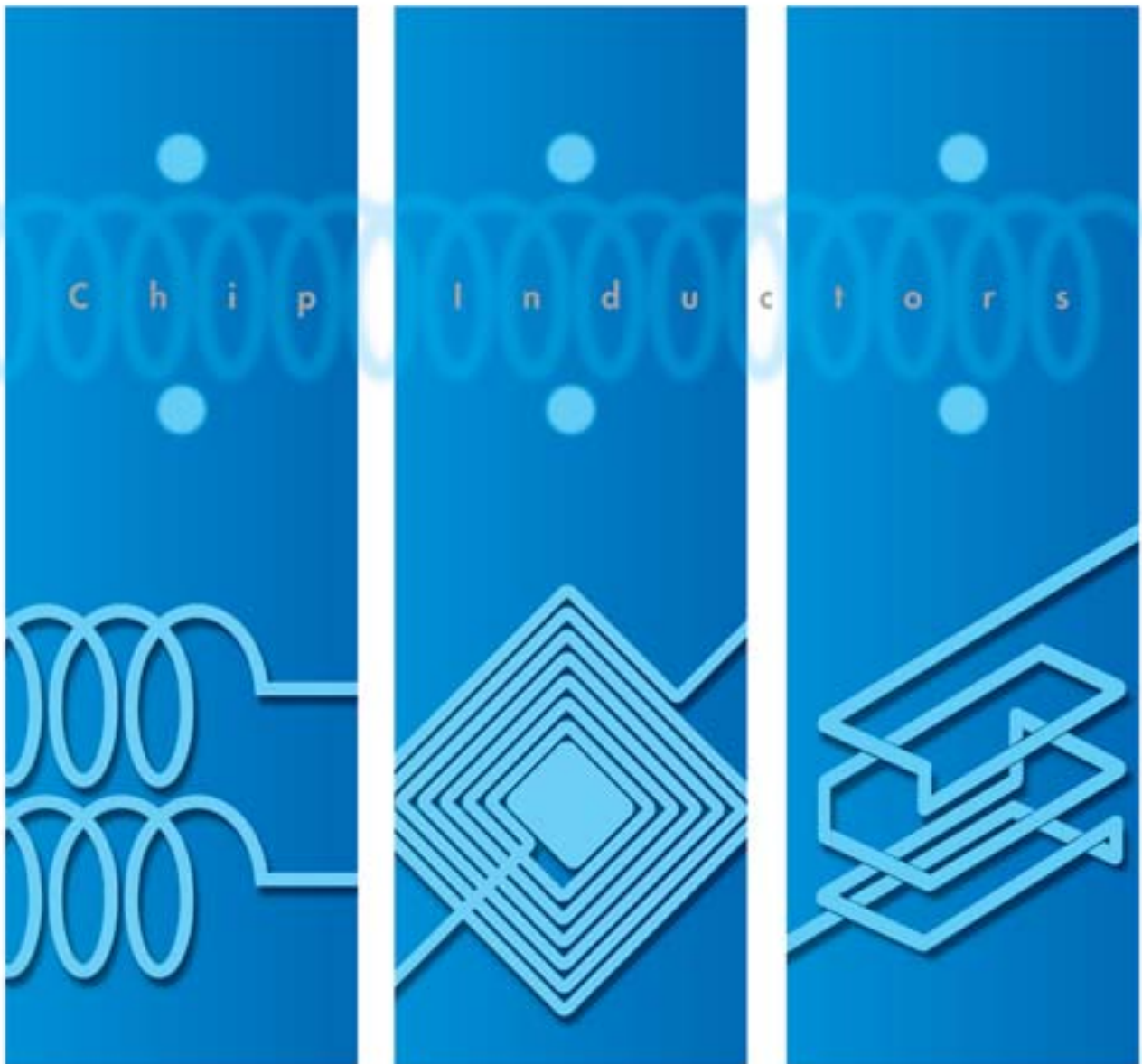


# Chip Inductors

## (Chip Coils)



**muRata**

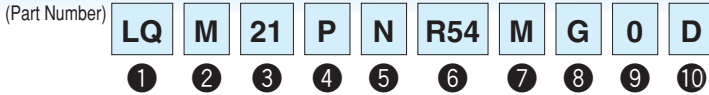
*Innovator  
in Electronics*

**Murata  
Manufacturing Co., Ltd.**

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O05E.pdf  
Nov.25,2013

# Inductors for Power Lines Part Numbering



## ① Product ID

Product ID	
LQ	Chip Inductors (Chip Coils)

