

# Multilayer High Frequency inductor

## CIH03Q Series (0603/ EIA 0201)



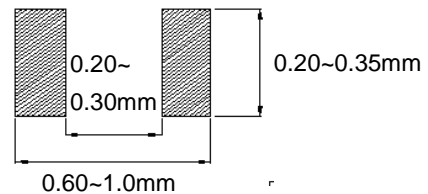
### APPLICATION

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

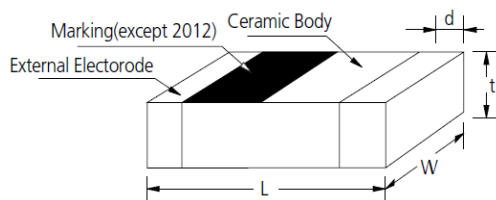
### FEATURES

- High Q value in high frequency range
- Small size(0.6x0.3x0.3)
- 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
03	0.6±0.03	0.3±0.03	0.3±0.03	0.1±0.05

### DESCRIPTION

Part No.	Inductance(nH)	Test Freq. [MHz]	Q (Min.)	Q Typical Frequency[Hz]					DC Resistance [Ω]max.	Rated current (mA)max.	SRF [MHz]min.
				500M	800M	1.8G	2.0G	2.4G			
CIH03Q0N6□	0.6±0.1nH,0.2nH,0.3nH	500	13	>24	>31	>53	>56	>64	0.07	550	10000
CIH03Q0N7□	0.7±0.1nH,0.2nH,0.3nH	500	13	24	31	53	56	64	0.09	490	10000
CIH03Q0N8□	0.8±0.1nH,0.2nH,0.3nH	500	13	24	31	53	56	64	0.12	420	10000
CIH03Q0N9□	0.9±0.1nH,0.2nH,0.3nH	500	13	22	27	50	55	59	0.12	420	10000
CIH03Q1N0□	1.0±0.1nH,0.2nH,0.3nH	500	13	22	27	50	55	59	0.12	420	10000
CIH03Q1N1□	1.1±0.1nH,0.2nH,0.3nH	500	13	19	24	39	41	47	0.11	440	10000
CIH03Q1N2□	1.2±0.1nH,0.2nH,0.3nH	500	13	19	24	39	41	46	0.11	440	10000
CIH03Q1N3□	1.3±0.1nH,0.2nH,0.3nH	500	13	19	24	39	41	46	0.13	410	10000
CIH03Q1N4□	1.4±0.1nH,0.2nH,0.3nH	500	13	19	24	39	41	46	0.13	410	10000
CIH03Q1N5□	1.5±0.1nH,0.2nH,0.3nH	500	13	18	24	39	41	46	0.16	370	10000
CIH03Q1N6□	1.6±0.1nH,0.2nH,0.3nH	500	13	18	23	37	41	45	0.20	330	10000
CIH03Q1N7□	1.7±0.1nH,0.2nH,0.3nH	500	13	18	23	37	41	45	0.20	330	10000
CIH03Q1N8□	1.8±0.1nH,0.2nH,0.3nH	500	13	17	23	37	39	44	0.20	330	10000
CIH03Q1N9□	1.9±0.1nH,0.2nH,0.3nH	500	13	17	23	37	39	43	0.20	330	10000
CIH03Q2N0□	2.0±0.1nH,0.2nH,0.3nH	500	13	17	23	36	38	43	0.20	330	10000
CIH03Q2N1□	2.1±0.1nH,0.2nH,0.3nH	500	13	17	22	36	38	42	0.20	330	10000
CIH03Q2N2□	2.2±0.1nH,0.2nH,0.3nH	500	13	17	22	34	35	39	0.22	310	9500
CIH03Q2N3□	2.3±0.1nH,0.2nH,0.3nH	500	13	17	22	33	35	39	0.22	310	9300
CIH03Q2N4□	2.4±0.1nH,0.2nH,0.3nH	500	13	17	22	33	35	39	0.22	310	9100
CIH03Q2N5□	2.5±0.1nH,0.2nH,0.3nH	500	13	17	22	33	35	39	0.22	310	8900

