



**THE DATASHEET OF
CIH10T82NJNC**



Chip Inductor, CIH Series

High Frequency Type



Feature

- Lowest value of specific resistivity, good property of Q and high SRF.
- Possible to use at range above 100MHz
- Monolithic structure for high reliability.

Application

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

CIH Series has dielectric material and 100% Ag as an internal conductor Therefore, it has high Q and |Z| at high frequency. It is possible to use for high frequency over 100MHz.

| | |
|----------------|------------|
| Operating Temp | -55~+125°C |
| Storage Temp | -10~+40°C |

Dimensions



Unit : mm

| SIZE CODE | L | W | t | d |
|-----------|----------|----------|----------|-----------|
| 03 | 0.6±0.03 | 0.3±0.03 | 0.3±0.03 | 0.15±0.05 |
| 05 | 1.0±0.05 | 0.5±0.05 | 0.5±0.05 | 0.25±0.1 |
| 10 | 1.6±0.15 | 0.8±0.15 | 0.8±0.15 | 0.3±0.2 |

Part Numbering

CI H 03 T 12N J N C
 (1) (2) (3) (4) (5) (6) (7) (8)

- (1) Chip Inductor
- (2) H: High frequency type
- (3) Dimension
- (4) Material code(T: Dielectric material)
- (5) Inductance(4N7: 4.7nH, 10N: 10nH, R10: 100nH)
- (6) Tolerance(C: ±0.2nH, S: ±0.3nH, J: ±5%, K: ±10%)
- (7) Thickness option(N: Standard, A: Thinner than standard, B: Thicker than standard)
- (8) Packaging(C: paper tape, E: embossed tape)

CIH 0603(0201) Type

| Part No. | Inductance (nH) | Q (Min.) 100 MHz | Q (typical) Frequency | | | | | SRF- Resonant Frequency (MHz) min | DC resistance (Ω) max | Rated current (mA) Max. |
|---------------|---------------------|---------------------|--------------------------|--------|--------|--------|--------|---|---|----------------------------------|
| | | | 500MHz | 800MHz | 1.8GHz | 2.0GHz | 2.4GHz | | | |