## ② Structure

Code	Structure
H	Wire Wound Type (Ferrite Core)
W	
M	Multilayer Type (Ferrite Core)

## ③ Dimensions (L×W)

Code	Dimensions (L×W)	Size Code (in inch)
15	1.0×0.5mm	0402
18	1.6×0.8mm	0603
21	2.0×1.25mm	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
5B	5.0×5.0mm	2020
55	5.7×5.0mm	2220
66	6.3×6.3mm	2525

## ④ Applications and Characteristics

Code	Series	Applications and Characteristics
D	LQM	for Choke (Low-current DC Power Supplies)
F		for Choke (DC Power Supplies)
D	LQH	for Choke
S		for Choke (Magnetically Shielded Type)
C	LQH/LQW	for Choke (Coating Type)
P	LQM/LQH	for Power Line

## ⑤ Category

Code	Category
N	Standard Type
B	Special Feature Classification

## 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 that 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
D	±0.5nH
J	±5%
K	±10%
M	±20%
N	±30%

## ⑧ Features (Except for LQH□□P/LQM□□P)

Code	Features	Series
0	Standard Type	LQM/LQH*1 /LQW
1	Low DC Resistance	LQW
2	Standard Type	LQH32C
3	Low DC Resistance	LQH32C/43CN
5	Low Profile Type	LQH2MC/32C
7	Large Current Type	LQM21F
8	Low DC Resistance /Large Current Type	

\*1 Except for LQH32 Series

## ⑨ Thickness (LQH□□P/LQM□□P Only • Except for LQH43P)

Code	Dimensions (T)
B	0.35mm
C	0.5mm
D	0.6mm
E	0.7mm
F	0.8mm
0	0.85mm
G	0.9mm
J	1.1mm
M	1.4mm
N	1.55mm
P	1.65mm
T	2.0mm

## ⑩ Electrode (Except for LQH□□P/LQM□□P)

•Lead (Pb) Free

Code	Electrode	Series
0	Sn	LQM/LQW
2		LQH2MC
3	LF Solder	LQH (Except for LQH2MC)

## ⑪ Specification (LQH□□P/LQM□□P Only • Except for LQH43P)

Code	Specification
0/S	Standard Type
C	Good Bias Current Characteristics Type
H	High Spec Type (Low DC Resistance/ Good Bias Current Characteristics Type)
R	Low DC Resistance Type

Continued on the following page. 

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## ⑧⑨ Thickness (LQH43P Only)

Code	Dimensions (T)
26	2.6mm

## ⑩ Packaging

Code	Packaging	Series
K	Embossed Taping (ø330mm Reel)	LQH*1 /LQM21*2
F		LQH3NP_MR
L	Embossed Taping (ø180mm Reel)	LQH*5/LQM18P/LQM21*2 /LQM31P/LQM2HP/LQM2MP
E		LQH3NP_MR
B	Bulk	LQH2MC/LQM/LQW
J	Paper Taping (ø330mm Reel)	LQM18/LQM21*3
D	Paper Taping (ø180mm Reel)	LQM18/LQM21*4 /LQW

\*1 Except for LQH2MC/LQH2HP\_G0/LQH3NP/LQH43C

\*2 LQM21D(22 - 47μH)/LQM21F(4.7 - 47μH)

\*3 LQM21D(1.0 - 10μH)/LQM21F(1.0 - 2.2μH)

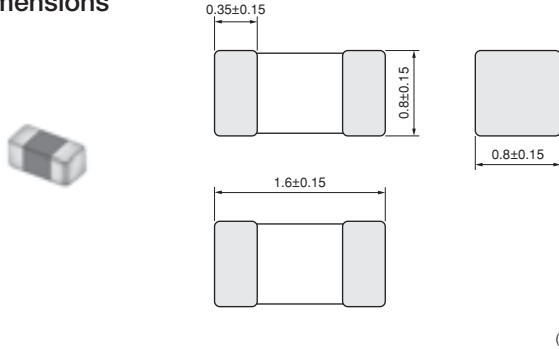
\*4 LQM21D(1.0 - 10μH)/LQM21F(1.0 - 2.2μH)/LQM21P

\*5 Except for LQH3NP\_MR

# LQM18NN\_00 Series 0603/1608 (inch/mm)

## Size Code 0603 (1608) in inch (in mm)

### Appearance/Dimensions



### Packaging

Code	Packaging	Minimum Quantity
D	ø180mm Paper Taping	4000
J	ø330mm Paper Taping	10000
B	Packing in Bulk	1000



Refer to pages 137 to 140 for mounting information.

