

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.

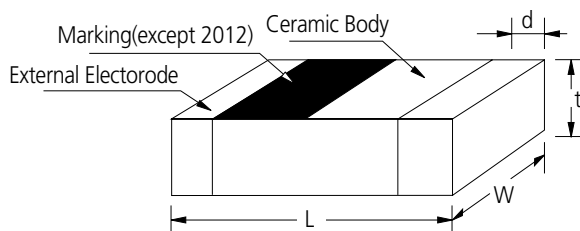
Application

- 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: $\pm 0.2\text{nH}$, S: $\pm 0.3\text{nH}$, J: $\pm 5\%$, K: $\pm 10\%$)
- (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 □	$1.0 \pm 0.2\text{nH}$, 0.3nH	4	17	20	28	30	33	13000	0.14	300
CIH 03T 1N2 □	$1.2 \pm 0.2\text{nH}$, 0.3nH	4	16	20	28	30	33	10000	0.14	250
CIH 03T 1N5 □	$1.5 \pm 0.2\text{nH}$, 0.3nH	4	15	20	27	29	32	10000	0.18	230
CIH 03T 1N8 □	$1.8 \pm 0.2\text{nH}$, 0.3nH	4	15	20	27	29	31	10000	0.19	200
CIH 03T 2N2 □	$2.2 \pm 0.2\text{nH}$, 0.3nH	4	15	20	26	28	30	8800	0.22	200
CIH 03T 2N7 □	$2.7 \pm 0.2\text{nH}$, 0.3nH	5	15	20	26	28	30	7700	0.25	200
CIH 03T 3N3 □	$3.3 \pm 0.2\text{nH}$, 0.3nH	5	15	20	26	28	30	6700	0.30	200
CIH 03T 3N9 □	$3.9 \pm 0.2\text{nH}$, 0.3nH	5	15	20	27	29	31	6000	0.30	200
CIH 03T 4N7 □	$4.7 \pm 0.2\text{nH}$, 0.3nH	5	15	19	26	28	30	5300	0.40	200
CIH 03T 5N6 □	$5.6 \pm 0.2\text{nH}$, 0.3nH	5	15	19	26	27	28	4600	0.40	200
CIH 03T 6N8 □	$6.8 \pm 5\%$	5.5	14	18	23	24	25	4100	0.48	150
CIH 03T 8N2 □	$8.2 \pm 5\%$	5	14	18	22	23	23	3400	0.55	150
CIH 03T 10N □	$10.0 \pm 5\%$	5	14	17	22	22	21	3300	0.63	150
CIH 03T 12N □	$12.0 \pm 5\%$	6	14	17	21	21	19	3000	0.70	150
CIH 03T 15N □	$15.0 \pm 5\%$	6	13	16	19	18	14	2700	0.80	100
CIH 03T 18N □	$18.0 \pm 5\%$	6	13	17	16	14	9	2100	0.90	100
CIH 03T 22N □	$22.0 \pm 5\%$	5	13	15	14	11	5	1800	1.2	100
CIH 03T 27N □	$27.0 \pm 5\%$	4	12	14	10	7	2	1800	1.8	50
CIH 03T 33N □	$33.0 \pm 5\%$	4	12	14	8	5	1	1700	2.1	50
CIH 03T 39N □	$39.0 \pm 5\%$	4	12	13	4	1	-	1500	2.4	50
CIH 03T 47N □	$47.0 \pm 5\%$	4	11	12	2	-	-	1300	2.8	50
CIH 03T 56N □	$56.0 \pm 5\%$	4	11	11	-	-	-	1100	3.0	50

□ : Tolerance (C: $\pm 0.2\text{nH}$, S: $\pm 0.3\text{nH}$, J: $\pm 5\%$)

