Chip Coils for High Frequency Vertical Wire Wound

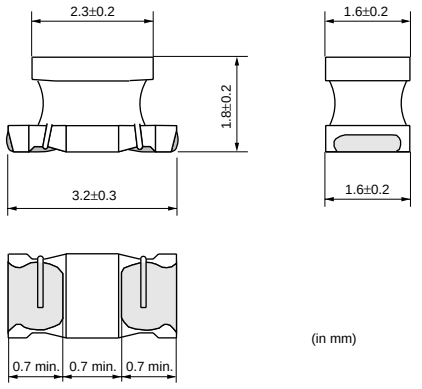
LQW31H Series (1206 Size)

LQW31H series is alumina core type chip inductor for high frequency circuit. Its low dc resistance and high Q due to wire wound structure are suitable for hand held telecommunications equipment.

■ Features

1. Inductance range from 8.8 to 100nH.
2. Because of the high self resonant frequency, it can be used in high frequency range.
3. Tight inductance tolerance (+-5%)

■ Dimension



(in mm)

■ Rated Value (☐: packaging code)

Part Number	Inductance	Test Frequency	Rated Current	DC resistance	Q (min.)	Test Frequency	Self Resonance Frequency (min.)
LQW31HN8N8J03☐	8.8nH±5%	100MHz	750mA	0.029ohm±40%	50	436MHz	1000MHz
LQW31HN8N8K03☐	8.8nH±10%	100MHz	750mA	0.029ohm±40%	50	436MHz	1000MHz
LQW31HN15NJ03☐	14.7nH±5%	100MHz	680mA	0.035ohm±40%	60	436MHz	1000MHz
LQW31HN15NK03☐	14.7nH±10%	100MHz	680mA	0.035ohm±40%	60	436MHz	1000MHz
LQW31HN17NJ03☐	17nH±5%	100MHz	650mA	0.037ohm±40%	60	436MHz	1000MHz
LQW31HN17NK03☐	17nH±10%	100MHz	650mA	0.037ohm±40%	60	436MHz	1000MHz
LQW31HN23NJ03☐	23nH±5%	100MHz	590mA	0.046ohm±40%	60	436MHz	1000MHz
LQW31HN23NK03☐	23nH±10%	100MHz	590mA	0.046ohm±40%	60	436MHz	1000MHz
LQW31HN27NJ03☐	27nH±5%	100MHz	560mA	0.051ohm±40%	60	436MHz	1000MHz
LQW31HN27NK03☐	27nH±10%	100MHz	560mA	0.051ohm±40%	60	436MHz	1000MHz
LQW31HN33NJ03☐	33nH±5%	100MHz	530mA	0.057ohm±40%	60	436MHz	1000MHz
LQW31HN33NK03☐	33nH±10%	100MHz	530mA	0.057ohm±40%	60	436MHz	1000MHz
LQW31HN39NJ03☐	39nH±5%	100MHz	490mA	0.067ohm±40%	60	436MHz	1000MHz
LQW31HN39NK03☐	39nH±10%	100MHz	490mA	0.067ohm±40%	60	436MHz	1000MHz
LQW31HN47NJ03☐	47nH±5%	100MHz	380mA	0.11ohm±40%	60	436MHz	1000MHz
LQW31HN47NK03☐	47nH±10%	100MHz	380mA	0.11ohm±40%	60	436MHz	1000MHz
LQW31HN56NJ03☐	56nH±5%	100MHz	330mA	0.14ohm±40%	60	436MHz	1000MHz
LQW31HN56NK03☐	56nH±10%	100MHz	330mA	0.14ohm±40%	60	436MHz	1000MHz
LQW31HN64NJ03☐	64nH±5%	100MHz	290mA	0.18ohm±40%	60	436MHz	1000MHz
LQW31HN64NK03☐	64nH±10%	100MHz	290mA	0.18ohm±40%	60	436MHz	1000MHz
LQW31HN84NJ03☐	84nH±5%	100MHz	240mA	0.28ohm±40%	60	436MHz	1000MHz
LQW31HN84NK03☐	84nH±10%	100MHz	240mA	0.28ohm±40%	60	436MHz	1000MHz
LQW31HNR10J03☐	100nH±5%	100MHz	230mA	0.3ohm±40%	60	436MHz	900MHz
LQW31HNR10K03☐	100nH±10%	100MHz	230mA	0.3ohm±40%	60	436MHz	900MHz

Operating Temperature Range: -25°C to +85°C

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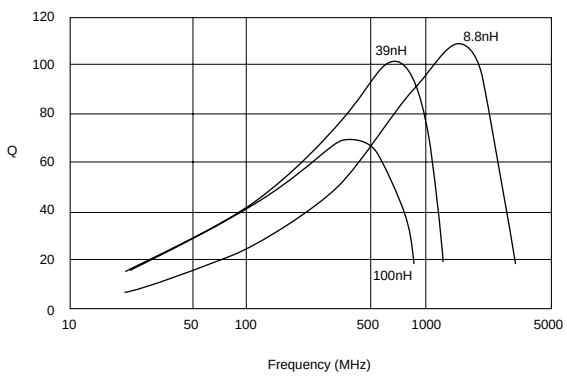
■ Q - Frequency Characteristics (Typ.)



