

# SLH Series

## SMD Power Inductors

### APPLICATIONS

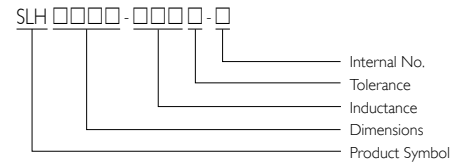
- High current POL converters
- Low profile, high current power supply
- Battery powered devices
- DC-DC converters in distributed power systems
- DC-DC converter for Field Programmable Gate Array (FPGA)
- Harsh environments including moisture, chemicals and salt spray

### FEATURES

- Halogen Free products
- Shielded construction
- Lowest DCR/ $\mu$ H, in this package size
- Handle high transient current spikes without saturation
- No air-gap inside but filled with magnetic powder



### PRODUCT IDENTIFICATION



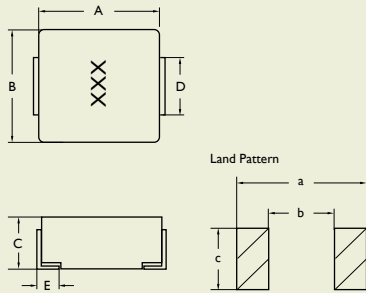
- Tolerance: J =  $\pm 5\%$ , K =  $\pm 10\%$ , L =  $\pm 15\%$ , M =  $\pm 20\%$ , P =  $\pm 25\%$ , N =  $\pm 30\%$ , Y = min
- Internal No.: N = Lead Free



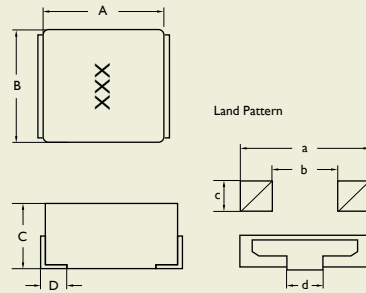
## SHAPES AND DIMENSIONS

Unit: mm

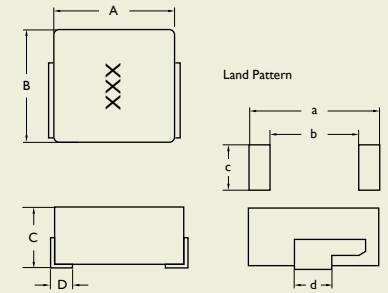
SLH0630/0650



SLH1040/1235



SLH1250/1265



TYPE	A	B	C	D	E	a	b	c	d
SLH0630	6.86 ± 0.381	6.47 ± 0.254	3.0 <sup>+0</sup>	3.18	1.27 ± 0.30	7.37	3.71	3.4	
SLH0650	6.86 ± 0.381	6.47 ± 0.254	5.0 <sup>+0</sup>	3.18 ± 0.30	1.27 ± 0.30	7.37	3.71	3.4	
SLH1040	11.5 <sup>+0</sup>	10.3 <sup>+0</sup>	4.0 <sup>+0</sup>	2.2 ± 0.30		13	6	4.0 <sup>+0</sup>	3.0 ± 0.3
SLH1235	13.2 ± 0.38	12.9 <sup>+0</sup>	3.5 <sup>+0</sup>	2.3 ± 0.30		13.8	8.1	3.3	3.0 ± 0.3
SLH1250	13.2 ± 0.50	12.9 <sup>+0</sup>	5.0 <sup>+0</sup>	2.3 ± 0.30		13.76	7.87	5.0	4.7 ± 0.3
SLH1265	13.2 ± 0.50	12.9 <sup>+0</sup>	6.5 <sup>+0</sup>	2.3 ± 0.30		13.76	7.87	5.0	4.7 ± 0.3

## ELECTRICAL CHARACTERISTICS SLH0630

PART NO.	INDUCTANCE (μH) ±20%	DC RESISTANCE (mΩ)		Isat (A) Max.	I <sub>rms</sub> (A) Max.
		Typical	Max.		
SLH0630-R10M-N	0.10	1.50	1.70	60.0	32.5
SLH0630-R15M-N	0.15	1.90	2.50	52.0	26.0
SLH0630-R20M-N	0.20	2.40	3.00	41.0	24.0
SLH0630-R22M-N	0.22	2.50	2.80	40.0	23.0
SLH0630-R33M-N	0.33	3.50	3.90	30.0	20.0
SLH0630-R47M-N	0.47	4.00	4.20	26.0	17.5
SLH0630-R68M-N	0.68	5.00	5.50	25.0	15.5
SLH0630-R82M-N	0.82	6.70	8.50	24.0	13.0
SLH0630-1R0M-N	1.00	9.00	10.0	22.0	11.0
SLH0630-1R5M-N	1.50	14.0	15.0	18.0	9.00
SLH0630-2R2M-N	2.20	18.0	20.0	14.0	8.00
SLH0630-3R3M-N	3.30	28.0	30.0	13.5	6.00
SLH0630-4R7M-N	4.70	37.0	40.0	10.0	5.50
SLH0630-6R8M-N	6.80	54.0	60.0	8.00	4.50
SLH0630-8R2M-N	8.20	64.0	68.0	7.50	4.00
SLH0630-100M-N	10.0	102	105	7.00	3.00

### Note:

Inductance test frequency at 100 KHz

Isat: DC current at which the inductance drops 30% from its value without current

