

Data Sheet

Customer:

Product: Shielded SMD Power Inductor – SDRH Series

Sizes.: 0830/0840/0845

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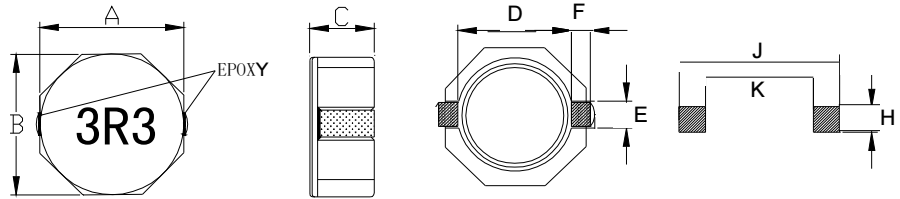
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Shielded SMD Power Inductor



Dimensions

Unit: mm

Codes	A	B	C max.	D ref	E ref	F ref	H	J	K
SDRH0830	8.0±0.3	8.0±0.3	3.0	6.3	2.5	1.2	2.8	10.1	6.1
SDRH0840	8.0±0.3	8.0±0.3	4.0	6.3	2.5	1.2	2.8	10.1	6.1
SDRH0845	8.0±0.3	8.0±0.3	4.5	6.3	2.5	1.2	2.8	10.1	6.1

Features

- Magnetically shielded construction
- ROHS compliance

Inductance and rated current ranges

- SDRH0830 1.0~100µH 6.5~0.75A
- SDRH0840 1.8~100µH 6.5~0.88A
- SDRH0845 1.0~100µH 8.5~1.30A

Applications

- LCD TV
- DC to DC Converters
- Notebook PC

- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Characteristics

- Rated DC Current : The current when the inductance becomes 35% lower than its initial value.
- Operating temperature: -40~125°C

