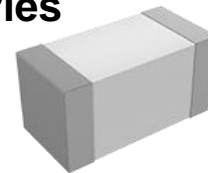


# Multilayer Chip High Frequency Inductor - SDHL Series

SDHL1005 Operating Temp. : -55°C ~ +125°C

SDHL1608 Operating Temp. : -40°C ~ +85°C



## FEATURES

- Higher self-resonant frequency than SDCL series inductors
- Ultra miniature size and light weight
- No polarity
- Excellent solderability and high heat resistance

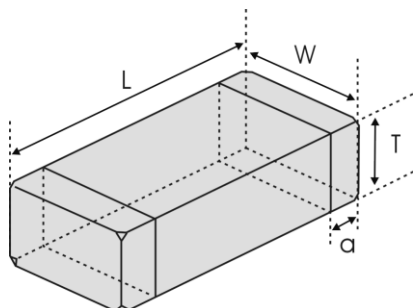
## APPLICATIONS

- Bluetooth module
- RF module of telecommunication products, such as cellular phone, cordless telephone, etc.
- Power AMP module
- Computer communications, radar detectors

## PRODUCT IDENTIFICATION

<u>SDHL</u> ①	<u>1005</u> ②	<u>C</u> ③	<u>10N</u> ④	<u>J</u> ⑤	<u>T</u> ⑥	<u>D</u> ⑦	<u>F</u> ⑧
① Type SDHL   Chip High Freq. Inductor	② External Dimensions (LxW) (mm) 1005 [0402]   1.0x0.5 1608 [0603]   1.6x0.8	③ Material Code C	④ Nominal Inductance Example   Nominal Value 1N0   1.0nH 10N   10nH R10   100nH	⑤ Inductance Tolerance C   ±0.2nH S   ±0.3nH J   ±5% K   ±10%	⑥ Packing T   Tape & Reel	⑦ Internal Code D	⑧ Hazardous Substance Free Products F

## SHAPE AND DIMENSIONS



Unit: mm [inch]

Type	L	W	T	a
SDHL1005 [0402]	1.0±0.15 [.039±.006]	0.5±0.15 [.020±.006]	0.5±0.15 [.020±.006]	0.25±0.1 [.010±.004]
SDHL1608 [0603]	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]

# SPECIFICATIONS

## SDHL1005 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq. L/Q	Typical Q @ Freq. (GHz)						Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
				0.1	0.3	0.5	0.8	1	1.8			
Units	nH	-	MHz	-						MHz	Ω	mA
Symbol	L	Q	Freq	Q						S.R.F	DCR	I <sub>r</sub>
SDHL1005C1N0□TDF	1.0	5	100	9	16	20	25	28	31	>8500	0.10	500
SDHL1005C1N2□TDF	1.2	5	100	9	15	18	24	27	31	>8500	0.12	500
SDHL1005C1N5□TDF	1.5	5	100	7	12	16	20	21	29	>8500	0.15	500
SDHL1005C1N8□TDF	1.8	5	100	7	12	16	20	21	29	>8500	0.17	500
SDHL1005C2N2□TDF	2.2	5	100	7	12	16	20	21	30	>8500	0.17	500
SDHL1005C2N7□TDF	2.7	5	100	7	12	16	20	21	29	>8500	0.20	500
SDHL1005C3N3□TDF	3.3	5	100	7	12	15	19	20	27	>8500	0.22	400
SDHL1005C3N9□TDF	3.9	5	100	7	12	15	20	21	28	7500	0.25	400
SDHL1005C4N7□TDF	4.7	5	100	7	12	15	19	20	27	6500	0.28	400
SDHL1005C5N6□TDF	5.6	5	100	8	12	15	20	22	30	6500	0.30	400
SDHL1005C6N8□TDF	6.8	5	100	8	12	15	20	22	30	6500	0.35	400
SDHL1005C8N2□TDF	8.2	5	100	8	12	15	19	21	30	6500	0.38	350
SDHL1005C10N□TDF	10	5	100	8	13	16	21	23	32	4700	0.42	350
SDHL1005C12N□TDF	12	5	100	8	13	16	20	23	27	4300	0.47	350
SDHL1005C15N□TDF	15	5	100	8	12	15	19	22	28	4000	0.50	300
SDHL1005C18N□TDF	18	5	100	8	13	16	21	24	32	4000	0.60	250
SDHL1005C22N□TDF	22	5	100	8	13	17	22	26	31	3500	0.70	200
SDHL1005C27N□TDF	27	5	100	8	14	18	23	26	32	3000	0.80	200
SDHL1005C33N□TDF	33	5	100	8	14	17	23	27	32	2500	0.90	200
SDHL1005C39N□TDF	39	5	100	8	14	18	23	27	32	2000	1.00	200
SDHL1005C47N□TDF	47	7	100	9	14	18	22	24	29	2400	2.20	100
SDHL1005C56N□TDF	56	7	100	9	14	18	23	24	29	2300	2.50	100
SDHL1005C68N□TDF	68	7	100	9	14	17	22	24	29	2200	2.70	100
SDHL1005C82N□TDF	82	7	100	8	13	17	20	20	16	2100	2.90	100
SDHL1005CR10□TDF	100	7	100	8	13	17	20	20	13	2000	3.20	100