Chip Coils for High Frequency Wire Wound Ferrite Type

muRata

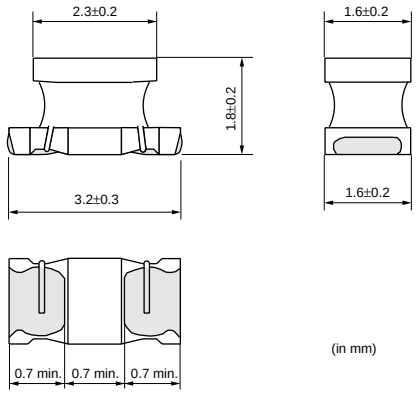
LQH31H Series (1206 Size)

LQH31H series is wire wound type chip coil with ferrite core for high frequency.

■ Features

1. Inductance range from 54 to 880nH
2. High Q value and stable inductance in high frequency range from 30 to 150MHz
3. Applicable soldering methods are both flow soldering and reflow soldering.

■ Dimension



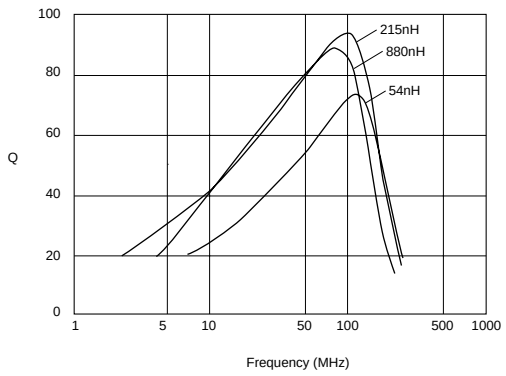
(in mm)

■ Rated Value (☐: packaging code)

Part Number	Inductance	Test Frequency	Rated Current	DC resistance	Q (min.)	Test Frequency	Self Resonance Frequency (min.)
LQH31HN54NK03☐	54nH±10%	1MHz	920mA	0.035ohm±30%	50	100MHz	800MHz
LQH31HN95NK03☐	95nH±10%	1MHz	790mA	0.047ohm±30%	60	100MHz	650MHz
LQH31HNR14J03☐	145nH±5%	1MHz	700mA	0.061ohm±30%	60	100MHz	500MHz
LQH31HNR14K03☐	145nH±10%	1MHz	700mA	0.061ohm±30%	60	100MHz	500MHz
LQH31HNR21J03☐	215nH±5%	1MHz	520mA	0.11ohm±30%	60	100MHz	430MHz
LQH31HNR21K03☐	215nH±10%	1MHz	520mA	0.11ohm±30%	60	100MHz	430MHz
LQH31HNR29J03☐	290nH±5%	1MHz	420mA	0.17ohm±30%	60	100MHz	360MHz
LQH31HNR29K03☐	290nH±10%	1MHz	420mA	0.17ohm±30%	60	100MHz	360MHz
LQH31HNR39J03☐	390nH±5%	1MHz	330mA	0.26ohm±30%	60	100MHz	300MHz
LQH31HNR39K03☐	390nH±10%	1MHz	330mA	0.26ohm±30%	60	100MHz	300MHz
LQH31HNR50J03☐	500nH±5%	1MHz	260mA	0.44ohm±30%	60	100MHz	270MHz
LQH31HNR50K03☐	500nH±10%	1MHz	260mA	0.44ohm±30%	60	100MHz	270MHz
LQH31HNR61J03☐	610nH±5%	1MHz	250mA	0.48ohm±30%	60	100MHz	240MHz
LQH31HNR61K03☐	610nH±10%	1MHz	250mA	0.48ohm±30%	60	100MHz	240MHz
LQH31HNR75J03☐	750nH±5%	1MHz	190mA	0.79ohm±30%	60	100MHz	220MHz
LQH31HNR75K03☐	750nH±10%	1MHz	190mA	0.79ohm±30%	60	100MHz	220MHz
LQH31HNR88J03☐	880nH±5%	1MHz	180mA	0.86ohm±30%	60	100MHz	200MHz
LQH31HNR88K03☐	880nH±10%	1MHz	180mA	0.86ohm±30%	60	100MHz	200MHz

Operating Temperature Range: -25°C to +85°C

■ Q - Frequency Characteristics (Typ.)