Part No.	Inductance(nH)	Test Freq. [MHz]	Q (Min.)	Q Typical Frequency[Hz]					DC Resistance [ $\Omega$ ]max	Rated current (mA)max	SRF [MHz]min.
				500M	800M	1.8G	2.0G	2.4G			
CIH03Q2N6□	2.6±0.1nH,0.2nH,0.3nH	500	13	17	22	33	35	39	0.22	310	9300
CIH03Q2N7□	2.7±0.1nH,0.2nH,0.3nH	500	13	17	22	33	35	39	0.22	310	9100
CIH03Q2N8□	2.8±0.1nH,0.2nH,0.3nH	500	13	17	22	33	35	39	0.22	310	8900
CIH03Q2N9□	2.9±0.1nH,0.2nH,0.3nH	500	13	17	22	33	35	39	0.22	310	8700
CIH03Q3N0□	3.0±0.1nH,0.2nH,0.3nH	500	13	17	22	33	39	43	0.30	270	8600
CIH03Q3N1□	3.1±0.1nH,0.2nH,0.3nH	500	13	17	22	33	39	43	0.30	270	8400
CIH03Q3N2□	3.2±0.1nH,0.2nH,0.3nH	500	13	18	22	33	35	39	0.30	270	8200
CIH03Q3N3□	3.3±0.1nH,0.2nH,0.3nH	500	13	18	22	33	35	39	0.30	270	8100
CIH03Q3N4□	3.4±0.1nH,0.2nH,0.3nH	500	13	16	22	33	35	39	0.30	270	8000
CIH03Q3N5□	3.5±0.1nH,0.2nH,0.3nH	500	13	16	22	33	35	39	0.30	270	7800
CIH03Q3N6□	3.6±0.1nH,0.2nH,0.3nH	500	13	16	22	33	35	39	0.30	270	7700
CIH03Q3N7□	3.7±0.1nH,0.2nH,0.3nH	500	13	16	22	33	35	38	0.30	270	7600
CIH03Q3N8□	3.8±0.1nH,0.2nH,0.3nH	500	13	16	22	33	35	38	0.30	270	7500
CIH03Q3N9□	3.9±0.1nH,0.2nH,0.3nH	500	13	16	22	33	35	38	0.30	270	7300
CIH03Q4N3□	4.3±0.1nH,0.2nH,0.3nH	500	13	16	21	32	34	37	0.38	260	6500
CIH03Q4N7□	4.7±0.1nH,0.2nH,0.3nH	500	13	16	21	32	34	37	0.44	220	6200
CIH03Q5N1□	5.1±0.1nH,0.2nH,0.3nH	500	13	16	21	32	34	37	0.44	220	5900
CIH03Q5N6□	5.6±0.1nH,0.2nH,0.3nH	500	13	16	21	32	34	37	0.47	210	5500
CIH03Q6N2□	6.2±0.1nH,0.2nH,0.3nH	500	13	16	21	32	33	36	0.47	210	5100
CIH03Q6N8□	6.8±3%,5%	500	13	16	21	31	32	35	0.55	190	4800
CIH03Q7N5□	7.5±3%,5%	500	13	16	20	30	32	34	0.61	190	4600
CIH03Q8N2□	8.2±3%,5%	500	13	16	20	30	31	33	0.57	190	4300
CIH03Q9N1□	9.1±3%,5%	500	13	16	20	30	30	32	0.73	170	4000
CIH03Q10N□	10.0±3%,5%	500	13	16	20	28	29	31	0.73	170	3800
CIH03Q12N□	12.0±3%,5%	500	12	16	20	27	27	27	0.85	160	3300
CIH03Q15N□	15.0±3%,5%	500	12	15	19	24	24	23	0.89	150	2600
CIH03Q18N□	18.0±3%,5%	500	11	15	19	23	23	21	1.05	140	2300
CIH03Q22N□	22.0±3%,5%	500	10	15	19	22	22	19	1.29	130	1900
CIH03Q27N□	27.0±5%	500	14	18	21	18	15	-	1.90	140	2200
CIH03Q33N□	33.0±5%	300	10	16	17	11	-	-	2.00	140	1800
CIH03Q39N□	39.0±5%	300	10	15	17	-	-	-	2.10	130	1800
CIH03Q47N□	47.0±5%	300	10	16	17	-	-	-	2.60	120	1600
CIH03Q56N□	56.0±5%	300	10	15	15	-	-	-	3.30	110	1400
CIH03Q68N□	68.0±5%	300	9	15	15	-	-	-	3.30	110	1200
CIH03Q82N□	82.0±5%	300	9	15	14	-	-	-	3.80	100	1200
CIH03QR10□	100.0±5%	300	9	14	12	-	-	-	4.30	90	900

