

Multilayer High Frequency Inductor

CIH Series CIH10 (1608 / EIA 0603)



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

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

APPLICATION

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

SPECIFICATION

- Operating temperature range -40 to $+85^{\circ}\text{C}$
- Storage temperature range -10 to $+40^{\circ}\text{C}$

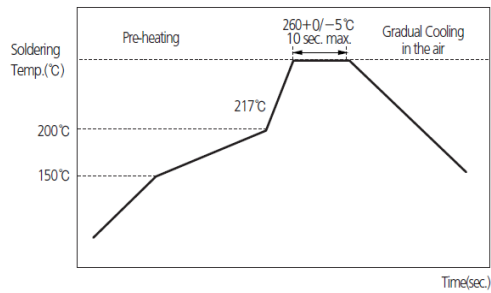
PRODUCT IDENTIFICATION

CI	H	10	T	10N	J	N	C
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

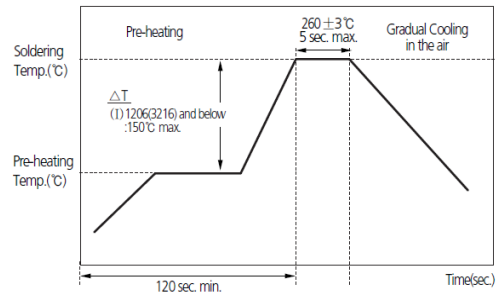
- (1) Chip Inductor
- (2) H:High frequency type
- (3) Dimension
- (4) Material code(T:Dielectric material)
- (5) Inductance(4N7:4.7nH, 10N:10nH, R10:100nH)
- (6) Tolerance(C: $\pm 0.2\text{nH}$, S: $\pm 0.3\text{nH}$, J: $\pm 5\%$, K: $\pm 10\%$)
- (7) Thickness option(N:Standard, A:Thinner than standard,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

RECOMMENDED SOLDERING CONDITION

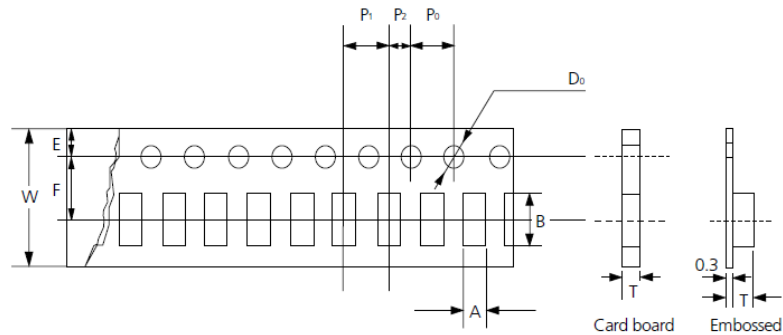
REFLOW SOLDERING



FLOW SOLDERING



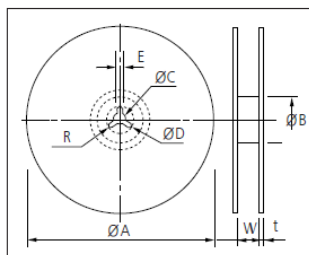
PACKAGING



Unit: mm

Type	03	05	10	21			22	31				32	41	43	
Tape	Card	Card	Card	Embossed			Card	Embossed	Embossed			Card	Embossed	Embossed	Embossed
Chip Thickness	0.3	0.5	0.8	0.85	1.0	1.25	0.85	1.2	0.6	0.8	1.1	0.85	1.3	1.6 (1.2)	1.5
Chip Cavity	A	0.40 ±0.06	0.65 ±0.1	1.0 ±0.2	1.5 ±0.2	1.5 ±0.2	1.45 ±0.1	2.39 ±0.10	1.9 ±0.2	1.9 ±0.2	1.9 ±0.2	2.0 ±0.2	2.9 ±0.2	1.9 ±0.2	3.5 ±0.2
	B	0.70 ±0.06	1.15 ±0.1	1.8 ±0.2	2.3 ±0.2	2.3 ±0.2	2.4 ±0.2	2.79 ±0.10	3.6 ±0.2	3.6 ±0.2	3.6 ±0.2	3.6 ±0.2	3.6 ±0.2	4.9 ±0.2	4.9 ±0.2
t max	0.45	0.8	1.1	1.5	2.0	2.0	0.95 ±0.1	1.80 ±0.10	1.15	1.4	1.4	1.1	1.55	1.8	1.78
W	8 ±0.2	8 ±0.2	8 ±0.2	8 ±0.2	8 ±0.2	8 ±0.2	8.0 ±0.3	8.0 ±0.3	8 ±0.2	8 ±0.2	8 ±0.2	8 ±0.2	8 ±0.2	12 ±0.2	12 ±0.2
F	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	3.5 ±0.05	5.5 ±0.05	5.5 ±0.05
E	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1	1.75 ±0.1
P ₁	2 ±0.05	2 ±0.05	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	8.0 ±0.1	8.0 ±0.1
P ₂	2 ±0.1	2 ±0.1	2 ±0.1	2 ±0.1	2 ±0.1	2 ±0.1	2.0 ±0.1	2.0 ±0.05	2 ±0.1	2 ±0.1	2 ±0.1	2 ±0.1	2 ±0.1	2 ±0.1	2 ±0.1
P ₀	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1	4.0 ±0.1
D ₀	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1 /Ø	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1 /Ø	Ø1.5 ±0.1	Ø1.5 ±0.1	Ø1.5 ±0.1
Quantity / Reel (PCS)	10,000	10,000	4,000	4,000	3,000	2,000	4,000	2,000	4,000	3,000	3,000	4,000	2,500	2,000 (3,000)	1,000

• Reel dimensions



Unit: mm

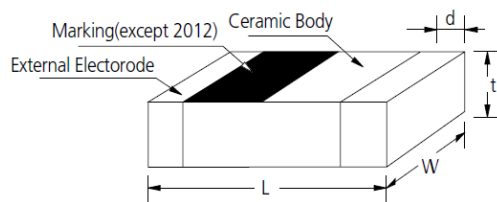
Symbol	A	B	C	D
7" Reel	Ø180+0/-3	Ø60+1/-0	Ø13±0.3	25±0.5
13" Reel	Ø330±2.0	Ø80±1.0	Ø13±0.3	25±0.5

Symbol	E	W	t	R
7" Reel	2.0±0.5	9±0.5	1.2±0.2	1.0
13" Reel	2.0±0.5	9±0.5	2.2±0.2	1.0

Multilayer High Frequency Inductor

1. Model :CIH10 Series

2. 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

3. Description

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	0.1	800
CIH 10T 1N8 S	1.8±0.3nH	8	20	6000	0.1	800
CIH 10T 2N2 S	2.2±0.3nH	8	20	6000	0.1	800
CIH 10T 2N7 S	2.7±0.3nH	10	25	6000	0.1	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	0.4	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	0.6	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	350
CIH 10T R12	120.0±10%, 5%	(2)8	-	500	1.2	300
CIH 10T R15	150.0±10%, 5%	(2)8	-	500	1.2	250
CIH 10T R18	180.0±10%, 5%	(2)8	-	400	1.3	250
CIH 10T R22	220.0±10%, 5%	(2)8	-	400	1.5	200
CIH 10T R27	270.0±10%, 5%	(2)8	-	400	1.5	200

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

※Test equipment:Agilent 4291B+16192A , (1) 500MHz, (2) 50MHz,