

## Data Sheet

**Customer:**

**Product:** Shielded SMD Power Inductor – SDRH Series

**Sizes.:** 0830/0840/0845

**Issued Date:** 03-Jul-20

**Edition:** REV.B1



VIKING TECH CORPORATION  
光韻科技股份有限公司  
No.70, Guangfu N. Rd., Hukou  
Township, Hsinchu County  
303, Taiwan (R.O.C)

TEL:886-3-5972931  
FAX:886-3-5972935•886-3-5973494  
E-mail:sales@viking.com.tw

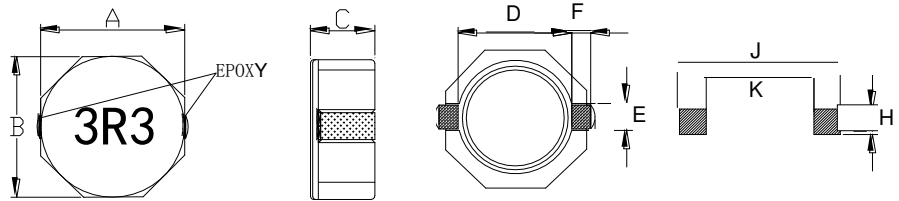
VIKING TECH CORPORATION KAOHSIUNG BRANCH  
光韻科技股份有限公司高雄分公司  
No.248-3, Sin-Sheng Rd., Cian-Jhen Dist., Kaohsiung,  
806, Taiwan

TEL:886-7-8217999  
FAX:886-7-8228229  
E-mail:sales@viking.com.tw

VIKING ELECTRONICS (WUXI) CO., LTD.  
光韻電子(無錫)有限公司  
No.22 Xixia Road, Machinery & Industry Park,  
National Hi-Tech Industrial Development Zone  
of Wuxi, Wuxi, Jiangsu Province, China  
Zip Code:214028  
TEL:86-510-85203339  
FAX:86-510-85203667•86-510-85203977  
E-mail:china@viking.com.tw

Produced by (QC)	Checked (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
03-Jul-20	03-Jul-20	03-Jul-20	03-Jul-20	
<i>Kris Chen</i>	<i>Ben Chang</i>	<i>Ben Chang</i>		

## 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 7.0~1.05A
- SDRH0845 1.0~330μH 9.0~0.65A

### ■ 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**

SDRH0830 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (mΩ) max.	IDC (A) max.
SDRH0830□T1R0	1.0	N	100KHz, 0.25V	11.0	6.50
SDRH0830□T2R5	2.5	N	100KHz, 0.25V	15.6	4.50
SDRH0830□T3R3	3.3	N	100KHz, 0.25V	18.2	4.00
SDRH0830□T4R7	4.7	N	100KHz, 0.25V	24.7	3.40
SDRH0830□T7R3	7.3	N	100KHz, 0.25V	39.0	2.80
SDRH0830□T100	10	N	100KHz, 0.25V	47.0	2.50
SDRH0830□T150	15	N	100KHz, 0.25V	69.0	1.90
SDRH0830□T220	22	N	100KHz, 0.25V	99.0	1.60
SDRH0830□T330	33	N	100KHz, 0.25V	156	1.30
SDRH0830□T470	47	N	100KHz, 0.25V	195	1.15
SDRH0830□T680	68	N	100KHz, 0.25V	286	0.92
SDRH0830□T101	100	N	100KHz, 0.25V	430	0.75