### Rated Value (□: packaging code)

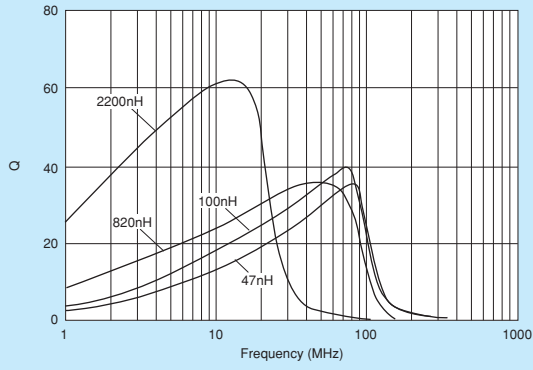
Part Number	Inductance	Inductance Test Frequency	Rated Current	Max. of DC Resistance	Q (min.)	Q Test Frequency	Self-Resonance Frequency (min.)	
LQM18NN47NM00□	47nH ±20%	50MHz	50mA	0.30Ω	10	50MHz	260MHz	Kit
LQM18NN68NM00□	68nH ±20%	50MHz	50mA	0.30Ω	10	50MHz	250MHz	Kit
LQM18NN82NM00□	82nH ±20%	50MHz	50mA	0.30Ω	10	50MHz	245MHz	Kit
LQM18NNR10K00□	100nH ±10%	25MHz	50mA	0.50Ω	15	25MHz	240MHz	Kit
LQM18NNR12K00□	120nH ±10%	25MHz	50mA	0.50Ω	15	25MHz	205MHz	Kit
LQM18NNR15K00□	150nH ±10%	25MHz	50mA	0.60Ω	15	25MHz	180MHz	Kit
LQM18NNR18K00□	180nH ±10%	25MHz	50mA	0.60Ω	15	25MHz	165MHz	Kit
LQM18NNR22K00□	220nH ±10%	25MHz	50mA	0.80Ω	15	25MHz	150MHz	Kit
LQM18NNR27K00□	270nH ±10%	25MHz	50mA	0.80Ω	15	25MHz	136MHz	Kit
LQM18NNR33K00□	330nH ±10%	25MHz	35mA	0.85Ω	15	25MHz	125MHz	Kit
LQM18NNR39K00□	390nH ±10%	25MHz	35mA	1.00Ω	15	25MHz	110MHz	Kit
LQM18NNR47K00□	470nH ±10%	25MHz	35mA	1.35Ω	15	25MHz	105MHz	Kit
LQM18NNR56K00□	560nH ±10%	25MHz	35mA	1.55Ω	15	25MHz	95MHz	Kit
LQM18NNR68K00□	680nH ±10%	25MHz	35mA	1.70Ω	15	25MHz	90MHz	Kit
LQM18NNR82K00□	820nH ±10%	25MHz	35mA	2.10Ω	15	25MHz	85MHz	Kit
LQM18NN1R0K00□	1000nH ±10%	10MHz	25mA	0.60Ω	35	10MHz	75MHz	Kit
LQM18NN1R2K00□	1200nH ±10%	10MHz	25mA	0.80Ω	35	10MHz	65MHz	Kit
LQM18NN1R5K00□	1500nH ±10%	10MHz	25mA	0.80Ω	35	10MHz	60MHz	Kit
LQM18NN1R8K00□	1800nH ±10%	10MHz	25mA	0.95Ω	35	10MHz	55MHz	Kit
LQM18NN2R2K00□	2200nH ±10%	10MHz	15mA	1.15Ω	35	10MHz	50MHz	Kit

Class of Magnetic Shield: Magnetic shield of ferrite  
 Operating Temperature Range (Self-temperature rise is not included): -40°C~+85°C

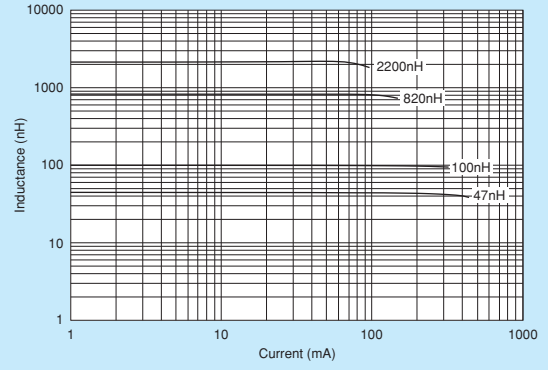
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■ Q-Frequency Characteristics (Typ.)



