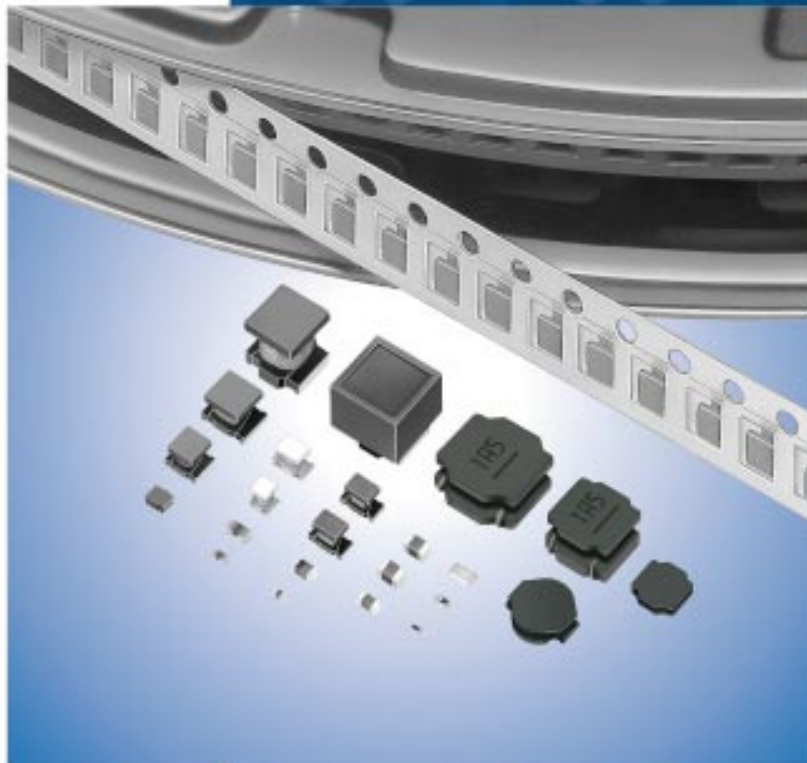


Chip Inductors (Chip Coils)



● Part Numbering

Chip Inductors (Chip Coils)(SMD)

(Part Number)

LQ	H	32	M	N	331	K	2	3	L
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

① Product ID

Product ID	Category
LQ	Chip Inductors (Chip Coils)

② Structure

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

③ Dimensions (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
2H	2.5×2.0mm	1008
3N	3.0×3.0mm	1212
31	3.2×1.6mm	1206
32	3.2×2.5mm	1210
43	4.5×3.2mm	1812
44	4.0×4.0mm	1515
55	5.7×5.0mm (5.87×5.2mm)	2220
6P	6.0×6.0mm	2424
66	6.3×6.3mm	2525
88	8.0×8.0mm	3131

④ Applications and Characteristics

Code	Series	Applications and Characteristics
H	LQG	Multilayer Air-core Inductor (Coil)
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

⑤ Category

Code	Category
N	Standard Type
S	

⑥ Inductance

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.

⑦ Inductance 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

⑧ Features (Except LQH□□P/LQM□□P)

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
8	Low DC Resistance /Large Current Type	

*1 Except LQM21N Series

*2 Except LQH32 Series

Continued on the following page.

Continued from the preceding page.

(Part Number)

L	Q	H	3	2	M	N	3	3	1	K	2	3	L
1	2	3	4	5	6	7	8	9	10				

⑧ Thickness (LQH□□P/LQM□□P Only · Except LQH6PP/LQH88P)

Code	Dimensions (T)
C	0.5mm
E	0.7mm
0	0.85mm
G	0.9mm
J	1.1mm
M	1.4mm
N	1.55mm
P	1.65mm
R	1.85mm

⑨ Electrode (Except LQH□□P/LQM□□P)

•Lead (Pb) Free

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

⑨ Specification (LQH□□P/LQM□□P Only · Except LQH6PP/LQH88P)

Code	Specification
0	Standard Type

⑧⑨ Thickness (LQH6PP/LQH88P Only)

