

## HQ Series



Due to accurate wire winding technology, these chip inductors are designed for filtering, impedance matching, resonance and choke circuits for RF designer. Both standard series custom designs are available.

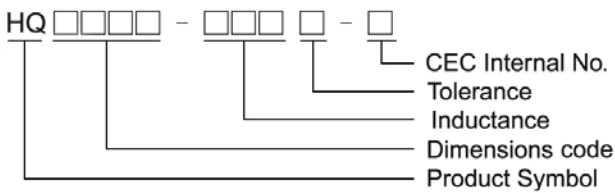
### Features

- RoHS compliant.
- Ceramic body and wire wound construction provide highest SRFs
- Exceptional Q values even at high frequencies
- Highest possible SRFs as well as excellent Q values
- The non-magnetic coil form assures utmost thermal stability, predictability and batch consistency
- The highest Q factors and low RDC to fulfill the needs of mobile applications

### Applications

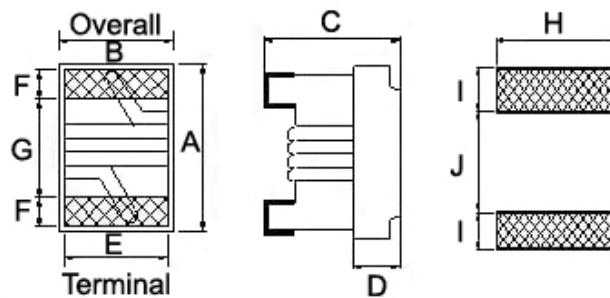
- RF products for cellular phone
- GPS receiver
- Base Station
- Repeater
- Wireless LAN/ mouse/ keyboard/ earphone
- Remote control
- Security system and other RF modules

### Product Identification



### Shape and Dimensions/ Recommended Pattern

#### HQ0805/1008



#### Dimensions

		A Max	B Max	C Max	D	E	F	G	H	I	J
HQ0805	inch	0.090	0.070	0.061	0.020	0.050	0.017	0.050	0.070	0.040	0.030
	mm	2.29	1.78	1.56	0.50	1.27	0.44	1.27	1.78	1.02	0.76
HQ1008	inch	0.117	0.110	0.083	0.028	0.080	0.020	0.060	0.100	0.040	0.050
	mm	2.96	2.79	2.10	0.70	2.03	0.51	1.52	2.54	1.02	1.27

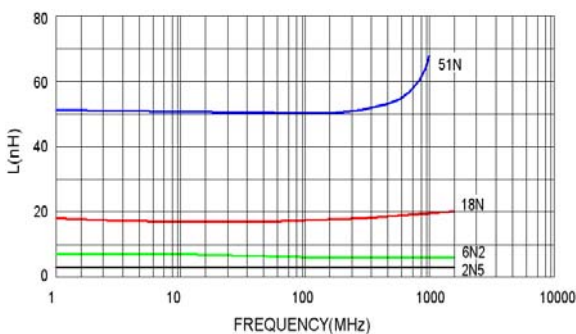
## Electrical Characteristics

Part Number	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	Rdc (Ω) Max	Irms (mA) Max	Color
HQ0805-2N5□-S	2.5	250	10 / 5	80	1500	6000	0.020	1600	Black
HQ0805-5N6□-S	5.6	250	10 / 5	98	1500	6000	0.035	1600	Brown
HQ0805-6N2□-S	6.2	250	10 / 5	88	1000	4750	0.035	1600	Red
HQ0805-12N□-S	12.0	250	10 / 5	80	1000	3000	0.045	1600	Orange
HQ0805-16N□-S	16.0	250	10 / 5 / 2	72	500	2950	0.060	1500	Yellow
HQ0805-18N□-S	18.0	250	10 / 5 / 2	75	500	2550	0.060	1400	Green
HQ0805-20N□-S	20.0	250	10 / 5 / 2	70	500	2050	0.055	1400	Blue
HQ0805-27N□-S	27.0	250	10 / 5 / 2	75	500	2000	0.070	1300	Violet
HQ0805-30N□-S	30.0	250	10 / 5 / 2	65	500	1950	0.095	1200	Gray
HQ0805-39N□-S	39.0	250	10 / 5 / 2	65	500	1600	0.095	1100	White
HQ0805-48N□-S	48.0	200	10 / 5 / 2	65	500	1400	0.110	1200	Black
HQ0805-51N□-S	51.0	200	10 / 5 / 2	65	500	1400	0.120	1000	Brown

