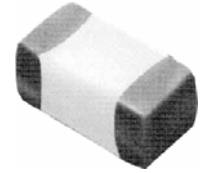


# 片式高频电感—SDHL 系列

## Chip High Frequency Inductor – SDHL Series

Operating Temp. : -55°C~ +125°C



### 特征

- 比 SDCL 系列更高的自谐频率
- 体积小, 重量轻
- 无极性
- 良好的可焊性和耐焊性

### FEATURES

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

### 用途

- 蓝牙模块
- CDMA、TDMA、GSM、PCS 制式手机
- 蜂窝电话、无绳电话、寻呼机等通讯产品的射频模块
- 功率放大模块
- 计算机通信, 雷达探测器

### APPLICATIONS

- Bluetooth module
- CDMA, TDMA, GSM, PCS phone
- RF module of telecommunication products, such as cellular phone, cordless telephone, pager, etc
- Power AMP module
- Computer communications, radar detectors

### 产品型号

### PRODUCT IDENTIFICATION

**SDHL**      **1005**      **C**      **10N**      **J**      **T**      **(f)**  
 ①                      ②                      ③                      ④                      ⑤                      ⑥                      ⑦

①

| 分类 Type |                                    |
|---------|------------------------------------|
| SDHL    | 片式高频电感<br>Chip High Freq. Inductor |

②

| 外形尺寸(L×W) (mm)<br>External Dimensions (L×W) (mm) |         |
|--|---------|
| 1005 [0402]                                      | 1.0×0.5 |
| 1608 [0603]                                      | 1.6×0.8 |

③

| 材料代号 Material Code |  |
|--------------------|--|
| C                  |  |

④

| 公称电感量 Nominal Inductance |               |
|--------------------------|---------------|
| Example                  | Nominal Value |
| 3N9                      | 3.9nH         |
| 10N                      | 10nH          |
| R10                      | 100nH         |

⑤

| 电感公差 Inductance Tolerance |        |
|---------------------------|--------|
| C                         | ±0.2nH |
| S                         | ±0.3nH |
| G                         | ±2%    |
| J                         | ±5%    |

⑥

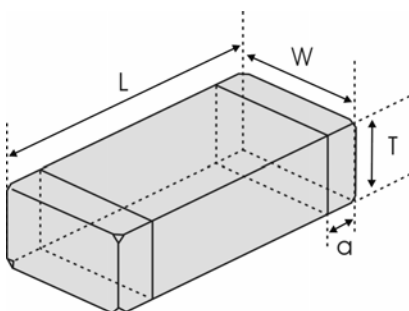
| 包装 Packing |                 |
|------------|-----------------|
| B          | 散装 Bulk Package |
| T          | 编带 Tape & Reel  |

⑦

| 无铅产品 Lead Free Products |  |
|-------------------------|--|
| (f)                     |  |

### 外观尺寸

### SHAPE AND DIMENSIONS



Unit:mm[inch]

