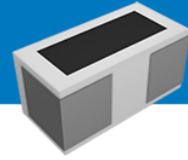


Multilayer High Q Chip Ceramic Inductor – HQ – H Series



Operating temp. : -55°C ~+125°C

FEATURES

- ◆ Monolithic structure for high reliability
- ◆ High self-resonant frequency
- ◆ Excellent solderability and high heat resistance
- ◆ High Q factor

APPLICATIONS

- ◆ RF circuit in telecommunication and other equipments
- ◆ Mobile phones and other electronic devices
- ◆ Bluetooth, WLAN

PRODUCT IDENTIFICATION

1 HQ	2 0402	3 H	4 3N9	5 B	6 T	7 01
---------	-----------	--------	----------	--------	--------	---------

1 Type	
HQ	High Q Chip Inductor

2 External Dimensions (L×W) (mm)	
0402 [01005]	0.4×0.2
0603 [0201]	0.6×0.3

3 Feature Type	
	H

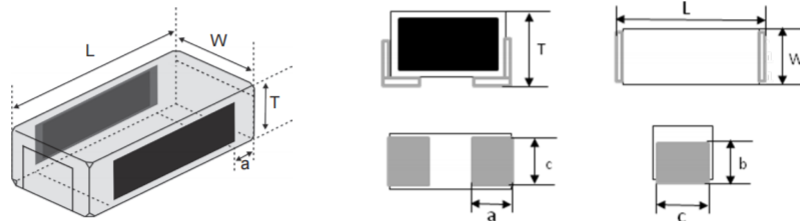
4 Nominal Inductance	
Example	Nominal Value
3N9	3.9nH
10N	10nH
※N=nH	

5 Inductance Tolerance	
B	±0.1nH
C	±0.2nH
S	±0.3nH
H	±3%
J	±5%

6 Packing	
T	Paper Tape
P	Plastic Tape Carrier Package

7 Serial Code	
	01

SHAPE AND DIMENSIONS



Type	L	W	T	a	b	c
0402 [01005]	0.4±0.02 [.016±.0008]	0.2±0.02 [.008±.0008]	0.2±0.02 [.008±.0008]	0.14±0.03 [.005±.0010]	0.14±0.03 [.005±.0010]	0.17±0.03 [.006±.0010]
0603 [0201]	0.6±0.03 [.024±.0012]	0.3±0.03 [.012±.0012]	0.3±0.02 [.012±.0008]	0.15±0.03 [.006±.0012]	0.2±0.03 [.008±.0012]	0.22±0.03 [.0088±.0012]

Unit: mm [inch]