Code	Dimension (T)
38	3.8mm
43	4.3mm

⑩ Packaging

Code	Packaging	Series
K	Embossed Taping (ø330mm Reel)	LQH*1 /LQW□□H*6 /LQM31F/LQM21*2
L	Embossed Taping (ø180mm Reel)	LQH/LQW□□H/LQM31F/LQM21*2 /LQM31P/LQM2HP/LQM2MP
B	Bulk	LQH2MC/LQW/LQG/LQM/LQP
J	Paper Taping (ø330mm Reel)	LQW18A/LQG/LQM18/LQM21*3 /LQP*5
D	Paper Taping (ø180mm Reel)	LQW□□A/LQG/LQM18/LQM21*4 /LQP

*1 Except LQH2MC /LQH32P /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 LQP02T /15T

*6 Except LQW21H

Product Guide

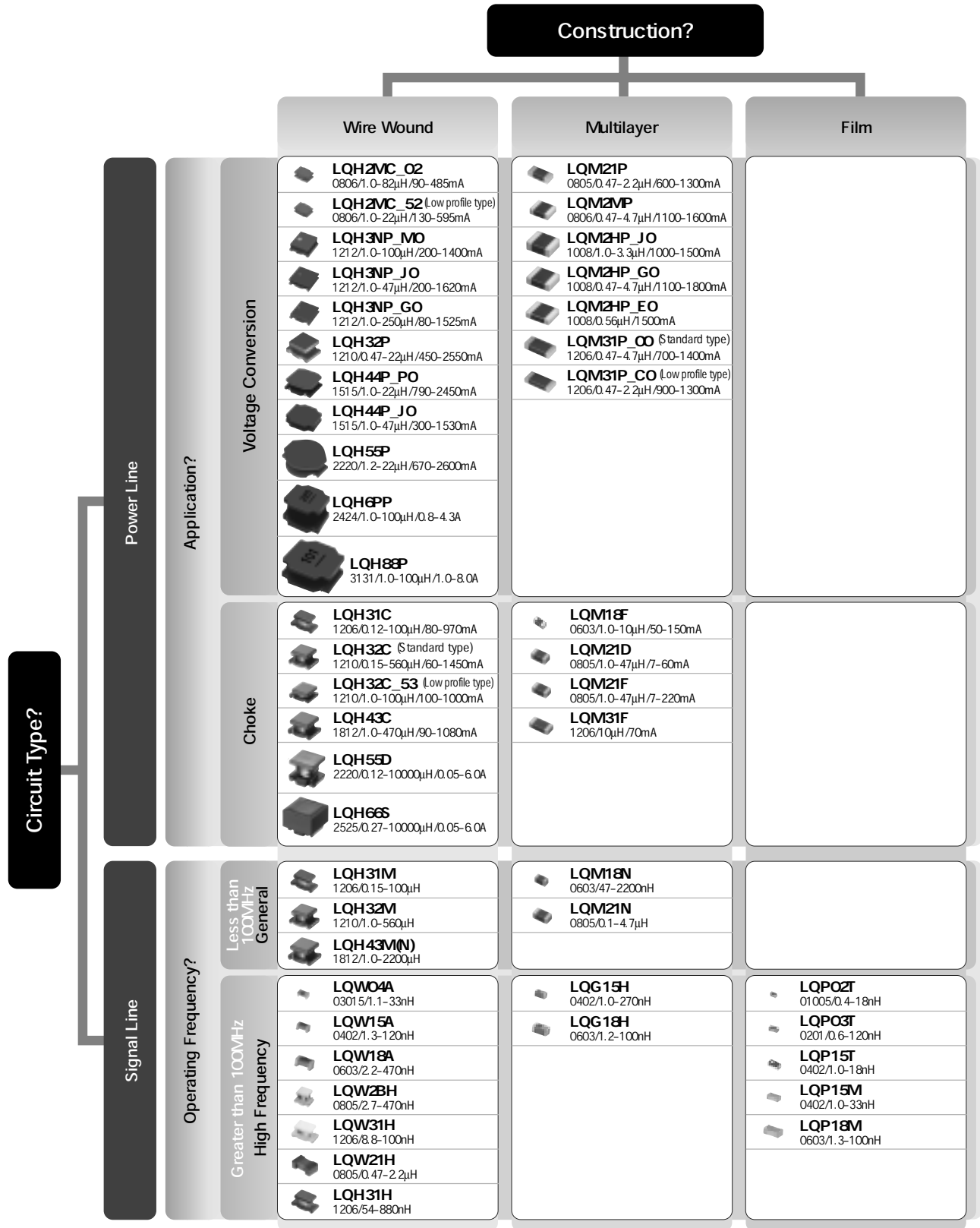
Murata's LQ□ series of chip inductors (chip coils) consists of compact, high-performance inductors. Their innovative coil and case structures mean low DC resistance and outstanding high-frequency characteristics. The series is designed for a variety of applications, facilitating component selection for individual circuit requirements.