※□: Please specify the inductance tolerance: For L≤6.2nH, choose C=±0.2nH or S=±0.3nH; For L>6.2nH, choose J=±5% or K=±10%.

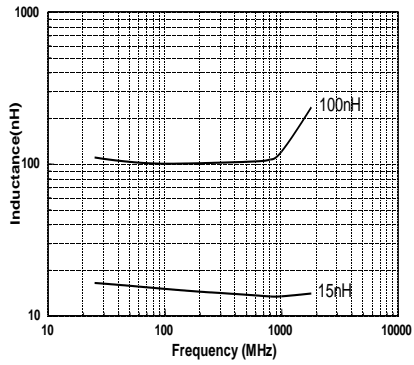
## SDHL1608 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq. L/Q	Typical Q @ Freq. (GHz)						Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
				0.1	0.3	0.5	0.8	1	1.8			
Units	nH	-	MHz	-						MHz	Ω	mA
Symbol	L	Q	Freq	Q						S.R.F	DCR	I <sub>r</sub>
SDHL1608C10N□TDF	10	8	100	10	22	28	35	39	45	>6000	0.6	500
SDHL1608C12N□TDF	12	8	100	10	18	23	26	32	42	6000	0.7	500
SDHL1608C15N□TDF	15	8	100	12	22	28	35	39	42	5500	0.8	500
SDHL1608C18N□TDF	18	8	100	10	18	22	25	30	43	5200	0.9	300
SDHL1608C22N□TDF	22	8	100	12	21	27	34	37	37	5000	1.0	300
SDHL1608C27N□TDF	27	8	100	10	18	24	26	32	38	4800	1.2	300
SDHL1608C33N□TDF	33	8	100	12	21	27	33	35	31	4500	1.4	300
SDHL1608C39N□TDF	39	8	100	11	20	26	32	34	29	4000	1.5	200
SDHL1608C47N□TDF	47	8	100	12	20	26	31	34	27	3500	1.6	200
SDHL1608C56N□TDF	56	8	100	11	20	26	31	34	24	3000	1.8	200
SDHL1608C68N□TDF	68	8	100	10	18	21	24	28	20	2800	2.0	200
SDHL1608C82N□TDF	82	8	100	10	19	22	26	26	15	2500	2.2	200
SDHL1608CR10□TDF	100	8	100	10	19	24	27	25	-	2000	2.5	150
SDHL1608CR12□TDF	120	8	100	10	19	23	26	24	-	1600	2.8	150
SDHL1608CR15□TDF	150	8	100	10	18	24	26	23	-	1400	3.0	150
SDHL1608CR18□TDF	180	8	100	10	17	22	23	-	-	1000	3.4	150

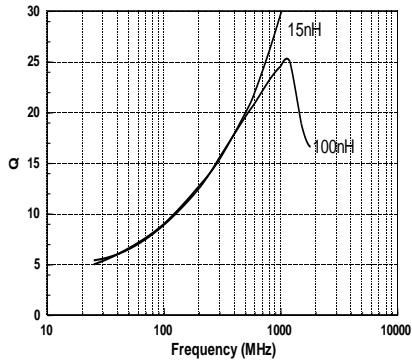
※□: Please specify the inductance tolerance: J=±5% or K=±10%.

# TYPICAL ELECTRICAL CHARACTERISTICS

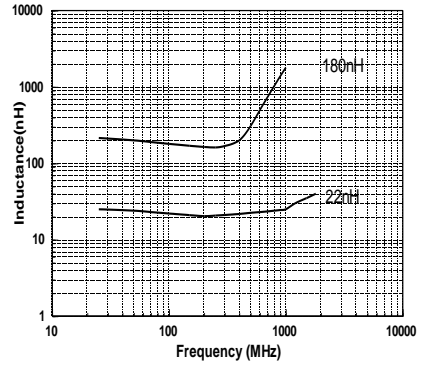
## SDHL1005 Series Inductance vs. Frequency Characteristics



## Q vs. Frequency Characteristics



## SDHL1608 Series Inductance vs. Frequency Characteristics



## Q vs. Frequency Characteristics