SPECIFICATIONS HQ0402H Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.	Typical Q @ Freq. (GHz)					Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
				0.5	0.8	1.8	2.0	2.4			
Units	nH	-	MHz	-					MHz	Ω	mA
Symbol	L	Q	Freq.	Q					S.R.F	DCR	I _r
HQ0402H0N2 □○ 01	0.2	-	500	-	-	-	-	-	16600	0.1	990
HQ0402H0N3 □○ 01	0.3	-	500	-	-	-	-	-	16600	0.1	990
HQ0402H0N4 □○ 01	0.4	-	500	-	-	-	-	-	16600	0.1	990
HQ0402H0N5 □○ 01	0.5	11	500	15	18	33	35	40	16600	0.1	730
HQ0402H0N6 □○ 01	0.6	11	500	15	17	32	34	40	16600	0.1	730
HQ0402H0N7 □○ 01	0.7	11	500	15	18	34	36	41	16600	0.1	730
HQ0402H0N8 □○ 01	0.8	11	500	14	18	32	35	41	16600	0.15	630
HQ0402H0N9 □○ 01	0.9	11	500	15	18	32	34	38	16600	0.15	580
HQ0402H1N0 □○ 01	1.0	11	500	14	19	32	35	42	16600	0.15	580
HQ0402H1N1 □○ 01	1.1	11	500	15	19	31	33	36	16600	0.15	580
HQ0402H1N2 □○ 01	1.2	11	500	15	20	32	34	38	16600	0.2	550
HQ0402H1N3 □○ 01	1.3	11	500	14	18	29	31	34	16000	0.2	400
HQ0402H1N4 □○ 01	1.4	11	500	15	19	30	32	38	15000	0.2	400
HQ0402H1N5 □○ 01	1.5	11	500	15	19	31	32	33	15000	0.2	400
HQ0402H1N6 □○ 01	1.6	11	500	14	18	30	31	35	15000	0.3	390
HQ0402H1N7 □○ 01	1.7	11	500	14	18	30	32	35	15000	0.3	380
HQ0402H1N8 □○ 01	1.8	11	500	14	19	30	32	34	15000	0.3	380
HQ0402H1N9 □○ 01	1.9	11	500	14	18	30	32	35	13000	0.3	380
HQ0402H2N0 □○ 01	2.0	11	500	15	19	31	33	35	13000	0.3	380
HQ0402H2N1 □○ 01	2.1	11	500	14	18	29	32	35	13000	0.3	380
HQ0402H2N2 □○ 01	2.2	11	500	15	20	32	34	34	13000	0.3	380
HQ0402H2N3 □○ 01	2.3	11	500	15	19	30	32	38	13000	0.4	370
HQ0402H2N4 □○ 01	2.4	11	500	15	20	31	33	35	13000	0.4	370
HQ0402H2N5 □○ 01	2.5	11	500	14	18	29	31	35	11500	0.4	370
HQ0402H2N6 □○ 01	2.6	11	500	14	18	30	32	35	11500	0.4	370
HQ0402H2N7 □○ 01	2.7	11	500	14	19	30	32	34	11500	0.4	370
HQ0402H2N8 □○ 01	2.8	11	500	14	18	29	31	35	10000	0.4	360
HQ0402H2N9 □○ 01	2.9	11	500	14	18	28	31	35	10000	0.45	360
HQ0402H3N0 □○ 01	3.0	11	500	14	17	28	30	34	10000	0.45	360
HQ0402H3N1 □○ 01	3.1	11	500	14	18	28	31	35	10000	0.9	290
HQ0402H3N2 □○ 01	3.2	11	500	14	18	31	32	34	10000	0.9	290
HQ0402H3N3 □○ 01	3.3	11	500	14	18	30	31	33	10000	0.9	290
HQ0402H3N4 □○ 01	3.4	11	500	14	17	27	29	33	9700	1	280
HQ0402H3N5 □○ 01	3.5	11	500	14	17	28	30	32	9700	1	280
HQ0402H3N6 □○ 01	3.6	11	500	14	17	27	29	31	9700	1	280
HQ0402H3N7 □○ 01	3.7	11	500	13	17	27	29	33	9700	1	270
HQ0402H3N8 □○ 01	3.8	11	500	14	17	27	29	32	9700	1	270
HQ0402H3N9 □○ 01	3.9	11	500	14	17	25	26	30	9700	1	270
HQ0402H4N0 □○ 01	4.0	11	500	14	16	26	28	30	9700	1	270
HQ0402H4N1 □○ 01	4.1	11	500	14	17	26	28	31	9000	1	270
HQ0402H4N2 □○ 01	4.2	11	500	14	17	27	29	31	9000	1	270
HQ0402H4N3 □○ 01	4.3	11	500	14	17	26	28	31	9000	1	270
HQ0402H4N7 □○ 01	4.7	11	500	14	17	25	27	30	8500	1	270
HQ0402H5N1 □○ 01	5.1	11	500	14	17	26	28	31	7800	1.2	250
HQ0402H5N6 □○ 01	5.6	11	500	15	18	30	31	33	7800	1.3	230
HQ0402H6N2 □○ 01	6.2	11	500	15	18	30	31	32	7200	1.3	220
HQ0402H6N8 □○ 01	6.8	11	500	15	19	29	31	33	6600	1.4	210