	Part Number	Structure	Size Code Inch (mm)	Inductance Range							Rated Current (mA)				
				1n	10n	100n	1μ	10μ	100μ	1m	10m	10	100	1000	10000
Power Inductor	LQM21P	Magnetically Shielded Multilayer	0805 (2012)				470nH	2.2μH						600	1300
	LQM2MP		0806 (2016)				470nH	4.7μH						1100	1600
	LQM2HP_J0		1008 (2520)				1.0μH	3.3μH						1000	1500
	LQM2HP_G0		1008 (2520)				470nH	4.7μH						1100	1800
	LQM2HP_E0		1008 (2520)				560nH								1500
	LQM31P_00		1206 (3216)				470nH	4.7μH						700	1400
	LQM31P_C0		1206 (3216)				470nH	2.2μH						900	1300
	LQH2MC_02		0806 (2016)	Wire Wound				1.0μH	82μH					90	485
	LQH2MC_52	0806 (2016)					1.0μH	22μH					130	595	
	LQH3NP_M0	1212 (3030)					1.0μH	100μH					200	1400	
	LQH3NP_J0	1212 (3030)					1.0μH	47μH					200	1620	
	LQH3NP_G0	1212 (3030)					1.0μH	250μH					80	1525	
	LQH32P	1210 (3225)					470nH	22μH						450	2550
	LQH44P_P0	1515 (4040)					1.0μH	22μH						790	2450
	LQH44P_J0	1515 (4040)					1.0μH	47μH						300	1530
	LQH55P	2220 (5852)					1.2μH	22μH						670	2600
	LQH6PP	2424 (6060)					1.0μH	100μH						800	4300
	LQH88P	3131 (8080)					1.0μH	100μH						1000	8000
	Chokes	LQM18F	Magnetically Shielded Multilayer		0603 (1608)				1.0μH	10μH					50
		LQM21D		0805 (2012)				1.0μH	47μH				7	60	
LQM21F		0805 (2012)					1.0μH	47μH				7	220		
LQM31F		1206 (3216)						10μH						70	
LQH31C		1206 (3216)	Wire Wound				120nH	100μH					80	970	
LQH32C_23/33		1210 (3225)					150nH	560μH					60	1450	
LQH32C_53		1210 (3225)					1.0μH	100μH					100	1000	
LQH43C		1812 (4532)					1.0μH	470μH					90	1080	
LQH55D		2220 (5750)					120nH	10mH					50	6000	
LQH66S		2525 (6363)		Magnetically Shielded				270nH	10mH					50	6000
General Frequency Range	LQM18N	Magnetically Shielded Multilayer	0603 (1608)				47nH	2.2μH					15	50	
	LQM21N		0805 (2012)				100nH	4.7μH					30	250	
	LQH31M	Wire Wound (ferrite core)	1206 (3216)				150nH	100μH					45	250	
	LQH32M		1210 (3225)				1.0μH	560μH					40	445	
	LQH43M(N)		1812 (4532)				1.0μH	2.2mH					30	500	
High Frequency Range Tight Inductance Tolerance	LQG15H	Multilayer	0402 (1005)				1.0nH	270nH					110	300	
	LQG18H		0603 (1608)				1.2nH	100nH					300	500	
	LQP02T	Film	01005 (0402)				0.4nH	18nH					140	320	
	LQP03T_02		0201 (0603)				0.6nH	120nH					40	850	
	LQP03T_00		0201 (0603)				0.6nH	56nH					100	840	
	LQP03T_04		0201 (0603)				0.6nH	56nH					50	420	
	LQP15T		0402 (1005)				1.0nH	18nH					80	300	
	LQP15M		0402 (1005)				1.0nH	33nH					60	400	
	LQP18M		0603 (1608)				1.3nH	100nH					50	300	
	LQW04A		Wire Wound (air core)	03015 (0804)				1.1nH	33nH					140	990
	LQW15A	0402 (1005)					1.3nH	120nH					110	1200	
	LQW18A	0603 (1608)					2.2nH	470nH					75	1400	
	LQW2BH	0805 (2015)					2.7nH	470nH					160	1900	
	LQW31H	1206 (3216)					8.8nH	100nH					230	750	
	LQW21H	Wire Wound (ferrite core)	0805 (2012)				470nH	2.2μH					75	160	
LQH31H	1206 (3216)					54nH	880nH					180	920		