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● Part Numbering

Chip Coils (SMD)

(Part Number) **LQ H 32 M N 331 K 2 3 L**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶Product ID

Product ID	
LQ	Chip Coils

❷Structure

Code	Structure
G	Monolithic Type (Air-core Coil)
H	Wire Wound Type (Ferrite Core)
M	Monolithic Type (Ferrite Core)
P	Film Type
W	Wire Wound Type (Air-core Coil)

❸Dimensions (L×W)

Code	Dimensions (L×W)	EIA
02	0.4×0.2mm	01005
03	0.6×0.3mm	0201
04	0.8×0.4mm	03015
15	1.0×0.5mm	0402
18	1.6×0.8mm	0603
21	2.0×1.25mm	0805
2B	2.0×1.5mm	0805
2M	2.0×1.6mm	0806
3N	3.0×3.0mm	1212
31	3.2×1.6mm	1206
32	3.2×2.5mm	1210
43	4.5×3.2mm	1812
55	5.7×5.0mm	2220
66	6.3×6.3mm	2525

❹Applications and Characteristics

Code	Series	Applications and Characteristics
H	**LQG**	Monolithic Air-core
N	**LQM**	for Resonant Circuit
D		for Choke (Low-current DC Power Supplies)
F		for Choke (DC Power Supplies)
M	**LQP**	Film Type
T		Film Type (Low DC Resistance Type)
A	**LQW**	High Q Type (UHF-SHF)
H		High Q Type (VHF-UHF)
N	**LQH**	for Resonant Circuit
M		for Resonant Circuit (Coating Type)
D		for Choke
C		for Choke (Coating Type)
S		for Choke (Magnetically Shielded Type)
H		for High-frequency Resonant Circuit
P	**LQM/LQH**	for Power Line

❺Category

Code	Category
N	Standard Type
S	

❻Inductance

Expressed by three-digit alphanumerics. The unit is micro-henry (μH). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits. If inductance is less than 0.1μH, the inductance code is expressed by a combination of two figures and the capital letter "**N**", and the unit of inductance is nano-henry (nH).
The capital letter "**N**" indicates the unit of "nH", and also expresses a decimal point. In this case, all figures are significant digits.

❼Inductance Tolerance

Code	Inductance Tolerance
B	±0.1nH
C	±0.2nH
D	±0.5nH
G	±2%
H	±3%
J	±5%
K	±10%
M	±20%
N	±30%
S	±0.3nH
W	±0.05nH

❽Features (Except **LQH3NP/LQM21P/LQM31P_C0**)

Code	Features	Series
0	Standard Type	**LQG/LQP/LQW/LQM***1**/LQH***2
1	High-Q/ Low DC Resistance	**LQW15A/18A/2BH**
	Standard Type	**LQM21N**
2	Standard Type	**LQH32C/32M**
3	Low DC Resistance	**LQH32C**
5	Low Profile Type	**LQH2MC/32C**
7	Large Current Type	**LQM21F**

*1 : Except LQM21N Series
*2 : Except LQH32 Series

❽Features (**LQH3NP/LQM21P/LQM31P_C0** Only)

Code	Dimensions (T)
C	0.5mm
G	0.9mm

❾Electrode

•Lead (Pb) Free

Code	Electrode	Series
0	Sn	**LQG18H/LQP03T/LQW□□A/LQM/LQH3NP**
2		**LQG15H/LQP02T/LQP15T/LQP□□M/LQH2MC**
3	LF Solder	**LQW□□H/LQH** (Except **LQH2MC**)
4	Au	**LQP03T**

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(Part Number) LQ H 32 M N 331 K 2 3 L
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❿Packaging

Code	Packaging	Series
K	Embossed Taping (ø330mm Reel)	**LQH***1 **/LQW□□H/LQM31F/LQM21***2
L	Embossed Taping (ø180mm Reel)	**LQH/LQW□□H/LQM31F/LQM21***2 **/LQM31P**
B	Bulk	**LQH2MC/LQW/LQG/LQM/LQP**
J	Paper Taping (ø330mm Reel)	**LQW15A/LQW18A/LQG/LQM18/LQM21***3 **/LQP***5
D	Paper Taping (ø180mm Reel)	**LQW□□A/LQG/LQM18/LQM21***4 **/LQP**

*1 Except LQH2MC/LQH3NP/LQH43C
*2 LQM21D(22 - 47µH)/LQM21F(4.7 - 47µH)/LQM21N(2.7 - 4.7µH) only.
*3 LQM21D(1.0 - 10µH)/LQM21F(1.0 - 2.2µH)/LQM21N(0.1 - 2.2µH) only.
*4 LQM21D(1.0 - 10µH)/LQM21F(1.0 - 2.2µH)/LQM21N(0.1 - 2.2µH)/LQM21P only.
*5 Except LQP15T