SPECIFICATIONS HQ0402H Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.	Typical Q @ Freq. (GHz)					Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
				0.5	0.8	1.8	2.0	2.4			
Units	nH	-	MHz	-					MHz	Ω	mA
Symbol	L	Q	Freq.	Q					S.R.F	DCR	I _r
HQ0402H7N5 □ ⊙ 01	7.5	11	500	14	19	28	31	33	6600	1.5	200
HQ0402H8N2 □ ⊙ 01	8.2	11	500	15	20	29	31	33	6600	1.6	190
HQ0402H9N1 □ ⊙ 01	9.1	11	500	15	19	28	31	32	5900	1.7	170
HQ0402H10N □ ⊙ 01	10	11	500	14	18	26	29	31	5500	1.7	170
HQ0402H11N □ ⊙ 01	11	11	500	14	17	25	26	28	3500	1.9	140
HQ0402H12N □ ⊙ 01	12	11	500	14	17	25	26	28	3500	2.1	140
HQ0402H13N □ ⊙ 01	13	10	500	13	16	23	24	24	3000	2.1	140
HQ0402H15N □ ⊙ 01	15	10	500	13	16	23	24	24	3000	2.3	140
HQ0402H16N □ ⊙ 01	16	10	500	12	15	21	21	21	2500	2.5	140
HQ0402H18N □ ⊙ 01	18	9	500	10	12	17	17	16	2500	2.5	140
HQ0402H20N □ ⊙ 01	20	9	500	10	11	16	16	15	2700	2.9	140
HQ0402H22N □ ⊙ 01	22	9	500	10	11	15	15	13	2300	3.2	120
HQ0402H24N □ ⊙ 01	24	9	500	10	11	15	16	13	2200	3.2	120
HQ0402H27N □ ⊙ 01	27	9	500	10	12	16	17	13	2000	3.5	120
HQ0402H30N □ ⊙ 01	30	6	500	10	12	13	12	10	1800	3.6	120
HQ0402H33N □ ⊙ 01	33	6	300	10	12	12	11	8	1800	3.8	120

※ □: Please specify the inductance tolerance. For L≤4.2nH, choose B=±0.1nH, C=±0.2nH or S=±0.3nH; For 4.2nH < L < 5.6nH, choose, H=±3%, J=±5% or S=±0.3nH; For L≥5.6nH, choose, H=±3%, J=±5%

※ ⊙: For the product of 0402, please specify the Packing: T means Paper Tape, P means Plastic Tape Carrier Package.

※: Please refer to "Measurement Notice for RF Inductors".

HQ0603H Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.	Typical Q @ Freq. (GHz)					Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
				0.5	0.8	1.8	2.0	2.4			
Units	nH	-	MHz	-					MHz	Ω	mA
Symbol	L	Q	Freq.	Q					S.R.F	DCR	I _r
HQ0603H0N6 □ T01	0.6	17	500	96	135	254	291	300	20000	0.05	1000
HQ0603H0N7 □ T01	0.7	17	500	85	127	259	332	304	20000	0.05	1000
HQ0603H0N8 □ T01	0.8	17	500	65	78	152	170	178	18000	0.05	1000
HQ0603H0N9 □ T01	0.9	17	500	40	52	94	103	107	18000	0.08	800
HQ0603H1N0 □ T01	1.0	17	500	47	63	94	107	118	17000	0.08	800
HQ0603H1N1 □ T01	1.1	17	500	38	52	86	93	103	17000	0.08	800
HQ0603H1N2 □ T01	1.2	17	500	36	46	78	84	93	17000	0.08	800
HQ0603H1N3 □ T01	1.3	17	500	36	48	80	85	97	17000	0.1	700
HQ0603H1N4 □ T01	1.4	17	500	32	42	69	73	80	16000	0.1	700
HQ0603H1N5 □ T01	1.5	17	500	35	44	71	76	82	15000	0.1	650
HQ0603H1N6 □ T01	1.6	17	500	34	44	69	75	80	15000	0.1	650
HQ0603H1N7 □ T01	1.7	17	500	35	44	68	72	77	15000	0.1	650
HQ0603H1N8 □ T01	1.8	17	500	33	41	64	68	74	15000	0.1	650
HQ0603H1N9 □ T01	1.9	17	500	34	41	65	68	73	12500	0.1	650
HQ0603H2N0 □ T01	2.0	17	500	32	40	59	62	68	12500	0.1	650
HQ0603H2N1 □ T01	2.1	17	500	33	41	59	61	67	11000	0.12	650
HQ0603H2N2 □ T01	2.2	17	500	32	39	55	57	62	11000	0.12	650
HQ0603H2N3 □ T01	2.3	17	500	32	40	57	58	64	11000	0.15	550
HQ0603H2N4 □ T01	2.4	17	500	30	37	53	55	60	11000	0.15	550
HQ0603H2N5 □ T01	2.5	17	500	31	38	55	57	62	10000	0.15	550
HQ0603H2N6 □ T01	2.6	17	500	31	38	55	57	62	10000	0.15	550
HQ0603H2N7 □ T01	2.7	17	500	28	35	51	52	57	10000	0.15	550
HQ0603H2N8 □ T01	2.8	17	500	29	36	51	53	58	10000	0.2	500