| CIH 03T 1N0 □ | 1.0±0.2nH, 0.3nH | 4 | 17 | 20 | 28 | 30 | 33 | 13000 | 0.14 | 300 |
| CIH 03T 1N2 □ | 1.2±0.2nH, 0.3nH | 4 | 16 | 20 | 28 | 30 | 33 | 10000 | 0.14 | 250 |
| CIH 03T 1N5 □ | 1.5±0.2nH, 0.3nH | 4 | 15 | 20 | 27 | 29 | 32 | 10000 | 0.18 | 230 |
| CIH 03T 1N8 □ | 1.8±0.2nH, 0.3nH | 4 | 15 | 20 | 27 | 29 | 31 | 10000 | 0.19 | 200 |
| CIH 03T 2N2 □ | 2.2±0.2nH, 0.3nH | 4 | 15 | 20 | 26 | 28 | 30 | 8800 | 0.22 | 200 |
| CIH 03T 2N7 □ | 2.7±0.2nH, 0.3nH | 5 | 15 | 20 | 26 | 28 | 30 | 7700 | 0.25 | 200 |
| CIH 03T 3N3 □ | 3.3±0.2nH, 0.3nH | 5 | 15 | 20 | 26 | 28 | 30 | 6700 | 0.30 | 200 |
| CIH 03T 3N9 □ | 3.9±0.2nH, 0.3nH | 5 | 15 | 20 | 27 | 29 | 31 | 6000 | 0.30 | 200 |
| CIH 03T 4N7 □ | 4.7±0.2nH, 0.3nH | 5 | 15 | 19 | 26 | 28 | 30 | 5300 | 0.40 | 200 |
| CIH 03T 5N6 □ | 5.6±0.2nH, 0.3nH | 5 | 15 | 19 | 26 | 27 | 28 | 4600 | 0.40 | 200 |
| CIH 03T 6N8 □ | 6.8±5% | 5.5 | 14 | 18 | 23 | 24 | 25 | 4100 | 0.48 | 150 |
| CIH 03T 8N2 □ | 8.2±5% | 5 | 14 | 18 | 22 | 23 | 23 | 3400 | 0.55 | 150 |
| CIH 03T 10N □ | 10.0±5% | 5 | 14 | 17 | 22 | 22 | 21 | 3300 | 0.63 | 150 |
| CIH 03T 12N □ | 12.0±5% | 6 | 14 | 17 | 21 | 21 | 19 | 3000 | 0.70 | 150 |
| CIH 03T 15N □ | 15.0±5% | 6 | 13 | 16 | 19 | 18 | 14 | 2700 | 0.80 | 100 |
| CIH 03T 18N □ | 18.0±5% | 6 | 13 | 17 | 16 | 14 | 9 | 2100 | 0.90 | 100 |
| CIH 03T 22N □ | 22.0±5% | 5 | 13 | 15 | 14 | 11 | 5 | 1800 | 1.2 | 100 |
| CIH 03T 27N □ | 27.0±5% | 4 | 12 | 14 | 10 | 7 | 2 | 1800 | 1.8 | 50 |
| CIH 03T 33N □ | 33.0±5% | 4 | 12 | 14 | 8 | 5 | 1 | 1700 | 2.1 | 50 |
| CIH 03T 39N □ | 39.0±5% | 4 | 12 | 13 | 4 | 1 | - | 1500 | 2.4 | 50 |
| CIH 03T 47N □ | 47.0±5% | 4 | 11 | 12 | 2 | - | - | 1300 | 2.8 | 50 |
| CIH 03T 56N □ | 56.0±5% | 4 | 11 | 11 | - | - | - | 1100 | 3.0 | 50 |