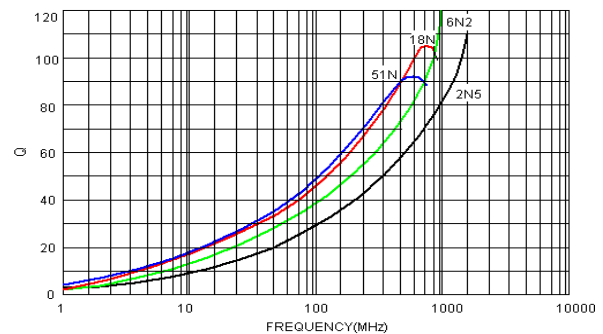
- When ordering, please specify tolerance and packaging codes.
- Tolerance: G = ±2%, J = ±5% , K = ±10%
- Packaging: Clear tape and reel {standard}
- L/Q: Agilent E4991A+ Agilent HP16197A
- SRF: Agilent HP8753D / Agilent E4991A
- RDC: CH502BC/ HP4338B
- I rms for a 15°C rise above 25°C ambient
- Operating temperature range from -40°C to 125°C.(Including self - temperature rise)

## Test Instruments : Agilent E4991A Material/Impedance Analyzer

Typical L vs. Frequency



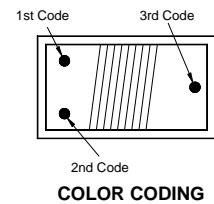
Typical Q vs. Frequency



## Electrical Characteristics

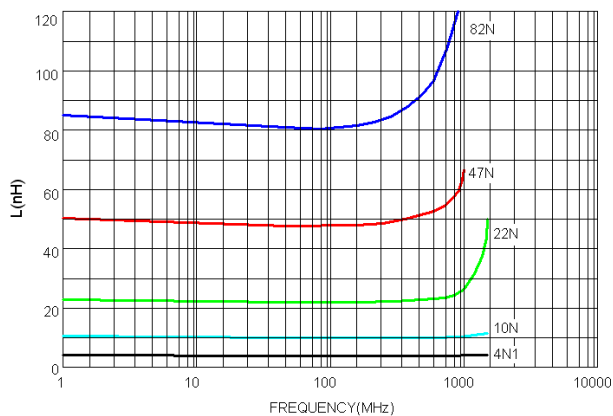
Part Number	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	Rdc (Ω) Max	Irms (mA) Max	Color Coding		
									1 <sup>ST</sup>	2 <sup>ND</sup>	3 <sup>RD</sup>
HQ1008-4N1□-S	4.1	50	10 / 5	75	1500	6000	0.05	1600	Black	Yellow	Black
HQ1008-10N□-S	10	50	10 / 5	60	500	3600	0.06	1600	Brown	Black	Black
HQ1008-12N□-S	12	50	10 / 5 / 2	70	500	2800	0.06	1500	Brown	Red	Black
HQ1008-18N□-S	18	50	10 / 5 / 2	62	350	2700	0.07	1400	Brown	Gray	Black
HQ1008-22N□-S	22	50	10 / 5 / 2	62	350	2050	0.07	1400	Red	Red	Black
HQ1008-33N□-S	33	50	10 / 5 / 2	75	350	1700	0.09	1300	Orange	Orange	Black
HQ1008-39N□-S	39	50	10 / 5 / 2	75	350	1300	0.09	1300	Orange	White	Black
HQ1008-47N□-S	47	50	10 / 5 / 2	75	350	1450	0.12	1200	Yellow	Violet	Black
HQ1008-56N□-S	56	50	10 / 5 / 2	75	350	1230	0.12	1200	Green	Blue	Black
HQ1008-68N□-S	68	50	10 / 5 / 2	80	350	1150	0.13	1100	Blue	Gray	Black
HQ1008-82N□-S	82	50	10 / 5 / 2	80	350	1060	0.16	1100	Gray	Red	Black
HQ1008-R10□-S	100	50	10 / 5 / 2	62	350	1000	0.16	1000	Brown	Black	Brown
HQ1008-R12□-S	120	25	10 / 5 / 2	50	100	950	0.20	1000	Brown	Red	Brown
HQ1008-R15□-S	150	25	10 / 5 / 2	48	100	820	0.23	1000	Brown	Green	Brown
HQ1008-R22□-S	220	25	10 / 5 / 2	48	100	730	0.45	1000	Red	Red	Brown
HQ1008-R27□-S	270	25	10 / 5 / 2	48	100	650	0.50	900	Red	Violet	Brown
HQ1008-R33□-S	330	25	10 / 5 / 2	48	100	570	0.65	900	Orange	Orange	Brown
HQ1008-R39□-S	390	25	10 / 5 / 2	48	100	530	0.70	900	Orange	White	Brown