Multilayer Chip Ferrite Inductor
Multilayer Chip Inductor for Choke
Multilayer Chip Power Inductor
Multilayer Ultra High Q Chip Ceramic Inductor
Multilayer High Q Chip Ceramic Inductor
Multilayer Chip Ceramic Inductor
Multilayer High Frequency Chip Ceramic Inductor
Wire Wound Chip Ferrite Inductor
Wire Wound Chip Ferrite Inductor
SMD Power Inductor

SPECIFICATIONS HQ0603H Series

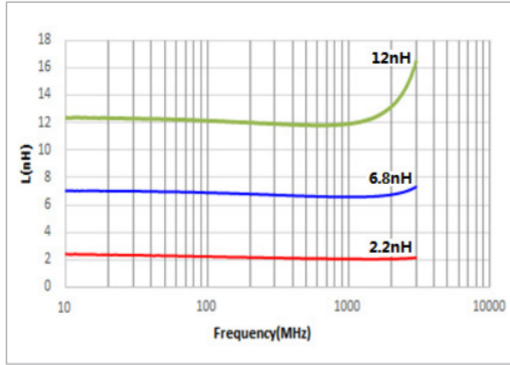
Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.	Typical Q @ Freq. (GHz)					Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
				0.5	0.8	1.8	2.0	2.4			
Units	nH	-	MHz	-					MHz	Ω	mA
Symbol	L	Q	Freq.	Q					S.R.F	DCR	I _r
HQ0603H2N9 □ T01	2.9	17	500	29	36	51	53	57	10000	0.2	500
HQ0603H3N0 □ T01	3.0	17	500	28	35	50	52	56	9500	0.2	500
HQ0603H3N1 □ T01	3.1	17	500	29	36	52	54	58	9500	0.24	450
HQ0603H3N2 □ T01	3.2	17	500	27	35	51	53	57	9500	0.24	450
HQ0603H3N3 □ T01	3.3	17	500	28	35	50	52	56	9500	0.24	450
HQ0603H3N4 □ T01	3.4	17	500	28	35	50	52	55	8000	0.25	450
HQ0603H3N5 □ T01	3.5	17	500	27	34	49	50	53	8000	0.25	450
HQ0603H3N6 □ T01	3.6	17	500	28	35	49	51	55	8000	0.25	400
HQ0603H3N7 □ T01	3.7	17	500	28	34	49	51	53	6500	0.25	400
HQ0603H3N8 □ T01	3.8	17	500	27	33	48	50	52	6500	0.25	400
HQ0603H3N9 □ T01	3.9	17	500	25	31	44	45	48	6500	0.25	400
HQ0603H4N0 □ T01	4.0	17	500	24	30	44	46	50	6500	0.35	360
HQ0603H4N1 □ T01	4.1	17	500	25	31	45	46	49	6500	0.35	360
HQ0603H4N2 □ T01	4.2	17	500	25	31	46	47	50	6500	0.35	360
HQ0603H4N3 □ T01	4.3	17	500	23	29	43	44	48	6500	0.35	360
HQ0603H4N7 □ T01	4.7	17	500	23	28	41	43	45	6500	0.35	350
HQ0603H5N1 □ T01	5.1	17	500	25	33	45	47	51	6500	0.39	350
HQ0603H5N6 □ T01	5.6	17	500	24	31	44	47	52	6000	0.39	350
HQ0603H6N2 □ T01	6.2	17	500	24	30	43	45	47	6000	0.55	300
HQ0603H6N8 □ T01	6.8	17	500	23	31	42	43	44	5400	0.55	300
HQ0603H7N5 □ T01	7.5	17	500	23	29	39	40	42	4800	0.55	300
HQ0603H8N2 □ T01	8.2	17	500	23	28	37	39	40	4800	0.65	250
HQ0603H9N1 □ T01	9.1	17	500	23	28	38	39	39	4500	0.65	250
HQ0603H10N □ T01	10	17	500	22	27	38	38	37	4500	0.69	250
HQ0603H11N □ T01	11	17	500	22	28	36	37	36	3700	0.69	250
HQ0603H12N □ T01	12	17	500	22	27	34	33	32	3700	0.69	250
HQ0603H13N □ T01	13	17	500	22	27	34	33	32	3700	0.69	250
HQ0603H15N □ T01	15	14	500	22	27	33	32	30	3500	0.8	250
HQ0603H18N □ T01	18	14	500	22	26	32	30	26	3500	1.1	200
HQ0603H20N □ T01	20	14	500	21	26	30	28	24	3000	1.2	200
HQ0603H22N □ T01	22	14	500	21	26	26	24	20	3000	1.2	200
HQ0603H24N □ T01	24	14	500	21	26	26	23	16	2000	1.6	150
HQ0603H27N □ T01	27	14	500	21	25	25	22	14	2000	1.6	150
HQ0603H30N □ T01	30	11	500	21	25	24	20	12	1700	2	150
HQ0603H33N □ T01	33	11	300	21	25	22	19	10	1700	2	150
HQ0603H36N □ T01	36	11	300	22	26	20	16	6	1500	2.5	130
HQ0603H39N □ T01	39	11	300	22	26	20	16	6	1500	2.5	130
HQ0603H43N □ T01	43	11	300	22	24	10	5	6	1300	3.5	130
HQ0603H47N □ T01	47	11	300	22	24	10	5	6	1300	3.5	130

