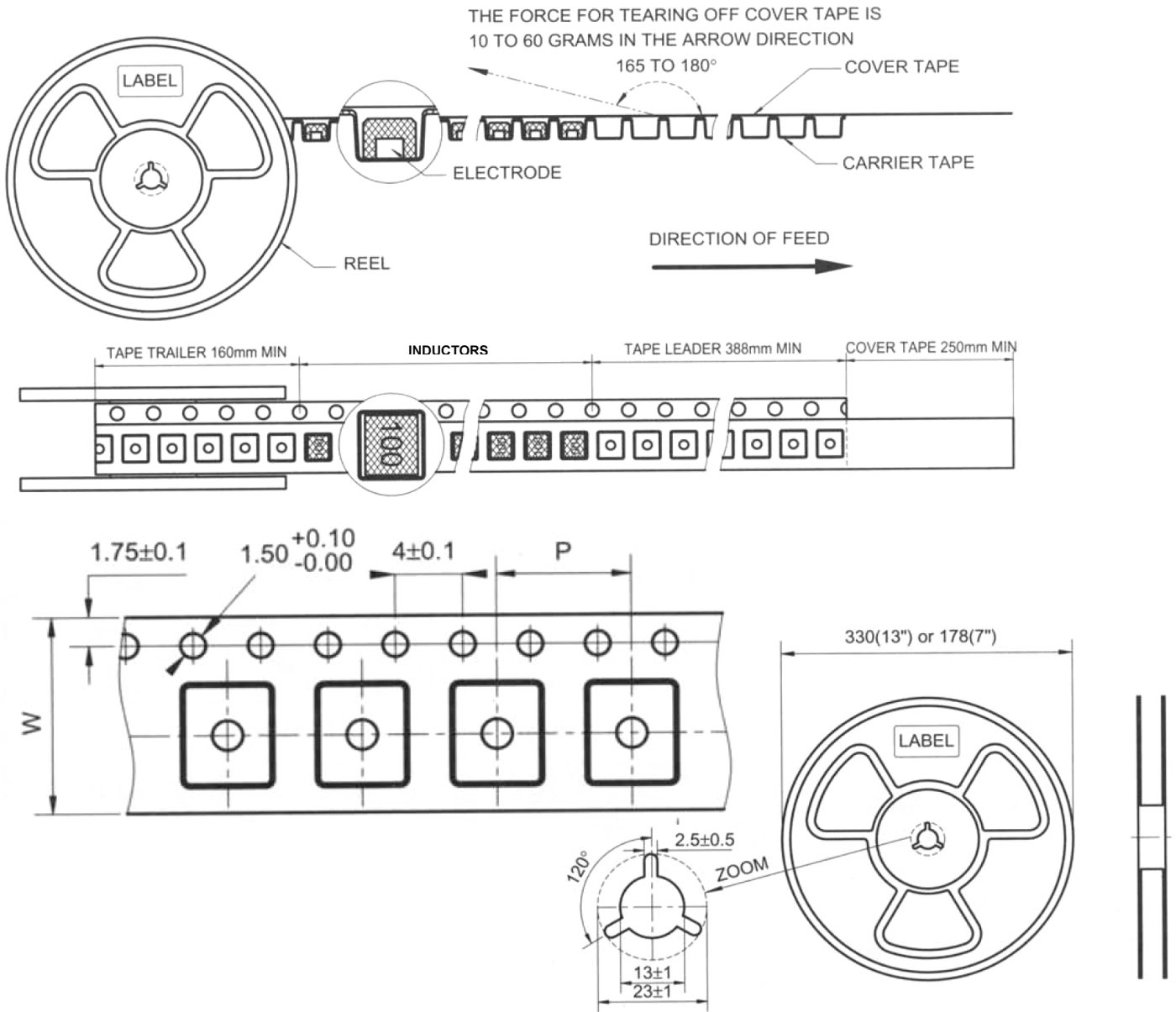
### Product Identification

SDN	0530	M	T	2R2
Product Type	Dimensions (AxBxC) 0530: 5.2×5.4×3.0	Inductor Tolerance M: ±20%	Packaging Style T: Tape and Reel	Inductance R20: 0.20 uH 2R2: 2.2uH 100: 10 uH

### Electrical Characteristics

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	3.0	33.0	25.0
R20	0.20	M	100KHz, 0.25V	3.9	14.5	14.0
R47	0.47	M	100KHz, 0.25V	8.5	12.0	11.0
R68	0.68	M	100KHz, 0.25V	12.0	11.5	9.0
1R0	1.0	M	100KHz, 0.25V	14.0	11.0	8.5
1R2	1.2	M	100KHz, 0.25V	16.0	11.0	8.5
1R5	1.5	M	100KHz, 0.25V	25.0	8.5	8.2
2R2	2.2	M	100KHz, 0.25V	29.0	7.5	7.0
3R3	3.3	M	100KHz, 0.25V	38.0	6.0	5.5
4R7	4.7	M	100KHz, 0.25V	60.0	5.0	4.5
6R8	6.8	M	100KHz, 0.25V	90.0	4.0	3.5
100	10	M	100KHz, 0.25V	125.0	3.5	3.2

■Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
SDN0530	12	8	2000

SMD Flat Wire Coils

General Characteristics

Item	Requirement	Test Method
Solderability	More than 90% of the terminal electrode should be covered with solder	230±5°C for 4±1 seconds
Solder Heat Resistance	Inductance within±20% of initial value No disconnection or short circuit The appearance shall not break	260±5°C for 10±1 seconds
Heat Resistance		Temperature: 125±5°C Time: 500 hours Tested after 2 hour at room temperature
Cold Resistance		Temperature: -40±5°C Time: 500 hours Tested after 2 hour at room temperature
Thermal Shock		One cycle:
Humidity Resistance		Temperature: 40±2°C, 90~95% relative humidity Time: 500 hours Tested after 2 hour at room temperature
Vibration Test	Inductance within±5% of initial value The appearance shall not break	After vibration for 1hour, in each of three orientations at sweep vibration (10~55~10Hz) with 1.52mm P-P amplitudes

Step	Temperature(°C)	Time (min.)
1	-40±5°C	30
2	Room temperature	3
3	125±5°C	30

The condition of reflow (recommendation):