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

## 规格特性

## SPECIFICATIONS

## SDHL1005 TYPE

| Part Number<br>型号 | Inductance<br>电感量 | Min. Quality Factor<br>品质因子 | L, Q<br>Test Freq. L/Q<br>测试频率 | Typical Q @ Freq. (MHz) |      |      |      |      |      | Min. Selfresonant Frequency<br>自谐振频率 | Max. DC Resistance<br>直流电阻 | Max. Rated Current<br>额定电流 | Thickness<br>厚度         |
|-------------------|-------------------|-----------------------------|--------------------------------|-------------------------|------|------|------|------|------|--------------------------------------|----------------------------|----------------------------|-------------------------|
|                   |                   |                             |                                | 100                     | 300  | 500  | 800  | 1000 | 1800 |                                      |                            |                            |                         |
| Units 单位          | nH                | -                           | MHz                            | -                       |      |      |      |      |      | MHz                                  | $\Omega$                   | mA                         | mm [inch]               |
| Symbol 符号         | L                 | Q                           | Freq                           | Q                       |      |      |      |      |      | S.R.F                                | DCR                        | Ir                         | T                       |
| SDHL1005C1N0S     | 1.0               | 3.5                         | 100                            | 50                      | 79   | 10.1 | 130  | 14.7 | 21.1 | >6000                                | 0.10                       | 300                        | 0.3±0.05<br>[.012±.002] |
| SDHL1005C1N2S     | 1.2               | 3.5                         | 100                            | 56                      | 85   | 10.9 | 139  | 15.3 | 22.1 | >6000                                | 0.10                       | 300                        |                         |
| SDHL1005C1N5S     | 1.5               | 3.5                         | 100                            | 56                      | 88   | 11.3 | 145  | 16.1 | 23.2 | >6000                                | 0.20                       | 300                        |                         |
| SDHL1005C1N8S     | 1.8               | 3.5                         | 100                            | 58                      | 92   | 11.9 | 152  | 17.0 | 24.5 | >6000                                | 0.20                       | 300                        |                         |
| SDHL1005C2N2S     | 2.2               | 4.0                         | 100                            | 63                      | 100  | 12.9 | 166  | 18.5 | 26.7 | >6000                                | 0.20                       | 250                        |                         |
| SDHL1005C2N7S     | 2.7               | 4.5                         | 100                            | 66                      | 106  | 13.9 | 179  | 19.9 | 29.0 | >6000                                | 0.25                       | 250                        |                         |
| SDHL1005C3N3S     | 3.3               | 5.0                         | 100                            | 69                      | 114  | 14.9 | 192  | 21.5 | 31.0 | >6000                                | 0.25                       | 250                        |                         |
| SDHL1005C3N9S     | 3.9               | 5.0                         | 100                            | 66                      | 108  | 14.4 | 186  | 21.1 | 30.5 | >6000                                | 0.30                       | 250                        |                         |
| SDHL1005C4N7S     | 4.7               | 5.5                         | 100                            | 73                      | 123  | 16.2 | 208  | 23.6 | 33.7 | >6000                                | 0.30                       | 200                        |                         |
| SDHL1005C5N6S     | 5.6               | 5.5                         | 100                            | 72                      | 123  | 16.3 | 209  | 23.7 | 33.5 | >6000                                | 0.35                       | 200                        |                         |
| SDHL1005C6N8J     | 6.8               | 5.5                         | 100                            | 7.1                     | 120  | 15.8 | 20.3 | 23.1 | 32.8 | >6000                                | 0.40                       | 200                        |                         |
| SDHL1005C8N2J     | 8.2               | 5.5                         | 100                            | 69                      | 120  | 15.8 | 20.1 | 22.9 | 32.5 | 5600                                 | 0.50                       | 200                        |                         |
| SDHL1005C10NJ     | 10                | 5.5                         | 100                            | 66                      | 114  | 15.2 | 19.3 | 21.9 | 30.8 | 5400                                 | 0.70                       | 200                        |                         |
| SDHL1005C12NJ     | 12                | 7.0                         | 100                            | 89                      | 15.1 | 19.7 | 25.5 | 29.0 | 40.8 | 4100                                 | 0.80                       | 200                        |                         |
| SDHL1005C15NJ     | 15                | 7.0                         | 100                            | 92                      | 15.4 | 20.0 | 26.1 | 29.8 | 41.8 | 4000                                 | 0.90                       | 200                        |                         |
| SDHL1005C18NJ     | 18                | 7.0                         | 100                            | 93                      | 15.7 | 20.5 | 26.6 | 30.4 | 41.3 | 3700                                 | 1.00                       | 150                        |                         |
| SDHL1005C22NJ     | 22                | 7.0                         | 100                            | 93                      | 15.5 | 20.3 | 26.1 | 29.7 | 39.8 | 3500                                 | 1.20                       | 150                        |                         |
| SDHL1005C27NJ     | 27                | 7.0                         | 100                            | 90                      | 15.6 | 20.5 | 26.5 | 30.2 | 40.1 | 3400                                 | 1.50                       | 150                        |                         |
| SDHL1005C33NJ     | 33                | 7.0                         | 100                            | 86                      | 14.6 | 19.2 | 24.8 | 28.0 | 36.4 | 3200                                 | 1.80                       | 150                        |                         |
| SDHL1005C39NJ     | 39                | 7.0                         | 100                            | 10.1                    | 15.9 | 19.9 | 24.1 | 26.1 | 25.7 | 2500                                 | 2.00                       | 100                        |                         |
| SDHL1005C47NJ     | 47                | 7.0                         | 100                            | 10.6                    | 16.4 | 20.6 | 24.8 | 26.7 | 23.0 | 2400                                 | 2.20                       | 100                        |                         |
| SDHL1005C56NJ     | 56                | 7.0                         | 100                            | 10.9                    | 16.7 | 21.1 | 25.0 | 26.8 | 23.9 | 2300                                 | 2.50                       | 100                        |                         |
| SDHL1005C68NJ     | 68                | 7.0                         | 100                            | 11.1                    | 17.3 | 21.7 | 25.5 | 27.7 | 20.7 | 2200                                 | 2.70                       | 100                        |                         |
| SDHL1005C82NJ     | 82                | 7.0                         | 100                            | 10.3                    | 16.5 | 20.9 | 24.5 | 25.9 | 20.4 | 2100                                 | 2.90                       | 100                        |                         |
| SDHL1005CR10J     | 100               | 7.0                         | 100                            | 92                      | 15.6 | 19.6 | 23.2 | 24.2 | 16.6 | 2000                                 | 3.20                       | 100                        |                         |