□: Tolerance (C: ±0.2nH, S: ±0.3nH, J: ±5%)

* Test equipment: Agilent E4991A+16196C

CIH
Series

CIH 1005(0402) Type

| Part No. | Inductance (nH) @100MHz | Q (Min) 100MHz | Q (typical.) | | | | | SRF (MHz) Min. | DC resistance (Ω) Max. | Rated current (mA) Max. |
|---------------|-------------------------------|----------------------|--------------|--------|--------|--------|--------|----------------------|---------------------------------------|-------------------------------|
| | | | 500MHz | 800MHz | 1.8GHz | 2.0GHz | 2.4GHz | | | |
| CIH 05T 1N0 S | 1.0±0.3nH | 8 | 23 | 29 | 48 | 50 | 56 | 10000 | 0.12 | 300 |
| CIH 05T 1N2 S | 1.2±0.3nH | 8 | 23 | 29 | 48 | 50 | 56 | 10000 | 0.12 | 300 |
| CIH 05T 1N5 S | 1.5±0.3nH | 8 | 23 | 29 | 47 | 50 | 56 | 6000 | 0.13 | 300 |
| CIH 05T 1N8 S | 1.8±0.3nH | 8 | 20 | 26 | 41 | 43 | 49 | 6000 | 0.14 | 300 |
| CIH 05T 2N2 S | 2.2±0.3nH | 8 | 22 | 27 | 44 | 47 | 52 | 6000 | 0.16 | 300 |
| CIH 05T 2N4 S | 2.4±0.3nH | 8 | 22 | 27 | 44 | 47 | 52 | 6000 | 0.16 | 300 |
| CIH 05T 2N7 S | 2.7±0.3nH | 8 | 22 | 27 | 43 | 45 | 50 | 6000 | 0.17 | 300 |
| CIH 05T 3N0 □ | 3.0±10%, 0.3nH | 8 | 24 | 30 | 46 | 48 | 53 | 6000 | 0.19 | 300 |
| CIH 05T 3N3 □ | 3.3±10%, 0.3nH | 8 | 24 | 30 | 46 | 48 | 53 | 6000 | 0.19 | 300 |
| CIH 05T 3N6 □ | 3.6±10%, 0.3nH | 8 | 24 | 30 | 46 | 48 | 53 | 6000 | 0.19 | 300 |
| CIH 05T 3N9 □ | 3.9±10%, 0.3nH | 8 | 22 | 28 | 43 | 45 | 50 | 4000 | 0.22 | 300 |
| CIH 05T 4N7 □ | 4.7±10%, 0.3nH | 8 | 23 | 30 | 45 | 47 | 50 | 4000 | 0.24 | 300 |
| CIH 05T 5N1 □ | 5.1±10%, 0.3nH | 8 | 22 | 28 | 42 | 43 | 45 | 4000 | 0.27 | 300 |
| CIH 05T 5N6 □ | 5.6±10%, 0.3nH | 8 | 22 | 28 | 42 | 43 | 45 | 4000 | 0.27 | 300 |
| CIH 05T 6N8 □ | 6.8±5%, 10% | 8 | 22 | 28 | 40 | 41 | 41 | 3900 | 0.32 | 300 |
| CIH 05T 7N5 □ | 7.5±5%, 10% | 8 | 22 | 28 | 38 | 38 | 36 | 3600 | 0.37 | 300 |
| CIH 05T 8N2 □ | 8.2±5%, 10% | 8 | 22 | 28 | 38 | 38 | 36 | 3600 | 0.37 | 300 |
| CIH 05T 10N □ | 10.0±5%, 10% | 8 | 22 | 28 | 37 | 36 | 31 | 3200 | 0.42 | 300 |
| CIH 05T 12N □ | 12.0±5%, 10% | 8 | 22 | 28 | 33 | 31 | 23 | 2700 | 0.50 | 300 |
| CIH 05T 15N □ | 15.0±5%, 10% | 8 | 22 | 28 | 29 | 26 | 17 | 2300 | 0.55 | 300 |
| CIH 05T 18N □ | 18.0±5%, 10% | 8 | 23 | 28 | 26 | 22 | 11 | 2100 | 0.65 | 250 |
| CIH 05T 22N □ | 22.0±5%, 10% | 8 | 22 | 27 | 21 | 14 | 2 | 1900 | 0.80 | 250 |
| CIH 05T 27N □ | 27.0±5%, 10% | 8 | 20 | 23 | 10 | 3 | - | 1600 | 0.90 | 250 |
| CIH 05T 33N □ | 33.0±5%, 10% | 8 | 20 | 23 | 3 | - | - | 1300 | 1.00 | 250 |
| CIH 05T 39N □ | 39.0±5%, 10% | 8 | 20 | 21 | - | - | - | 1200 | 1.20 | 200 |
| CIH 05T 47N □ | 47.0±5%, 10% | 8 | 19 | 20 | - | - | - | 1000 | 1.30 | 200 |
| CIH 05T 56N □ | 56.0±5%, 10% | 8 | 19 | 18 | - | - | - | 750 | 1.40 | 180 |
| CIH 05T 68N □ | 68.0±5%, 10% | 8 | 17 | 15 | - | - | - | 750 | 1.40 | 180 |
| CIH 05T 82N □ | 82.0±5%, 10% | 8 | 16 | 11 | - | - | - | 600 | 1.60 | 150 |
| CIH 05T R10 □ | 100.0±5%, 10% | 8 | 15 | 9 | - | - | - | 600 | 1.60 | 130 |

□ : Tolerance (S: ±0.3nH, J: ±5%, K: ±10%)

