

Multilayer Chip High Q Inductor – HQ 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 value correspond to wire wound inductor

APPLICATIONS

- RF circuit in telecommunication and other Equipments
- Mobile phones such as GSM, CDMA, PDC, etc.
- Bluetooth, W-LAN

PRODUCT IDENTIFICATION

HQ

①

Type	
HQ	Chip High Q Inductor

1005

②

C

③

External Dimensions (L×W) (mm)	
0402[01005]	0.4×0.2
1005 [0402]	1.0×0.5

3N9

④

④

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

S

⑤

⑤

Inductance Tolerance	
B	±0.1nH
C	±0.2nH
S	±0.3nH
G	±2%
H	±3%
J	±5%

T

⑥

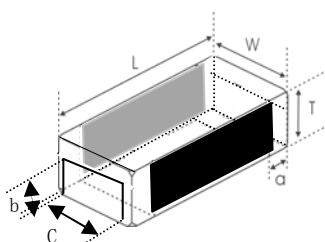
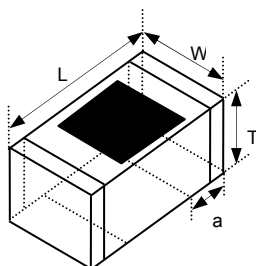
③

Material Code	
H	
C	

⑥

Packing	
T	Tape & Reel

SHAPE AND DIMENSIONS



Unit: mm [inch]

Type	L	W	T	a
HQ0402 [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]
HQ1005 [0402]	1.0±0.15 [0.039±0.006]	0.6±0.15 [0.024±0.006]	0.5±0.15 [0.020±0.006]	0.25±0.1 [0.010±0.004]

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Specifications subject to change without notice. Please check our website for latest information. Revised 2017/07/15

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SPECIFICATIONS

HQ0402 TYPE

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq. L/Q	Typical Q @ Freq. (MHz)					Min. Self-resonance Frequency	Max. DC Resistance	Max. Rated Current	Thickness
				500	800	1800	2000	2400				
Units	nH	-	MHz	-					MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq	Q					SRF	DCR	I _r	T
HQ0402H0N2□T01	0.2	-	500	-	-	-	-	-	16600	0.1	990	0.2±0.02 [.008±.0008]
HQ0402H0N5□T01	0.5	-	500	15	18	33	35	40	16600	0.1	730	
HQ0402H0N6□T01	0.6	-	500	15	17	32	34	40	16600	0.1	730	
HQ0402H0N8□T01	0.8	11	500	14	18	32	35	41	16600	0.15	630	
HQ0402H1N0□T01	1.0	11	500	14	19	32	35	42	16600	0.15	580	
HQ0402H1N2□T01	1.2	11	500	15	20	32	34	38	16600	0.2	550	
HQ0402H1N6□T01	1.6	11	500	14	18	30	31	35	15000	0.3	390	
HQ0402H1N8□T01	1.8	11	500	14	19	30	32	34	15000	0.3	380	
HQ0402H2N0□T01	2.0	11	500	15	19	31	33	35	13000	0.3	380	
HQ0402H2N2□T01	2.2	11	500	15	20	32	34	34	13000	0.3	380	
HQ0402H2N4□T01	2.4	11	500	15	20	31	33	35	13000	0.4	370	
HQ0402H2N7□T01	2.7	11	500	14	19	30	32	34	11500	0.4	370	
HQ0402H3N0□T01	3.0	11	500	14	17	28	30	34	10000	0.45	360	
HQ0402H3N3□T01	3.3	11	500	14	18	30	31	33	10000	0.9	290	
HQ0402H3N6□T01	3.6	11	500	14	17	27	29	31	9700	1.0	280	
HQ0402H3N9□T01	3.9	11	500	14	17	25	26	30	9000	1.0	270	
HQ0402H4N3□T01	4.3	11	500	14	17	26	28	31	9000	1.0	270	
HQ0402H4N7□T01	4.7	11	500	14	17	25	27	30	8500	1.0	270	
HQ0402H5N1□T01	5.1	11	500	14	17	26	28	31	7800	1.2	250	
HQ0402H5N6□T01	5.6	11	500	15	18	30	31	33	7800	1.3	230	
HQ0402H6N2□T01	6.2	11	500	15	18	30	31	32	7200	1.3	220	
HQ0402H6N8□T01	6.8	11	500	15	19	29	31	33	6600	1.4	210	
HQ0402H7N5□T01	7.5	11	500	14	19	28	31	33	6600	1.5	200	
HQ0402H8N2□T01	8.2	11	500	15	20	29	31	33	6600	1.6	190	
HQ0402H9N1□T01	9.1	11	500	15	19	28	31	32	5900	1.7	170	
HQ0402H10N□T01	10	11	500	14	18	26	29	31	5500	1.7	170	
HQ0402H12N□T01	12	11	500	14	17	25	26	28	3500	2.1	140	