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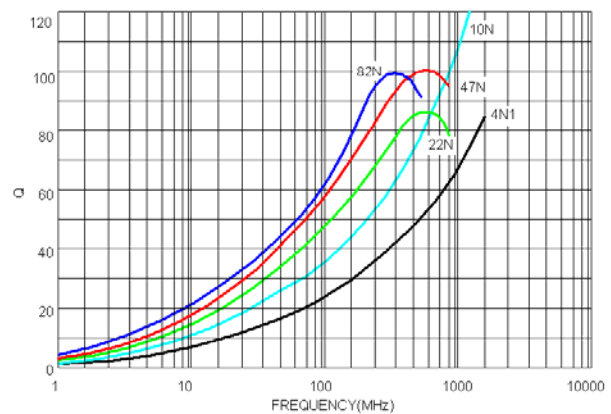


## Test Instruments : Agilent E4991A Material/Impedance Analyzer

Typical **L** vs. **Frequency**

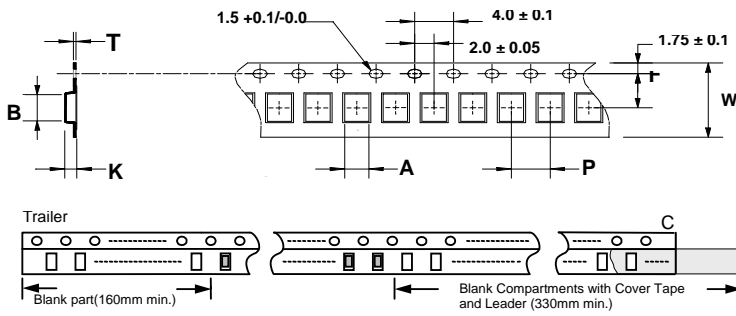


Typical **Q** vs. **Frequency**

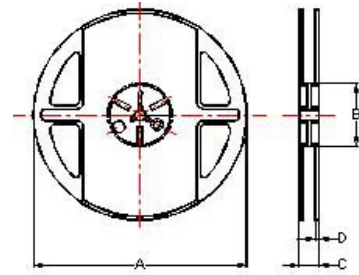


## Packaging Specifications

### Tape Dimensions



### Reel Dimensions



### Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity PCS / REEL
	A	B	T	W	P	F	K	A	B	C	D	
HQ0805	1.85	2.45	0.23	8	4	3.5	1.45	178	60	12	1.5	2000
HQ1008	2.80	2.95	0.23	8	4	3.5	2.20	178	60	12	1.5	2000