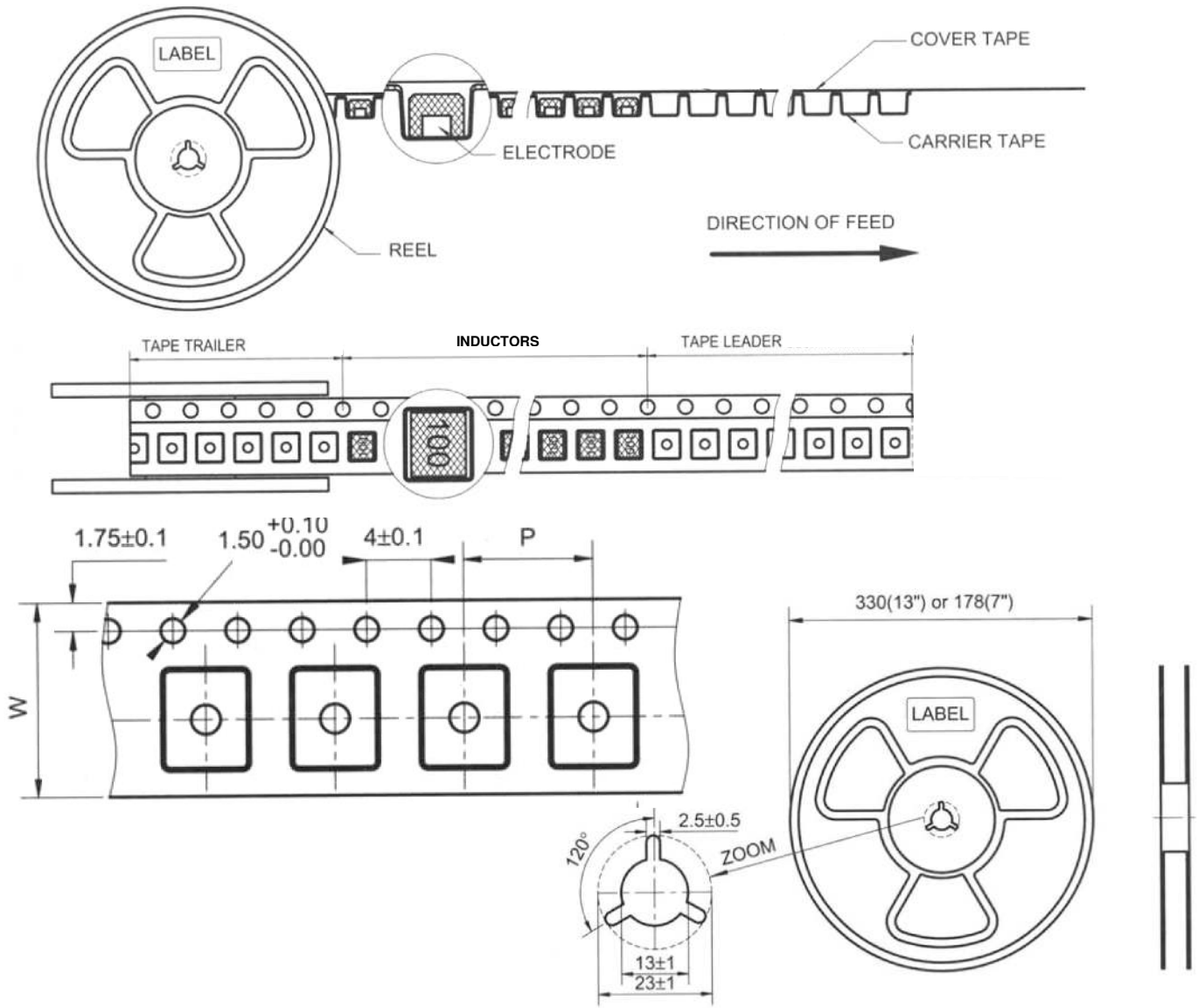
SDRH0840 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (mΩ) max.	IDC (A) max.
SDRH0840□T1R8	1.8	N	100KHz, 0.1V	15.6	7.00
SDRH0840□T2R5	2.5	N	100KHz, 0.1V	17.5	6.50
SDRH0840□T3R5	3.5	N	100KHz, 0.1V	24.0	5.00
SDRH0840□T4R7	4.7	N	100KHz, 0.1V	29.0	4.60
SDRH0840□T6R0	6.0	N	100KHz, 0.1V	32.0	4.20
SDRH0840□T100	10	N	100KHz, 0.1V	48.0	3.00
SDRH0840□T150	15	N	100KHz, 0.1V	67.0	2.75
SDRH0840□T220	22	N	100KHz, 0.1V	105	2.30
SDRH0840□T330	33	N	100KHz, 0.1V	157	1.75
SDRH0840□T470	47	N	100KHz, 0.1V	189	1.52
SDRH0840□T680	68	N	100KHz, 0.1V	290	1.30
SDRH0840□T101	100	N	100KHz, 0.1V	410	1.05

SDRH0845 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (mΩ) max.	IDC (A) max.
SDRH0845□T1R0	1.0	N	100KHz, 0.1V	9.50	9.00
SDRH0845□T1R2	1.2	N	100KHz, 0.1V	12.2	8.00
SDRH0845□T1R5	1.5	N	100KHz, 0.1V	13.0	7.80
SDRH0845□T2R0	2.0	N	100KHz, 0.1V	14.0	7.00
SDRH0845□T2R2	2.2	N	100KHz, 0.1V	15.0	6.80
SDRH0845□T2R5	2.5	N	100KHz, 0.1V	16.0	6.60
SDRH0845□T3R3	3.3	N	100KHz, 0.1V	17.0	6.20
SDRH0845□T3R9	3.9	N	100KHz, 0.1V	19.0	5.90
SDRH0845□T4R7	4.7	N	100KHz, 0.1V	22.0	5.60
SDRH0845□T6R8	6.8	N	100KHz, 0.1V	32.0	4.40
SDRH0845□T100	10	N	100KHz, 0.1V	36.0	4.00
SDRH0845□T150	15	N	100KHz, 0.1V	53.0	2.90
SDRH0845□T180	18	N	100KHz, 0.1V	72.0	2.70
SDRH0845□T220	22	N	100KHz, 0.1V	75.0	2.60
SDRH0845□T270	27	N	100KHz, 0.1V	100	2.25
SDRH0845□T330	33	N	100KHz, 0.1V	125	2.20
SDRH0845□T470	47	N	100KHz, 0.1V	150	1.80
SDRH0845□T680	68	N	100KHz, 0.1V	240	1.50
SDRH0845□T101	100	N	100KHz, 0.1V	360	1.30
SDRH0845□T121	120	N	100KHz, 0.1V	500	1.00
SDRH0845□T331-1	330	M	100KHz, 0.25V	1700	0.65

**■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: 15~28°C; Humidity: <80% relative humidity. Recommended product should be used within one year 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 <sup>2</sup> (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.

**The condition of reflow (recommendation):**