SPECIFICATIONS

HQ1005 TYPE

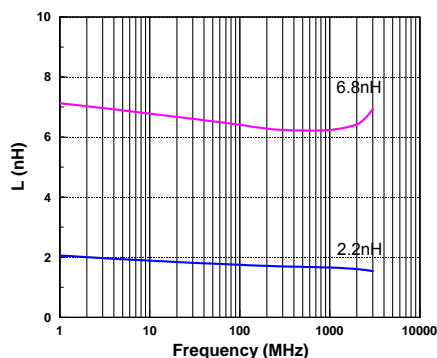
Part Number	Inductance	Min. Quality Factor	L, Q Test Freq. L/Q	Typical Q @ Freq. (MHz)				Min. Self-resona Frequency	Max. DC Resistance	Max. Rated Current	Thickness
				100	250	900	1800				
Units	nH	-	MHz	-				MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq	Q				SRF	DCR	I _r	T
HQ1005C1N0□T	1.0	20	250	13	22	48	75	6000	0.05	1000	0.5±0.15 [.020±.006]
HQ1005C1N2□T	1.2	20	250	13	22	48	75	6000	0.05	1000	
HQ1005C1N5□T	1.5	20	250	13	22	58	76	6000	0.05	1000	
HQ1005C1N8□T	1.8	20	250	13	22	49	78	6000	0.07	800	
HQ1005C2N0□T	2.0	20	250	14	23	49	82	6000	0.07	800	
HQ1005C2N2□T	2.2	20	250	14	23	49	82	6000	0.07	800	
HQ1005C2N4□T	2.4	20	250	14	23	47	78	6000	0.07	800	
HQ1005C2N5□T	2.5	20	250	14	23	47	78	6000	0.07	800	
HQ1005C2N7□T	2.7	20	250	14	23	48	82	6000	0.09	700	
HQ1005C2N9□T	2.9	20	250	14	23	48	82	6000	0.09	700	
HQ1005C3N0□T	3.0	20	250	14	23	50	84	6000	0.09	700	
HQ1005C3N3□T	3.3	20	250	14	24	52	90	6000	0.09	700	
HQ1005C3N6□T	3.6	20	250	15	24	55	95	6000	0.10	700	
HQ1005C3N9□T	3.9	20	250	15	25	50	89	6000	0.10	700	
HQ1005C4N1□T	4.1	20	250	15	25	49	86	6000	0.12	650	
HQ1005C4N3□T	4.3	20	250	15	25	49	86	6000	0.13	600	
HQ1005C4N7□T	4.7	20	250	15	26	50	88	6000	0.13	600	
HQ1005C5N1□T	5.1	20	250	15	26	49	84	5500	0.13	600	
HQ1005C5N6□T	5.6	20	250	15	27	50	84	5500	0.13	600	
HQ1005C5N8□T	5.8	20	250	15	27	50	82	5500	0.13	600	
HQ1005C6N2□T	6.2	20	250	15	27	50	80	5500	0.14	550	
HQ1005C6N8□T	6.8	22	250	15	27	55	89	5000	0.15	550	
HQ1005C7N3□T	7.3	22	250	15	27	54	90	5000	0.16	550	
HQ1005C7N5□T	7.5	22	250	15	27	54	90	5000	0.16	550	
HQ1005C8N2□T	8.2	22	250	15	27	56	84	5000	0.16	550	
HQ1005C8N7□T	8.7	22	250	15	27	53	80	5000	0.17	500	
HQ1005C9N1□T	9.1	22	250	15	27	53	79	4500	0.18	500	
HQ1005C9N5□T	9.5	22	250	15	27	52	77	4500	0.18	500	
HQ1005C10N□T	10	22	250	16	29	52	75	4500	0.18	500	
HQ1005C11N□T	11	22	250	16	28	52	71	4000	0.20	500	
HQ1005C12N□T	12	22	250	16	29	51	68	4000	0.20	500	
HQ1005C15N□T	15	22	250	16	29	50	60	4000	0.22	430	

※□: Please specify the inductance tolerance. For L≤6.2nH, choose B=±0.1nH or C=±0.2nH or S=±0.3nH; For L>6.2nH, choose G=±2% or H=±3% or J=±5%.

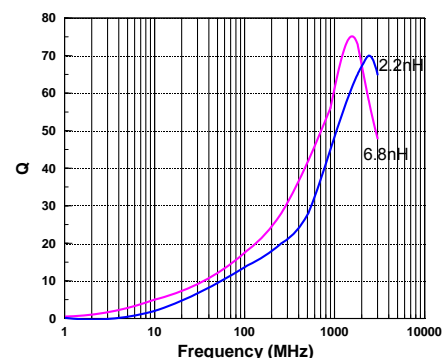
TYPICAL ELECTRICAL CHARACTERISTICS

HQ1005 TYPE

Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics



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