※: The product with tolerance less than  $\pm 0.3\text{nH}$ ,  $\pm 5\%$  is also available. Please contact your local sales.

## SDHL1608 TYPE

| Part Number<br>型号 | Inductance<br>电感量 | Min. Quality Factor<br>品质因子 | L, Q<br>Test Freq. L/Q<br>测试频率 | Typical Q @ Freq. (MHz) |     |     |     |      |      | Min. Selfresonant Frequency<br>自谐振频率 | Max. DC Resistance<br>直流电阻 | Max. Rated Current<br>额定电流 | Thickness<br>厚度         |
|-------------------|-------------------|-----------------------------|--------------------------------|-------------------------|-----|-----|-----|------|------|--------------------------------------|----------------------------|----------------------------|-------------------------|
|                   |                   |                             |                                | 100                     | 300 | 500 | 800 | 1000 | 1800 |                                      |                            |                            |                         |
| Units 单位          | nH                | -                           | MHz                            | -                       |     |     |     |      |      | MHz                                  | $\Omega$                   | mA                         | mm [inch]               |
| Symbol 符号         | L                 | Q                           | Freq                           | Q                       |     |     |     |      |      | S.R.F                                | DCR                        | Ir                         | T                       |
| SDHL1608C1N0S     | 1.0               | 7                           | 100                            | 9                       | 15  | 22  | 25  | 31   | 50   | >6000                                | 0.1                        | 1000                       | 0.3±0.05<br>[.012±.002] |
| SDHL1608C1N2S     | 1.2               | 7                           | 100                            | 9                       | 16  | 23  | 26  | 32   | 49   | >6000                                | 0.1                        | 1000                       |                         |
| SDHL1608C1N5S     | 1.5               | 7                           | 100                            | 9                       | 16  | 23  | 26  | 31   | 48   | >6000                                | 0.2                        | 1000                       |                         |
| SDHL1608C1N8S     | 1.8               | 7                           | 100                            | 9                       | 16  | 22  | 27  | 32   | 48   | >6000                                | 0.2                        | 1000                       |                         |
| SDHL1608C2N2S     | 2.2               | 7                           | 100                            | 9                       | 17  | 23  | 27  | 33   | 48   | >6000                                | 0.2                        | 800                        |                         |
| SDHL1608C2N7S     | 2.7               | 7                           | 100                            | 9                       | 17  | 22  | 25  | 33   | 46   | >6000                                | 0.2                        | 800                        |                         |
| SDHL1608C3N3S     | 3.3               | 7                           | 100                            | 9                       | 18  | 24  | 28  | 34   | 46   | >6000                                | 0.3                        | 800                        |                         |
| SDHL1608C3N9S     | 3.9               | 7                           | 100                            | 9                       | 18  | 25  | 28  | 32   | 46   | >6000                                | 0.3                        | 800                        |                         |
| SDHL1608C4N7S     | 4.7               | 7                           | 100                            | 9                       | 18  | 22  | 25  | 32   | 45   | >6000                                | 0.3                        | 500                        |                         |
| SDHL1608C5N6S     | 5.6               | 7                           | 100                            | 9                       | 18  | 24  | 26  | 31   | 44   | >6000                                | 0.4                        | 500                        |                         |
| SDHL1608C6N8J     | 6.8               | 7                           | 100                            | 9                       | 18  | 23  | 28  | 31   | 44   | >6000                                | 0.4                        | 500                        |                         |