I<sub>rms</sub>: The actual current when temperature of coil becomes ΔT = 40 °C

## ELECTRICAL CHARACTERISTIC SLH0650

PART NO.	INDUCTANCE ( $\mu\text{H}$ ) $\pm 20\%$	DC RESISTANCE ( $\text{m}\Omega$ )		Isat (A) Max.	I <sub>rms</sub> (A) Max.
		TYPICAL	Max.		
SLH0650-R56M-N	0.56	3.40	3.60	12.0	20.0
SLH0650-R68M-N	0.68	4.20	4.50	11.5	18.0
SLH0650-R82M-N	0.82	4.60	4.90	13.0	16.5
SLH0650-1R0M-N	1.00	5.60	6.50	15.0	13.0
SLH0650-1R5M-N	1.50	8.60	9.00	12.0	12.0
SLH0650-2R2M-N	2.20	13.0	13.6	10.0	10.0
SLH0650-3R3M-N	3.30	19.9	20.9	8.00	8.00
SLH0650-4R7M-N	4.80	28.9	30.3	7.00	6.50
SLH0650-5R6M-N	5.60	32.7	34.4	7.00	6.00
SLH0650-6R8M-N	6.80	42.5	44.6	5.50	5.50
SLH0650-8R2M-N	8.20	43.5	45.6	5.50	5.50
SLH0650-100M-N	10.0	67.9	71.3	4.50	4.50

## ELECTRICAL CHARACTERISTICS SLH1040

PART NO.	INDUCTANCE ( $\mu\text{H}$ ) $\pm 20\%$	DC RESISTANCE ( $\text{m}\Omega$ )		Isat (A) Max.	I <sub>rms</sub> (A) Max.
		TYPICAL	Max.		
SLH1040-R19M-N	0.19	0.88	0.95	90.0	40.0
SLH1040-R36M-N	0.36	1.30	1.40	60.0	31.5
SLH1040-R56M-N	0.56	1.70	1.80	49.0	27.5
SLH1040-1R0M-N	1.00	3.70	4.10	36.0	17.5
SLH1040-1R5M-N	1.50	5.30	5.80	27.5	15.0
SLH1040-2R2M-N	2.20	8.20	9.00	25.5	12.0
SLH1040-3R3M-N	3.30	10.8	11.8	18.6	10.0
SLH1040-4R7M-N	4.70	15.0	16.5	17.0	9.50
SLH1040-5R6M-N	5.60	17.6	19.3	16.0	8.50
SLH1040-6R8M-N	6.80	21.2	23.5	13.5	8.00
SLH1040-100M-N	10.0	33.2	36.5	12.0	6.80



## ELECTRICAL CHARACTERISTIC SLHI250

PART NO.	INDUCTANCE ( $\mu\text{H}$ ) $\pm 20\%$	DC RESISTANCE ( $\text{m}\Omega$ )		Isat (A) Max.	Irms (A) Max.
		TYPICAL	Max.		
SLHI250-R10M-N	0.10	0.53	0.60	118	55.0
SLHI250-R22M-N	0.22	0.64	0.80	110	51.0
SLHI250-R33M-N	0.33	0.85	1.10	80.0	42.0
SLHI250-R47M-N	0.47	1.10	1.30	65.0	38.0
SLHI250-R56M-N	0.56	1.30	1.50	55.0	36.0
SLHI250-R68M-N	0.68	1.50	1.70	54.0	34.0
SLHI250-R82M-N	0.82	2.00	2.30	53.0	31.0
SLHI250-1R0M-N	1.00	2.14	2.65	50.0	29.0
SLHI250-1R5M-N	1.50	3.40	4.10	48.0	23.0
SLHI250-2R2M-N	2.20	4.60	5.50	32.0	20.0
SLHI250-3R3M-N	3.30	7.70	9.20	32.0	15.0
SLHI250-4R7M-N	4.70	12.8	15.0	27.0	12.0
SLHI250-5R6M-N	5.60	14.0	16.5	22.0	11.5
SLHI250-6R8M-N	6.80	15.4	18.5	21.0	11.0
SLHI250-7R8M-N	7.80	17.2	20.5	18.0	10.0
SLHI250-8R2M-N	8.20	18.9	22.5	18.0	9.50
SLHI250-100M-N	10.0	21.4	25.5	16.0	9.00

Note:

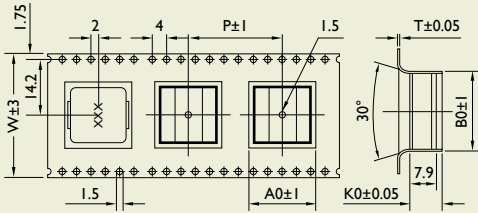
Inductance test frequency at 100 KHz

Isat: DC current at which the inductance drops 30% from its value without current

Irms: The actual current when temperature of coil becomes  $\Delta T = 40\text{ }^\circ\text{C}$

## TAPE DIMENSIONS

Unit: mm



TYPE	A0	B0	K0	P	W	T
SLH0630	7.20	6.70	3.00	8.00	16.00	0.40
SLH0650	7.20	6.70	5.00	8.00	16.00	0.50
SLH1040	11.50	10.30	4.00	16.00	24.00	0.50
SLH1250	13.70	12.90	5.00	16.00	24.00	0.50

## PACKAGING QUANTITY

TYPE	BULK	QUANTITY/REEL	CASKET/REEL	CASKET	QUANTITY/BOX
SLH0630	v	1,000	3	5	15,000
SLH0650	v	1,000	3	5	15,000
SLH1040	v	800	2	5	8,000
SLH1250	v	500	2	5	5,000