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

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

※Measurement equipment & Jig

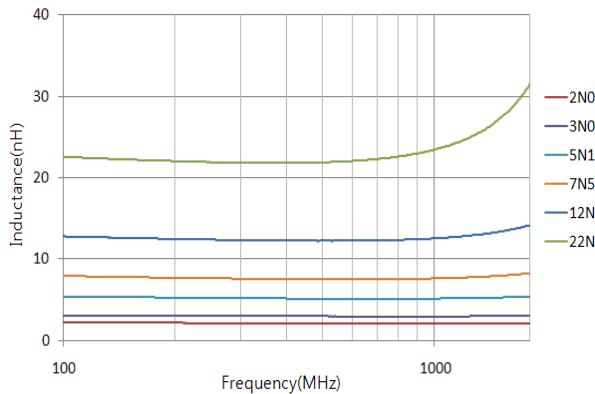
- Impedance Measuring equipment & Jig : Agilent E4991A + 16197A Bottom Electrode SMD Test Fixture
- Resistance Measuring equipment & Jig : Agilent 4338B + 16089A Large Kelvin Clip Leads

※ The Rated Current is the DC current value when the self-generation of heat rises to 20°C (Reference ambient temperature:20°C)

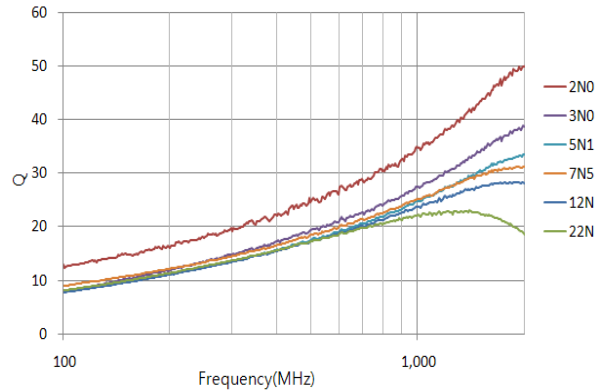
※ Residual Inductance of short chip: 0.30nH

**CHARACTERISTIC DATA**

■ Inductance-Frequency



■ Q-Frequency



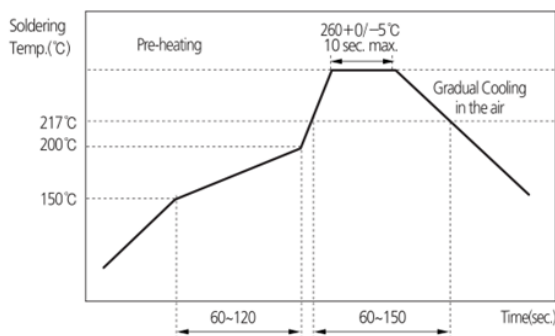
**PRODUCT IDENTIFICATION**

**C I H 03 Q 27N J N C**  
**(1) (2) (3) (4) (5) (6) (7) (8)**

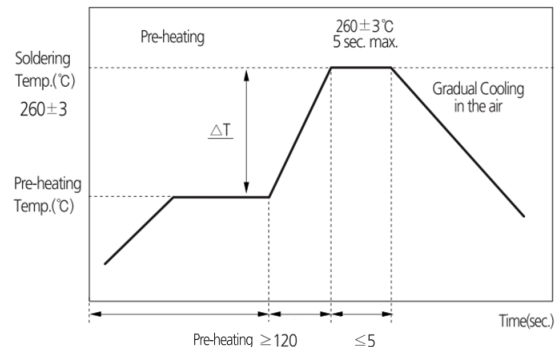
- (1) Chip Inductor
- (2) H:High frequency type
- (3) Dimension
- (4) Material code(Q:Dielectric material High Q type)
- (5) Inductance(0N6:0.6nH, 4N7:4.7nH, 27N:27nH)
- (6) Tolerance(B:±0.1nH, C:±0.2nH, S:±0.3nH, H:±3%, J:±5%)
- (7) Thickness option(N:Standard, A:Thinner than standard, B:Thicker than standard)
- (8) Packaging(C:paper tape, E:embossed tape)

**RECOMMENDED SOLDERING CONDITION**

**REFLOW SOLDERING**



**FLOW SOLDERING**



**PACKAGING**

Packaging Style	Quantity(pcs/reel)
Card Board Taping	10,000

**⚠** Any data in this sheet are subject to change, modify or discontinue without notice.  
 The data sheets include the typical data for design reference only. If there is any question regarding the data sheets, please contact our sales personnel or application engineers.