# 规格特性

# SPECIFICATIONS

## SDHL1608 TYPE

| Part Number<br>型号 | Inductance<br>电感量 | Min. Quality Factor<br>品质因子 | L,Q Test Freq. L/Q 测试频率 | Typical Q @ Freq. (MHz) |     |     |     |      |      | Min. Selfresonant Frequency<br>自谐振频率 | Max. DC Resistance<br>直流电阻 | Max. Rated Current<br>额定电流 | Thickness<br>厚度         |
|-------------------|-------------------|-----------------------------|-------------------------|-------------------------|-----|-----|-----|------|------|--------------------------------------|----------------------------|----------------------------|-------------------------|
|                   |                   |                             |                         | 100                     | 300 | 500 | 800 | 1000 | 1800 |                                      |                            |                            |                         |
| Units 单位          | nH                | -                           | MHz                     | -                       |     |     |     |      |      | MHz                                  | $\Omega$                   | mA                         | mm [inch]               |
| Symbol 符号         | L                 | Q                           | Freq                    | Q                       |     |     |     |      |      | S.R.F                                | DCR                        | I <sub>r</sub>             | T                       |
| SDHL1608C8N2J     | 8.2               | 7                           | 100                     | 9                       | 19  | 21  | 26  | 30   | 46   | >6000                                | 0.5                        | 500                        | 0.3±0.05<br>[.012±.002] |
| SDHL1608C10NJ     | 10                | 8                           | 100                     | 10                      | 18  | 24  | 27  | 32   | 44   | >6000                                | 0.6                        | 500                        |                         |
| SDHL1608C12NJ     | 12                | 8                           | 100                     | 10                      | 18  | 23  | 26  | 32   | 42   | 6000                                 | 0.7                        | 500                        |                         |
| SDHL1608C15NJ     | 15                | 8                           | 100                     | 10                      | 19  | 24  | 26  | 30   | 41   | 5500                                 | 0.8                        | 500                        |                         |
| SDHL1608C18NJ     | 18                | 8                           | 100                     | 10                      | 18  | 22  | 25  | 30   | 43   | 5200                                 | 0.9                        | 300                        |                         |
| SDHL1608C22NJ     | 22                | 8                           | 100                     | 10                      | 18  | 23  | 26  | 33   | 40   | 5000                                 | 1.0                        | 300                        |                         |
| SDHL1608C27NJ     | 27                | 8                           | 100                     | 10                      | 18  | 24  | 26  | 32   | 38   | 4800                                 | 1.2                        | 300                        |                         |
| SDHL1608C33NJ     | 33                | 8                           | 100                     | 10                      | 18  | 24  | 26  | 31   | 35   | 4500                                 | 1.4                        | 300                        |                         |
| SDHL1608C39NJ     | 39                | 8                           | 100                     | 10                      | 18  | 24  | 27  | 30   | 33   | 4000                                 | 1.5                        | 200                        |                         |
| SDHL1608C47NJ     | 47                | 8                           | 100                     | 10                      | 17  | 22  | 24  | 33   | 30   | 3500                                 | 1.6                        | 200                        |                         |
| SDHL1608C56NJ     | 56                | 8                           | 100                     | 10                      | 17  | 21  | 25  | 32   | 22   | 3000                                 | 1.8                        | 200                        |                         |
| SDHL1608C68NJ     | 68                | 8                           | 100                     | 10                      | 18  | 21  | 24  | 28   | 20   | 2800                                 | 2.0                        | 200                        |                         |
| SDHL1608C82NJ     | 82                | 8                           | 100                     | 10                      | 19  | 22  | 26  | 26   | 15   | 2500                                 | 2.2                        | 200                        |                         |
| SDHL1608CR10J     | 100               | 8                           | 100                     | 10                      | 19  | 24  | 27  | 25   | -    | 2000                                 | 2.5                        | 150                        |                         |
| SDHL1608CR12J     | 120               | 8                           | 100                     | 10                      | 19  | 23  | 26  | 24   | -    | 1600                                 | 2.8                        | 150                        |                         |
| SDHL1608CR15J     | 150               | 8                           | 100                     | 10                      | 18  | 24  | 26  | 23   | -    | 1400                                 | 3.0                        | 150                        |                         |
| SDHL1608CR18J     | 180               | 8                           | 100                     | 10                      | 17  | 22  | 23  | -    | -    | 1000                                 | 3.4                        | 150                        |                         |