Inductance Lineup
 ■ : E-24 or Higher
 ■ : E-12
 □ : Other
 *There are some items which do not match to E step.

CAUTION: Use rosin-based flux, but not strong acidic flux (with chlorine content exceeding 0.2wt%) when soldering chip inductor (chip coil). Do not use water-soluble flux.

Selection Guide



Guidance of Digits in This Chart

● for LQH2MC_02 0806/1.0-82μH/90-485mA

.....
 Size Inductance Rated Current
 (inch)

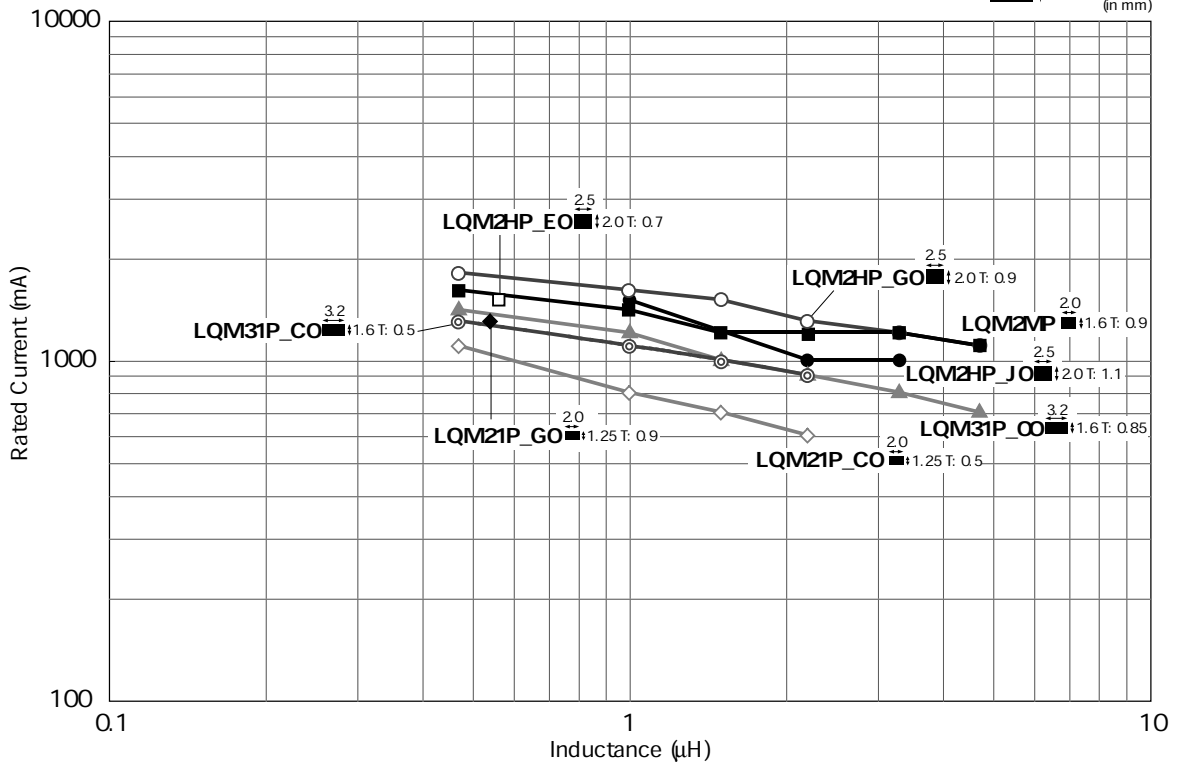
Product Guide by Thickness

Which Thickness?	Power Inductor			
	Multilayer Type	Wire Wound Type	Multilayer Type for Choke	Wire Wound Type for Choke
0.2mm				
0.3mm				
0.35mm				
0.4mm				
0.5mm	LQM21P_CO / LQM31P_CO			
0.65mm		LQH2VC_52		
0.7mm	LQM2HP_EO			
0.8mm			LQM18F	
0.85mm	LQM31P_CO		LQM21D (1.0 to 1Q.H) / LQM21F_CO	
0.9mm	LQM21P_GO / LQM2HP_GO / LQM2VP	LQH2VC_O2 / LQH3NP_GO		
1.0mm			LQM31F	
1.1mm	LQM2HP_JO	LQH3NP_JO / LQH44P_JO		
1.25mm			LQM21D (22 to 47μH) / LQM21F_70 / LQM21F_80	
1.4mm		LQH3NP_MD		
1.55mm		LQH32P		LQH32C_53
1.65mm		LQH44P_PO		
1.7mm				
1.8mm				LQH31C
1.85mm		LQH55P		
2.0mm				LQH32C_23/33
2.6mm				LQH43C
3.8mm		LQH88P		
4.3mm		LQH8PP		
4.7mm				LQH55D / LQH66S