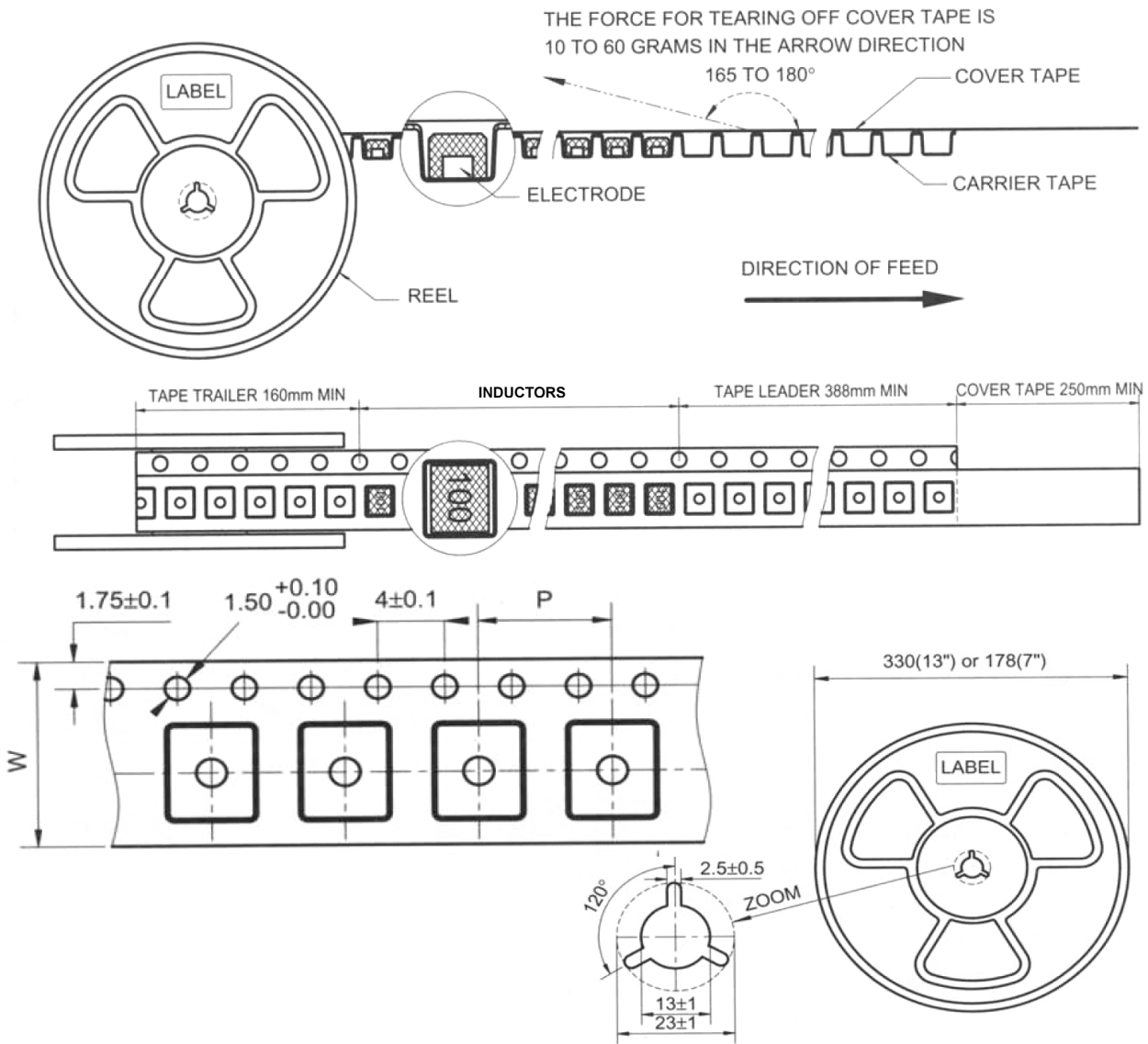
Product Identification

SDRH	0830	N	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	0830: 8.0x8.0x3.0 0840: 8.0x8.0x4.0 0845: 8.0x8.0x4.5	N: ±30%	T: Tape and Reel	1R0: 1.0µH 470: 47µH 101: 100µH

Electrical Characteristics

Codes	L (μ H)	Tolerance	Test Condition		DCR (m Ω) max.			IDC (A) max.		
			0830	0840 0845	0830	0840	0845	0830	0840	0845
1R0	1.0	N	100KHz, 0.25V	100KHz, 0.1V	11.0	-	9.50	6.50	-	9.00
1R2	1.2	N	100KHz, 0.25V	100KHz, 0.1V	-	-	12.2	-	-	8.00
1R5	1.5	N	100KHz, 0.25V	100KHz, 0.1V	-	-	13.0	-	-	7.80
1R8	1.8	N	100KHz, 0.25V	100KHz, 0.1V	-	15.6	-	-	7.00	-
2R0	2.0	N	100KHz, 0.25V	100KHz, 0.1V	-	-	14.0	-	-	7.00
2R2	2.2	N	100KHz, 0.25V	100KHz, 0.1V	-	-	15.0	-	-	6.80
2R5	2.5	N	100KHz, 0.25V	100KHz, 0.1V	15.6	17.5	16.0	4.50	6.50	6.60
3R3	3.3	N	100KHz, 0.25V	100KHz, 0.1V	18.2	-	17.0	4.00	-	6.20
3R5	3.5	N	100KHz, 0.25V	100KHz, 0.1V	-	24.0	-	-	5.00	-
3R9	3.9	N	100KHz, 0.25V	100KHz, 0.1V	-	-	19.0	-	-	5.90
4R7	4.7	N	100KHz, 0.25V	100KHz, 0.1V	24.7	29.0	22.0	3.40	4.60	5.60
6R0	6.0	N	100KHz, 0.25V	100KHz, 0.1V	-	32.0	-	-	4.20	-
6R8	6.8	N	100KHz, 0.25V	100KHz, 0.1V	-	-	25.0	-	-	4.40
7R3	7.3	N	100KHz, 0.25V	100KHz, 0.1V	39.0	-	-	2.80	-	-
100	10	N	100KHz, 0.25V	100KHz, 0.1V	47.0	48.0	36.0	2.50	3.00	4.00
150	15	N	100KHz, 0.25V	100KHz, 0.1V	69.0	67.0	53.0	1.90	2.75	2.90
180	18	N	100KHz, 0.25V	100KHz, 0.1V	-	-	72.0	-	-	2.70
220	22	N	100KHz, 0.25V	100KHz, 0.1V	99.0	105	75.0	1.60	2.30	2.60
270	27	N	100KHz, 0.25V	100KHz, 0.1V	-	-	100	-	-	2.25
330	33	N	100KHz, 0.25V	100KHz, 0.1V	156	157	125	1.30	1.75	2.20
470	47	N	100KHz, 0.25V	100KHz, 0.1V	195	189	150	1.15	1.52	1.80
680	68	N	100KHz, 0.25V	100KHz, 0.1V	286	290	240	0.92	1.30	1.50
101	100	N	100KHz, 0.25V	100KHz, 0.1V	430	410	360	0.75	1.05	1.30

■Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
SDRH0830	24	12	1000
SDRH0840	24	12	1000
SDRH0845	24	12	1000

■ SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: 25±3°C; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.

Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Temperature 85±2°C, Time: 48±2 hours, Tested after 1 hour at room temperature.
Low temperature Storage test		Temperature -25±2°C, Time: 48±2 hours, Tested after 1 hour at room temperature.
Humidity test		Temperature 40±2°C, 90~95% relative humidity Time: 96±2 hours, apply rated current, Tested after 1 hour at room temperature.
Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature.

Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
Resistance to Soldering Heat	No case deformation or change in appearance.	Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature of 130~150°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	Drop down with 981m/s ² (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.

The condition of reflow (recommendation):

