

# Multilayer High Frequency inductor

## CIH10T Series (1608/ EIA 0603)

### APPLICATION

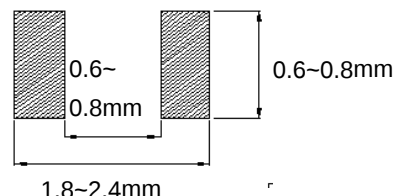
Mobile communication systems, noise suppression at high frequency and Impedance matching.

### FEATURES

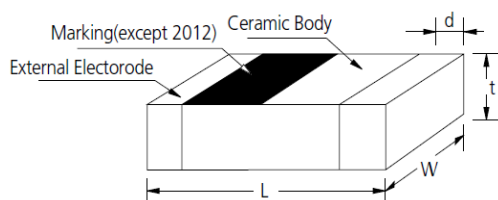
- Lowest value of specific resistivity, good property of Q and high SRF.
- Possible to use at range above 100MHz
- Monolithic structure for high reliability.
- Do not contain lead and support lead-free soldering.
- RoHS compliant



### RECOMMENDED LAND PATTERN



### DIMENSION



| Type | Dimension [mm] |          |          |         |
|------|----------------|----------|----------|---------|
|      | L              | W        | t        | d       |
| 10   | 1.6±0.15       | 0.8±0.15 | 0.8±0.15 | 0.3±0.2 |

### DESCRIPTION

| Part No.    | Inductance<br>(nH)<br>@100MHz | Q (typical.) |        | SRF<br>(MHz)<br>Min | DC<br>resistance<br>(Ω) Max. | Rated<br>current<br>(mA) Max. |
|-------------|-------------------------------|--------------|--------|---------------------|------------------------------|-------------------------------|
|             |                               | 100MHz       | 800MHz |                     |                              |                               |
| CIH10T1N0 S | 1.0±0.3nH                     | 8            | 20     | 10000               | 0.05                         | 800                           |
| CIH10T1N2 S | 1.2±0.3nH                     | 8            | 20     | 10000               | 0.05                         | 800                           |
| CIH10T1N5 S | 1.5±0.3nH                     | 8            | 20     | 6000                | 0.1                          | 800                           |
| CIH10T1N8 S | 1.8±0.3nH                     | 8            | 20     | 6000                | 0.1                          | 800                           |
| CIH10T2N2 S | 2.2±0.3nH                     | 8            | 20     | 6000                | 0.1                          | 800                           |
| CIH10T2N7 S | 2.7±0.3nH                     | 10           | 25     | 6000                | 0.1                          | 800                           |
| CIH10T3N3 □ | 3.3±0.3nH, 10%                | 10           | 25     | 6000                | 0.12                         | 800                           |
| CIH10T3N9 □ | 3.9±0.3nH, 10%                | 10           | 27     | 6000                | 0.14                         | 800                           |
| CIH10T4N7 □ | 4.7±0.3nH, 10%                | 10           | 27     | 4000                | 0.16                         | 800                           |
| CIH10T5N6 □ | 5.6±0.3nH, 10%                | 10           | 27     | 4000                | 0.18                         | 800                           |
| CIH10T6N8 □ | 6.8±10%, 5%                   | 10           | 27     | 4000                | 0.22                         | 700                           |
| CIH10T8N2 □ | 8.2±10%, 5%                   | 10           | 26     | 3500                | 0.24                         | 700                           |
| CIH10T10N □ | 10.0±10%, 5%                  | 12           | 26     | 3400                | 0.26                         | 600                           |
| CIH10T12N □ | 12.0±10%, 5%                  | 12           | 24     | 2600                | 0.28                         | 600                           |
| CIH10T15N □ | 15.0±10%, 5%                  | 12           | 24     | 2300                | 0.32                         | 500                           |
| CIH10T18N □ | 18.0±10%, 5%                  | 12           | 24     | 2000                | 0.35                         | 500                           |
| CIH10T22N □ | 22.0±10%, 5%                  | 12           | 25     | 1600                | 0.4                          | 500                           |
| CIH10T27N □ | 27.0±10%, 5%                  | 12           | 25     | 1400                | 0.45                         | 500                           |
| CIH10T33N □ | 33.0±10%, 5%                  | 12           | 24     | 1200                | 0.55                         | 500                           |
| CIH10T39N □ | 39.0±10%, 5%                  | 12           | 20     | 1100                | 0.6                          | 400                           |
| CIH10T47N □ | 47.0±10%, 5%                  | 12           | 20     | 900                 | 0.77                         | 400                           |
| CIH10T56N □ | 56.0±10%, 5%                  | 12           | 20     | 900                 | 0.75                         | 400                           |