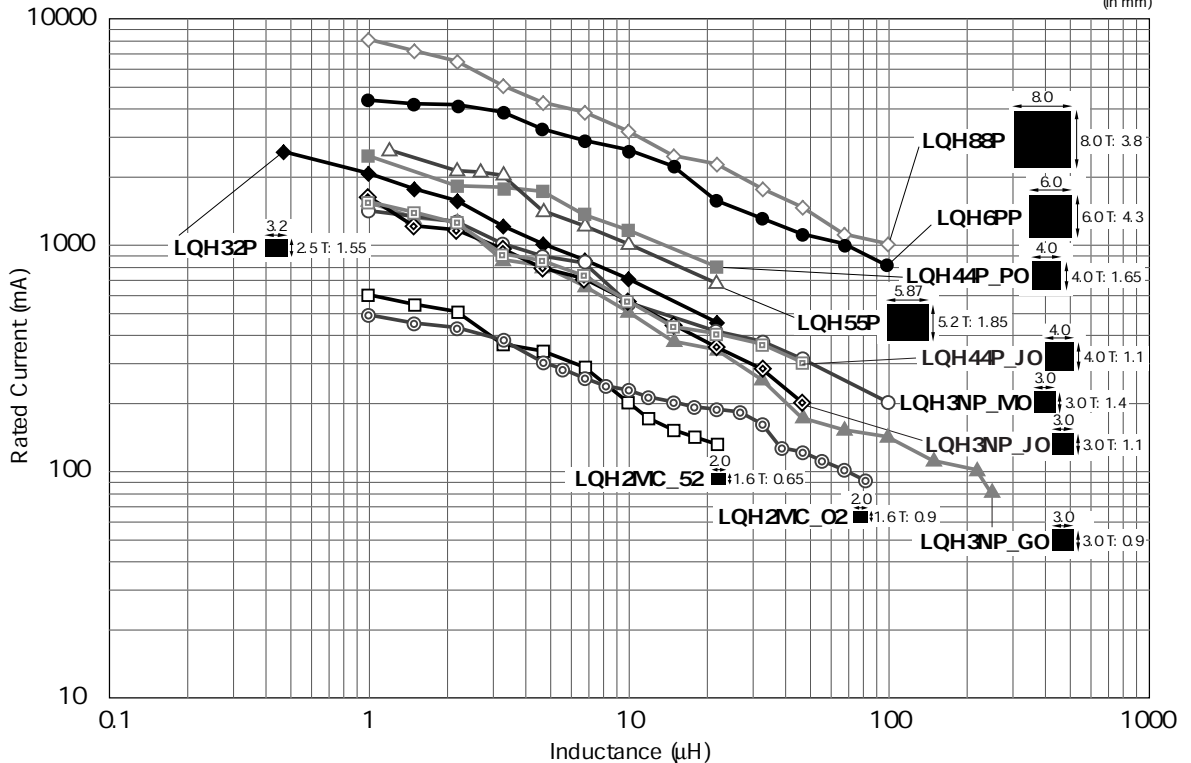
Which Thickness?	Inductor for General Use		Inductor for High Frequency		
	Multilayer Type	Wire Wound Type	Multilayer Type	Film Type	Wire Wound Type
0.2mm				LQP02T	
0.3mm				LQP03T	
0.35mm				LQP15M	
0.4mm				LQP15T	LQW04A
0.5mm			LQG15HN / LQG15HS	LQP18M	LQW15A
0.65mm					
0.7mm					
0.8mm	LQM18N		LQG18H		LQW18A
0.85mm	LQM21N (Q1 to 2Q.H)				
0.9mm					LQW21H
1.0mm					
1.1mm					
1.25mm	LQM21N (27 to 47μH)				
1.4mm					
1.55mm					
1.65mm					
1.7mm					LQW28H
1.8mm		LQH31M			LQH31H / LQW31H
1.85mm					
2.0mm		LQH32M			
2.6mm		LQH43M(N)			
3.8mm					
4.3mm					
4.7mm					

Power Inductor Product Guide

Power Inductor Multilayer Type



Power Inductor Wire Wound Type



Power Inductor Wire Wound Type



1

LQH32P_N0 Series (1210 Size)

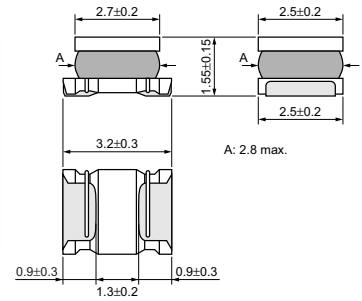
■ Features

1. Large allowable DC current of 2550mA (0.47 micro H)
2. The series has an inductance range from 0.47 to 22 micro H.
3. Magnetically shielded structure
4. Lead-free reflow soldering is available.

■ Applications

1. DSC, DVC, and 3.5/2.5 inch HDD
2. DC-DC converter for communication module of WiMAX

■ Dimension



(in mm)

■ Rated Value (□: packaging code)