※□: Please specify the inductance tolerance. For L≤4.2nH, choose B=±0.1nH, C=±0.2nH or S=±0.3nH; For L > 4.2nH choose, H=±3%, J=±5%.

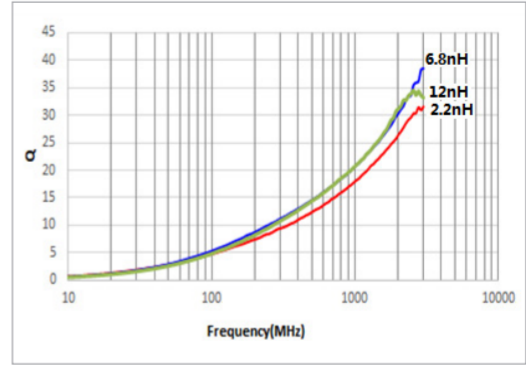
※: Please refer to "Measurement Notice for RF Inductors".

TYPICAL ELECTRICAL CHARACTERISTICS

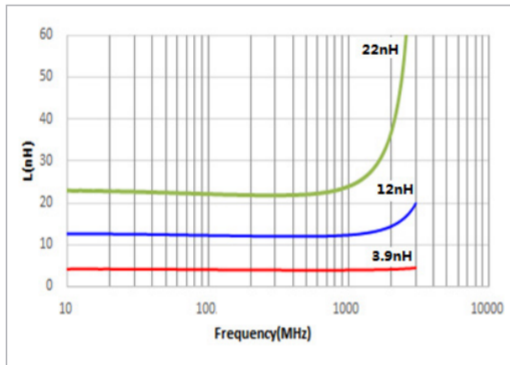
HQ0402H Series
Inductance-Frequency Characteristics



Q vs. Frequency Characteristics



HQ0603H Series
Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics

