

Multilayer High Frequency Inductor

CIH Series CIH03 (0603 / EIA 0201)



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 -55 to +125°C
- Storage temperature range -10 to +40°C

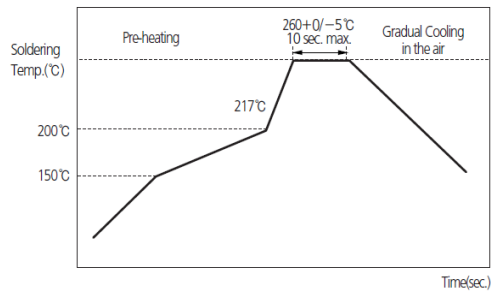
PRODUCT IDENTIFICATION

CI	H	03	T	10N	J	N	C
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

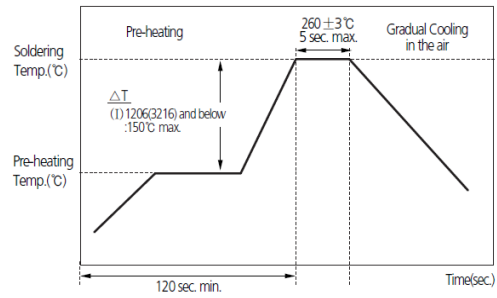
- (1) Chip Inductor
- (2) H:High frequency type
- (3) Dimension
- (4) Material code(T:Dielectric material)
- (5) Inductance(4N7:4.7nH, 10N:10nH, R10:100nH)
- (6) Tolerance(C:±0.2nH, S:±0.3nH, J:±5%, K:±10%)
- (7) Thickness option(N:Standard, A:Thinner than standard, B:Thicker than standard)
- (8) Packaging(C:paper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

RECOMMENDED SOLDERING CONDITION

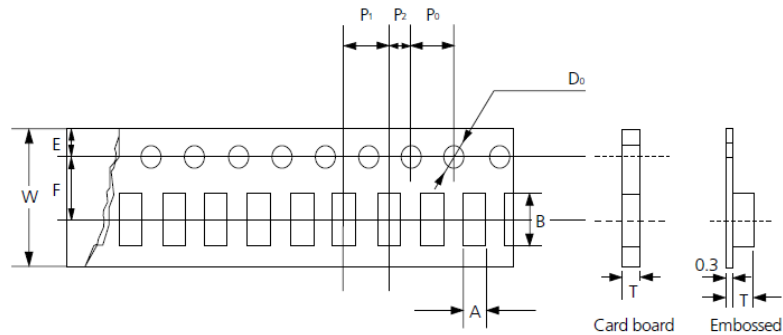
REFLOW SOLDERING



FLOW SOLDERING



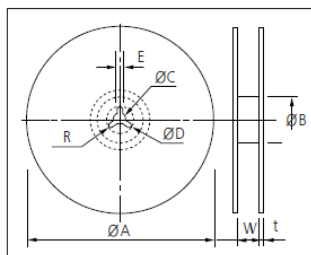
PACKAGING



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

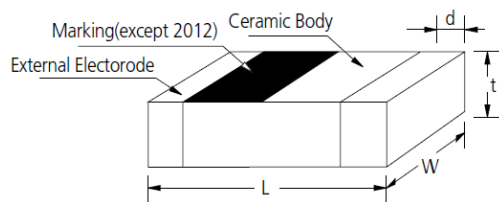
Symbol	A	B	C	D
7" Reel	Ø180+0/-3	Ø60+1/-0	Ø13±0.3	25±0.5
13" Reel	Ø330±2.0	Ø80±1.0	Ø13±0.3	25±0.5

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 :CIH03 Series

2. Dimension



Type	Dimension [mm]			
	L	W	t	d
03	0.6±0.03	0.3±0.03	0.3±0.03	0.15±0.05

3. Description

Part No.	Inductance (nH) @100MHz	Q (Min.) 100 MHz	Q (typical.)					SRF (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	0.3	200
CIH 03T 3N9	3.9±0.2nH,0.3nH	5	15	20	27	29	31	6000	0.3	200
CIH 03T 4N7	4.7±0.2nH,0.3nH	5	15	19	26	28	30	5300	0.4	200
CIH 03T 5N6	5.6±0.2nH,0.3nH	5	15	19	26	27	28	4600	0.4	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	0.7	150
CIH 03T 15N	15.0±5%	6	13	16	19	18	14	2700	0.8	100
CIH 03T 18N	18.0±5%	6	13	18	16	14	9	2100	0.9	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	50

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

※Test equipment:Agilent 4291B+16192A