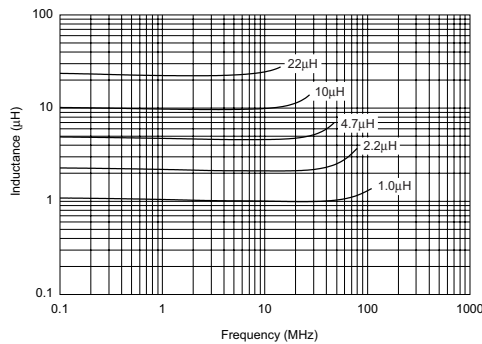
Part Number	Inductance	Inductance Test Frequency	*1 Allowable DC Current (Based on Temperature Rise)	*2 Allowable DC Current (Based on Inductance Change)	DC Resistance	Self Resonance Frequency (min.)	Class of Magnetic Shield
LQH32PNR47NN0□	0.47μH±30%	1MHz	2550mA	3400mA	0.03ohm±20%	100MHz	Magnetic shield of magnetic powder in resin
LQH32PN1R0NN0□	1.0μH±30%	1MHz	2050mA	2300mA	0.045ohm±20%	100MHz	Magnetic shield of magnetic powder in resin
LQH32PN1R5NN0□	1.5μH±30%	1MHz	1750mA	1750mA	0.057ohm±20%	70MHz	Magnetic shield of magnetic powder in resin
LQH32PN2R2NN0□	2.2μH±30%	1MHz	1600mA	1550mA	0.076ohm±20%	70MHz	Magnetic shield of magnetic powder in resin
LQH32PN3R3NN0□	3.3μH±30%	1MHz	1200mA	1250mA	0.12ohm±20%	50MHz	Magnetic shield of magnetic powder in resin
LQH32PN4R7NN0□	4.7μH±30%	1MHz	1000mA	1000mA	0.18ohm±20%	40MHz	Magnetic shield of magnetic powder in resin
LQH32PN6R8NN0□	6.8μH±30%	1MHz	850mA	850mA	0.24ohm±20%	40MHz	Magnetic shield of magnetic powder in resin
LQH32PN100MN0□	10μH±20%	1MHz	700mA	750mA	0.38ohm±20%	30MHz	Magnetic shield of magnetic powder in resin
LQH32PN220MN0□	22μH±20%	1MHz	450mA	500mA	0.81ohm±20%	20MHz	Magnetic shield of magnetic powder in resin

Operating Temperature Range: -40°C to +85°C Only for reflow soldering.

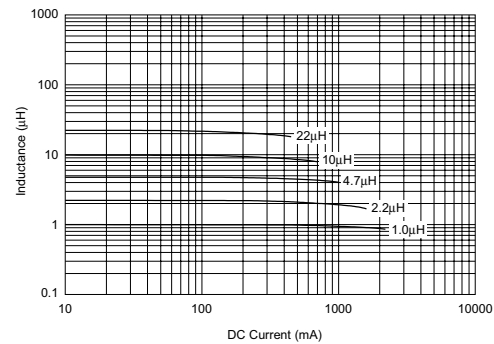
*1: When applied Allowable DC Current is applied to the Products, self-generation of heat will rise to 40°C or less.

*2: When applied Allowable DC Current is applied to the Products, Inductance will be within ±30% of nominal Inductance value.

■ Inductance - Frequency Characteristics (Typ.)




■ Inductance - Current Characteristics (Typ.)



Design Kits

Continued from the preceding page.

No.	Part Number	Quantity (pcs.)	Inductance		DC Resistance (Ω)	Allowable DC Current (mA)	
			Nominal	Tolerance		Based on Temperature Rise	Based on Inductance Change
7	LQH3NPN100NG0	10	10μH	±30%	0.57±20%	630	500
8	LQH3NPN150NG0	10	15μH	±30%	0.91±20%	475	370
9	LQH3NPN220MG0	10	22μH	±20%	1.1±20%	430	340
10	LQH3NPN330MG0	10	33μH	±20%	2.1±20%	345	250
11	LQH3NPN470MG0	10	47μH	±20%	3.0±20%	270	170
12	LQH3NPN680MG0	10	68μH	±20%	4.2±20%	235	150
13	LQH3NPN101MG0	10	100μH	±20%	8.0±20%	165	140
14	LQH3NPN151MG0	10	150μH	±20%	11±20%	145	110
15	LQH3NPN221MG0	10	220μH	±20%	14±20%	130	100
16	LQH3NPN251MG0	10	250μH	±20%	15±20%	130	80
17	LQH3NPN1R0NJ0	10	1.0μH	±30%	0.048±20%	1620	1650
18	LQH3NPN1R5NJ0	10	1.5μH	±30%	0.066±20%	1500	1200
19	LQH3NPN2R2NJ0	10	2.2μH	±30%	0.0828±20%	1460	1150
20	LQH3NPN3R3NJ0	10	3.3μH	±30%	0.126±20%	1270	950
21	LQH3NPN4R7NJ0	10	4.7μH	±30%	0.156±20%	1120	780
22	LQH3NPN6R8NJ0	10	6.8μH	±30%	0.252±20%	850	700
23	LQH3NPN100NJ0	10	10μH	±30%	0.36±20%	710	560
24	LQH3NPN150NJ0	10	15μH	±30%	0.528±20%	590	440
25	LQH3NPN220MJ0	10	22μH	±20%	0.72±20%	510	350
26	LQH3NPN330MJ0	10	33μH	±20%	1.08±20%	410	280
27	LQH3NPN470MJ0	10	47μH	±20%	1.56±20%	350	200
28	LQH3NPN1R0MM0	10	1.0μH	±20%	0.044±20%	2050	1400
29	LQH3NPN2R2MM0	10	2.2μH	±20%	0.073±20%	1600	1250
30	LQH3NPN3R3MM0	10	3.3μH	±20%	0.092±20%	1450	1000
31	LQH3NPN4R7MM0	10	4.7μH	±20%	0.13±20%	1250	880
32	LQH3NPN6R8MM0	10	6.8μH	±20%	0.20±20%	1000	820
33	LQH3NPN100MM0	10	10μH	±20%	0.26±20%	870	550