* Test equipment: Agilent E4991A+16196C

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 $\pm$ 0.3nH	8	23	29	48	50	56	10000	0.12	300
CIH 05T 1N2 S	1.2 $\pm$ 0.3nH	8	23	29	48	50	56	10000	0.12	300
CIH 05T 1N5 S	1.5 $\pm$ 0.3nH	8	23	29	47	50	56	6000	0.13	300
CIH 05T 1N8 S	1.8 $\pm$ 0.3nH	8	20	26	41	43	49	6000	0.14	300
CIH 05T 2N2 S	2.2 $\pm$ 0.3nH	8	22	27	44	47	52	6000	0.16	300
CIH 05T 2N4 S	2.4 $\pm$ 0.3nH	8	22	27	44	47	52	6000	0.16	300
CIH 05T 2N7 S	2.7 $\pm$ 0.3nH	8	22	27	43	45	50	6000	0.17	300
CIH 05T 3N0 □	3.0 $\pm$ 10%, 0.3nH	8	24	30	46	48	53	6000	0.19	300
CIH 05T 3N3 □	3.3 $\pm$ 10%, 0.3nH	8	24	30	46	48	53	6000	0.19	300
CIH 05T 3N6 □	3.6 $\pm$ 10%, 0.3nH	8	24	30	46	48	53	6000	0.19	300
CIH 05T 3N9 □	3.9 $\pm$ 10%, 0.3nH	8	22	28	43	45	50	4000	0.22	300
CIH 05T 4N7 □	4.7 $\pm$ 10%, 0.3nH	8	23	30	45	47	50	4000	0.24	300
CIH 05T 5N1 □	5.1 $\pm$ 10%, 0.3nH	8	22	28	42	43	45	4000	0.27	300
CIH 05T 5N6 □	5.6 $\pm$ 10%, 0.3nH	8	22	28	42	43	45	4000	0.27	300
CIH 05T 6N8 □	6.8 $\pm$ 5%, 10%	8	22	28	40	41	41	3900	0.32	300
CIH 05T 7N5 □	7.5 $\pm$ 5%, 10%	8	22	28	38	38	36	3600	0.37	300
CIH 05T 8N2 □	8.2 $\pm$ 5%, 10%	8	22	28	38	38	36	3600	0.37	300
CIH 05T 10N □	10.0 $\pm$ 5%, 10%	8	22	28	37	36	31	3200	0.42	300
CIH 05T 12N □	12.0 $\pm$ 5%, 10%	8	22	28	33	31	23	2700	0.50	300
CIH 05T 15N □	15.0 $\pm$ 5%, 10%	8	22	28	29	26	17	2300	0.55	300
CIH 05T 18N □	18.0 $\pm$ 5%, 10%	8	23	28	26	22	11	2100	0.65	250
CIH 05T 22N □	22.0 $\pm$ 5%, 10%	8	22	27	21	14	2	1900	0.80	250
CIH 05T 27N □	27.0 $\pm$ 5%, 10%	8	20	23	10	3	-	1600	0.90	250
CIH 05T 33N □	33.0 $\pm$ 5%, 10%	8	20	23	3	-	-	1300	1.00	250
CIH 05T 39N □	39.0 $\pm$ 5%, 10%	8	20	21	-	-	-	1200	1.20	200
CIH 05T 47N □	47.0 $\pm$ 5%, 10%	8	19	20	-	-	-	1000	1.30	200
CIH 05T 56N □	56.0 $\pm$ 5%, 10%	8	19	18	-	-	-	750	1.40	180
CIH 05T 68N □	68.0 $\pm$ 5%, 10%	8	17	15	-	-	-	750	1.40	180
CIH 05T 82N □	82.0 $\pm$ 5%, 10%	8	16	11	-	-	-	600	1.60	150
CIH 05T R10 □	100.0 $\pm$ 5%, 10%	8	15	9	-	-	-	600	1.60	130

□: Tolerance (S: $\pm$ 0.3nH, J: $\pm$ 5%, K: $\pm$ 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 $\pm$ 0.3nH	8	20	10000	0.05	800
CIH 10T 1N2 S	1.2 $\pm$ 0.3nH	8	20	10000	0.05	800
CIH 10T 1N5 S	1.5 $\pm$ 0.3nH	8	20	6000	0.10	800
CIH 10T 1N8 S	1.8 $\pm$ 0.3nH	8	20	6000	0.10	800
CIH 10T 2N2 S	2.2 $\pm$ 0.3nH	8	20	6000	0.10	800
CIH 10T 2N7 S	2.7 $\pm$ 0.3nH	10	25	6000	0.10	800
CIH 10T 3N3□	3.3 $\pm$ 0.3nH, 10%	10	25	6000	0.12	800
CIH 10T 3N9□	3.9 $\pm$ 0.3nH, 10%	10	27	6000	0.14	800
CIH 10T 4N7□	4.7 $\pm$ 0.3nH, 10%	10	27	4000	0.16	800
CIH 10T 5N6□	5.6 $\pm$ 0.3nH, 10%	10	27	4000	0.18	800
CIH 10T 6N8□	6.8 $\pm$ 10%, 5%	10	27	4000	0.22	700
CIH 10T 8N2□	8.2 $\pm$ 10%, 5%	10	26	3500	0.24	700
CIH 10T 10N□	10.0 $\pm$ 10%, 5%	12	26	3400	0.26	600
CIH 10T 12N□	12.0 $\pm$ 10%, 5%	12	24	2600	0.28	600
CIH 10T 15N□	15.0 $\pm$ 10%, 5%	12	24	2300	0.32	500
CIH 10T 18N□	18.0 $\pm$ 10%, 5%	12	24	2000	0.35	500
CIH 10T 22N□	22.0 $\pm$ 10%, 5%	12	25	1600	0.40	500
CIH 10T 27N□	27.0 $\pm$ 10%, 5%	12	25	1400	0.45	500
CIH 10T 33N□	33.0 $\pm$ 10%, 5%	12	24	1200	0.55	500
CIH 10T 39N□	39.0 $\pm$ 10%, 5%	12	20	1100	0.60	400
CIH 10T 47N□	47.0 $\pm$ 10%, 5%	12	20	900	0.77	400
CIH 10T 56N□	56.0 $\pm$ 10%, 5%	12	20	900	0.75	400
CIH 10T 68N□	68.0 $\pm$ 10%, 5%	12	⁽¹⁾ 20	700	0.85	350
CIH 10T 82N□	82.0 $\pm$ 10%, 5%	12	⁽¹⁾ 20	600	0.95	350
CIH 10T R10□	100.0 $\pm$ 10%, 5%	12	⁽¹⁾ 20	600	1.00	350
CIH 10T R12□	120.0 $\pm$ 10%, 5%	⁽²⁾ 8	-	500	1.20	300
CIH 10T R15□	150.0 $\pm$ 10%, 5%	⁽²⁾ 8	-	500	1.20	250
CIH 10T R18□	180.0 $\pm$ 10%, 5%	⁽²⁾ 8	-	400	1.30	250
CIH 10T R22□	220.0 $\pm$ 10%, 5%	⁽²⁾ 8	-	400	1.50	200
CIH 10T R27□	270.0 $\pm$ 10%, 5%	⁽²⁾ 8	-	400	1.50	200

□: Tolerance (S: $\pm$ 0.3nH, J: $\pm$ 5%, K: $\pm$ 10%)

※ Test equipment: Agilent 4291B+16192A

⁽¹⁾ 500MHz, ⁽²⁾ 50MHz,