* Test equipment: Agilent 4291B+16192A

CIH 1608(0603) Type

| Part No. | Inductance (nH) @100MHz | Q (typical) | | SRF (MHz) Min. | DC resistance (Ω) Max. | Rated current (mA) Max. |
|---------------|-------------------------------|------------------|-------------------|----------------------|---------------------------------------|-------------------------------|
| | | 100MHz | 800MHz | | | |
| CIH 10T 1N0 S | 1.0±0.3nH | 8 | 20 | 10000 | 0.05 | 800 |
| CIH 10T 1N2 S | 1.2±0.3nH | 8 | 20 | 10000 | 0.05 | 800 |
| CIH 10T 1N5 S | 1.5±0.3nH | 8 | 20 | 6000 | 0.10 | 800 |
| CIH 10T 1N8 S | 1.8±0.3nH | 8 | 20 | 6000 | 0.10 | 800 |
| CIH 10T 2N2 S | 2.2±0.3nH | 8 | 20 | 6000 | 0.10 | 800 |
| CIH 10T 2N7 S | 2.7±0.3nH | 10 | 25 | 6000 | 0.10 | 800 |
| CIH 10T 3N3□ | 3.3±0.3nH, 10% | 10 | 25 | 6000 | 0.12 | 800 |
| CIH 10T 3N9□ | 3.9±0.3nH, 10% | 10 | 27 | 6000 | 0.14 | 800 |
| CIH 10T 4N7□ | 4.7±0.3nH, 10% | 10 | 27 | 4000 | 0.16 | 800 |
| CIH 10T 5N6□ | 5.6±0.3nH, 10% | 10 | 27 | 4000 | 0.18 | 800 |
| CIH 10T 6N8□ | 6.8±10%, 5% | 10 | 27 | 4000 | 0.22 | 700 |
| CIH 10T 8N2□ | 8.2±10%, 5% | 10 | 26 | 3500 | 0.24 | 700 |
| CIH 10T 10N□ | 10.0±10%, 5% | 12 | 26 | 3400 | 0.26 | 600 |
| CIH 10T 12N□ | 12.0±10%, 5% | 12 | 24 | 2600 | 0.28 | 600 |
| CIH 10T 15N□ | 15.0±10%, 5% | 12 | 24 | 2300 | 0.32 | 500 |
| CIH 10T 18N□ | 18.0±10%, 5% | 12 | 24 | 2000 | 0.35 | 500 |
| CIH 10T 22N□ | 22.0±10%, 5% | 12 | 25 | 1600 | 0.40 | 500 |
| CIH 10T 27N□ | 27.0±10%, 5% | 12 | 25 | 1400 | 0.45 | 500 |
| CIH 10T 33N□ | 33.0±10%, 5% | 12 | 24 | 1200 | 0.55 | 500 |
| CIH 10T 39N□ | 39.0±10%, 5% | 12 | 20 | 1100 | 0.60 | 400 |
| CIH 10T 47N□ | 47.0±10%, 5% | 12 | 20 | 900 | 0.77 | 400 |
| CIH 10T 56N□ | 56.0±10%, 5% | 12 | 20 | 900 | 0.75 | 400 |
| CIH 10T 68N□ | 68.0±10%, 5% | 12 | ⁽¹⁾ 20 | 700 | 0.85 | 350 |
| CIH 10T 82N□ | 82.0±10%, 5% | 12 | ⁽¹⁾ 20 | 600 | 0.95 | 350 |
| CIH 10T R10□ | 100.0±10%, 5% | 12 | ⁽¹⁾ 20 | 600 | 1.00 | 350 |
| CIH 10T R12□ | 120.0±10%, 5% | ⁽²⁾ 8 | - | 500 | 1.20 | 300 |
| CIH 10T R15□ | 150.0±10%, 5% | ⁽²⁾ 8 | - | 500 | 1.20 | 250 |
| CIH 10T R18□ | 180.0±10%, 5% | ⁽²⁾ 8 | - | 400 | 1.30 | 250 |
| CIH 10T R22□ | 220.0±10%, 5% | ⁽²⁾ 8 | - | 400 | 1.50 | 200 |
| CIH 10T R27□ | 270.0±10%, 5% | ⁽²⁾ 8 | - | 400 | 1.50 | 200 |

□: Tolerance (S: ±0.3nH, J: ±5%, K: ±10%)

※ Test equipment: Agilent 4291B+16192A

⁽¹⁾ 500MHz, ⁽²⁾ 50MHz,

CIH
Series

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