| Part No.    | Inductance<br>(nH)<br>@100MHz | Q (typical.)     |                   | SRF<br>(MHz)<br>Min | DC<br>resistance<br>(Ω) Max. | Rated<br>current<br>(mA) Max. |
|-------------|-------------------------------|------------------|-------------------|---------------------|------------------------------|-------------------------------|
|             |                               | 100MHz           | 800MHz            |                     |                              |                               |
| CIH10T68N □ | 68.0±10%, 5%                  | 12               | <sup>(1)</sup> 20 | 700                 | 0.85                         | 350                           |
| CIH10T82N □ | 82.0±10%, 5%                  | 12               | <sup>(1)</sup> 20 | 600                 | 0.95                         | 350                           |
| CIH10TR10 □ | 100.0±10%, 5%                 | 12               | <sup>(1)</sup> 20 | 600                 | 1                            | 350                           |
| CIH10TR12 □ | 120.0±10%, 5%                 | <sup>(2)</sup> 8 | -                 | 500                 | 1.2                          | 300                           |
| CIH10TR15 □ | 150.0±10%, 5%                 | <sup>(2)</sup> 8 | -                 | 500                 | 1.2                          | 250                           |
| CIH10TR18 □ | 180.0±10%, 5%                 | <sup>(2)</sup> 8 | -                 | 400                 | 1.3                          | 250                           |
| CIH10TR22 □ | 220.0±10%, 5%                 | <sup>(2)</sup> 8 | -                 | 400                 | 1.5                          | 200                           |
| CIH10TR27 □ | 270.0±10%, 5%                 | <sup>(2)</sup> 8 | -                 | 400                 | 1.5                          | 200                           |

(1) 500MHz, (2) 50MHz,

\*Operating temperature range -55 to +125°C

※Tolerance (B :±0.1nH, C :±0.2nH, S :±0.3nH, H :±3%, J :±5%, K :±10%)

※Measurement equipment & Jig: HP4291B+16092A or Equivalent

※ The Rated Current is either the DC value at which the internal Ls value is decreased within 5% with the application of DC\_Current, or the value of current at which the temperature of the element is increased within 20°C  
(Reference ambient temperature:20°C)

## PRODUCT IDENTIFICATION

|            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>CI</b>  | <b>H</b>   | <b>10</b>  | <b>T</b>   | <b>10N</b> | <b>J</b>   | <b>N</b>   | <b>C</b>   |
| <b>(1)</b> | <b>(2)</b> | <b>(3)</b> | <b>(4)</b> | <b>(5)</b> | <b>(6)</b> | <b>(7)</b> | <b>(8)</b> |

(1) Chip Inductor

(3) Dimension

(5) Inductance(4N7:4.7nH, 10N:10nH, R10:100nH)

(7) Thickness option(N:Standard, A:Thinner than standard, B:Thicker than standard)

(8) Packaging(C:paper tape, E:embossed tape)

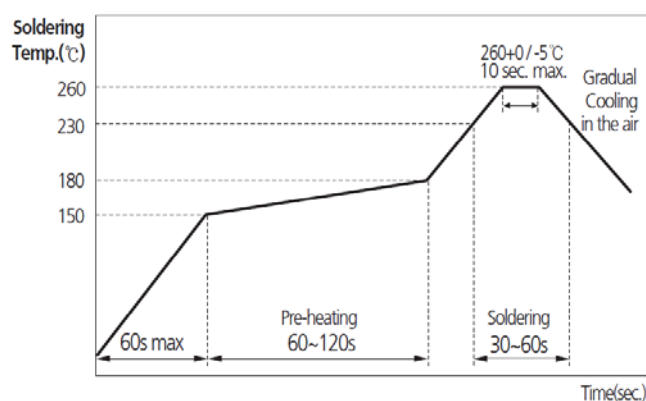
(2) H:High frequency type

(4) Material code(T:Dielectric material)

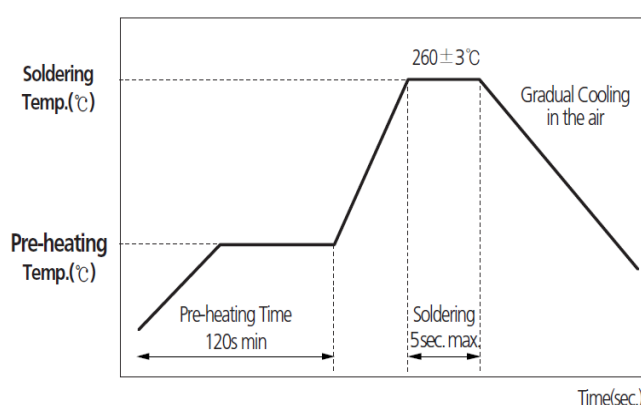
(6) Tolerance(C:±0.2nH, S:±0.3nH, J:±5%, K:±10%)

## RECOMMENDED SOLDERING CONDITION

### REFLOW SOLDERING



### FLOW SOLDERING



## PACKAGING

| Packaging Style   | Quantity(pcs/reel) |
|-------------------|--------------------|
| Card Board Taping | 4000               |

■ NOTICE :All specifications are subject to change without previous notice. Please contact with product representatives or engineers to check specifications.