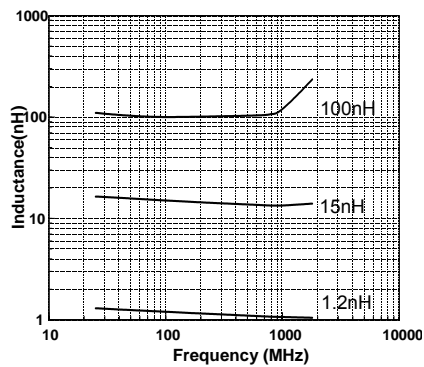
※: The product with tolerance less than  $\pm 0.3\text{nH}$ ,  $\pm 5\%$  is also available. Please contact your local sales.

## 电气特性

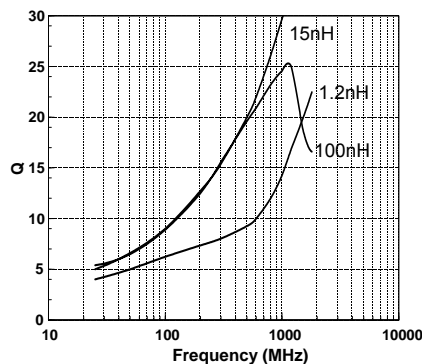
## TYPICAL ELECTRICAL CHARACTERISTICS

### SDHL1005 TYPE

#### Inductance vs. Frequency Characteristics

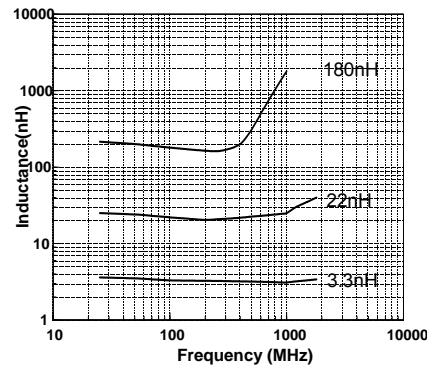


#### Q vs. Frequency Characteristics



### SDHL1608 TYPE

#### Inductance vs. Frequency Characteristics



#### Q vs. Frequency Characteristics