34	LQH3NPN1R0NM0	10	1.0μH	±30%	0.044±20%	2050	1400
35	LQH3NPN2R2NM0	10	2.2μH	±30%	0.073±20%	1600	1250
36	LQH3NPN3R3NM0	10	3.3μH	±30%	0.092±20%	1450	1000
37	LQH3NPN4R7NM0	10	4.7μH	±30%	0.13±20%	1250	880
38	LQH3NPN6R8NM0	10	6.8μH	±30%	0.20±20%	1000	820
39	LQH3NPN100NM0	10	10μH	±30%	0.26±20%	870	550
40	LQH3NPN220MM0	10	22μH	±20%	0.51±20%	650	410
41	LQH3NPN330MM0	10	33μH	±20%	0.85±20%	500	370
42	LQH3NPN470MM0	10	47μH	±20%	1.25±20%	410	310
43	LQH3NPN101MM0	10	100μH	±20%	3.50±20%	240	200
44	LQH32PNR47NNO	10	0.47μH	±30%	0.03±20%	2550	3400
45	LQH32PN1R0NNO	10	1.0μH	±30%	0.045±20%	2050	2300
46	LQH32PN1R5NNO	10	1.5μH	±30%	0.057±20%	1750	1750
47	LQH32PN2R2NNO	10	2.2μH	±30%	0.076±20%	1600	1550
48	LQH32PN3R3NNO	10	3.3μH	±30%	0.12±20%	1200	1250
49	LQH32PN4R7NNO	10	4.7μH	±30%	0.18±20%	1000	1000
50	LQH32PN6R8NNO	10	6.8μH	±30%	0.24±20%	850	850
51	LQH32PN100MNO	10	10μH	±20%	0.38±20%	700	750
52	LQH32PN220MNO	10	22μH	±20%	0.81±20%	450	500

Continued on the following page. 

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Murata:

[LQH31CN100K01L](#) [LQH31CN101K01L](#) [LQH31CN2R2M01L](#) [LQH31CN4R7M01L](#) [LQH3ERN1R2G01L](#)
[LQH3ERN1R5G01L](#) [LQH3ERN1R8G01L](#) [LQH3ERN2R2G01L](#) [LQH3ERN3R3G01L](#) [LQH3ERN4R7G01L](#)
[LQH3KSN100M53L](#) [LQH3KSN102N23L](#) [LQH3KSN152N23L](#) [LQH3KSN220M53L](#) [LQH3KSN222N23L](#)
[LQH3KSN330M53L](#) [LQH3KSN3R3N53L](#) [LQH3KSN471M53L](#) [LQH3KSN4R7N53L](#) [LQH3KSN561M53L](#)
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