■ Inductance-Current Characteristics (Typ.)



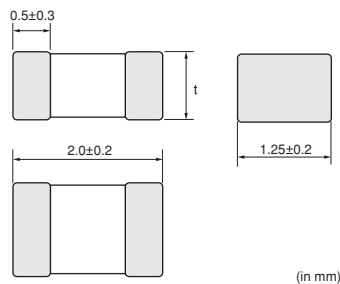
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# LQM21NN\_10

Series 0805/2012 (inch/mm)

Size Code 0805 (2012) in inch (in mm)

## Appearance/Dimensions



Dimension of t	Inductance: 0.1 to 2.2μH	0.85±0.2
	Inductance: 2.7 to 4.7μH	1.25±0.2

(in mm)

## Packaging

Code	Packaging	Minimum Quantity
D	ø180mm Paper Taping	4000
L	ø180mm Embossed Taping	3000
J	ø330mm Paper Taping	10000
K	ø330mm Embossed Taping	10000
B	Packing in Bulk	1000



Refer to pages 137 to 140 for mounting information.

## Rated Value (□: packaging code)

Part Number	Inductance	Inductance Test Frequency	Rated Current	Max. of DC Resistance	Q (min.)	Q Test Frequency	Self-Resonance Frequency (min.)	
LQM21NNR10K10□	0.1μH ±10%	25MHz	250mA	0.26Ω	20	25MHz	340MHz	Kit
LQM21NNR12K10□	0.12μH ±10%	25MHz	250mA	0.29Ω	20	25MHz	310MHz	Kit
LQM21NNR15K10□	0.15μH ±10%	25MHz	250mA	0.32Ω	20	25MHz	270MHz	Kit
LQM21NNR18K10□	0.18μH ±10%	25MHz	250mA	0.35Ω	20	25MHz	250MHz	Kit
LQM21NNR22K10□	0.22μH ±10%	25MHz	250mA	0.38Ω	20	25MHz	220MHz	Kit
LQM21NNR27K10□	0.27μH ±10%	25MHz	250mA	0.42Ω	20	25MHz	200MHz	Kit
LQM21NNR33K10□	0.33μH ±10%	25MHz	250mA	0.48Ω	20	25MHz	180MHz	Kit
LQM21NNR39K10□	0.39μH ±10%	25MHz	200mA	0.53Ω	25	25MHz	165MHz	Kit
LQM21NNR47K10□	0.47μH ±10%	25MHz	200mA	0.57Ω	25	25MHz	150MHz	Kit
LQM21NNR56K10□	0.56μH ±10%	25MHz	150mA	0.63Ω	25	25MHz	140MHz	Kit
LQM21NNR68K10□	0.68μH ±10%	25MHz	150mA	0.72Ω	25	25MHz	125MHz	Kit
LQM21NNR82K10□	0.82μH ±10%	25MHz	150mA	0.81Ω	25	25MHz	115MHz	Kit
LQM21NN1R0K10□	1.0μH ±10%	10MHz	50mA	0.40Ω	45	10MHz	107MHz	Kit
LQM21NN1R2K10□	1.2μH ±10%	10MHz	50mA	0.47Ω	45	10MHz	97MHz	Kit
LQM21NN1R5K10□	1.5μH ±10%	10MHz	50mA	0.50Ω	45	10MHz	87MHz	Kit
LQM21NN1R8K10□	1.8μH ±10%	10MHz	50mA	0.57Ω	45	10MHz	80MHz	Kit
LQM21NN2R2K10□	2.2μH ±10%	10MHz	30mA	0.63Ω	45	10MHz	71MHz	Kit
LQM21NN2R7K10□	2.7μH ±10%	10MHz	30mA	0.69Ω	45	10MHz	66MHz	Kit
LQM21NN3R3K10□	3.3μH ±10%	10MHz	30mA	0.80Ω	45	10MHz	59MHz	Kit
LQM21NN3R9K10□	3.9μH ±10%	10MHz	30mA	0.89Ω	45	10MHz	53MHz	Kit
LQM21NN4R7K10□	4.7μH ±10%	10MHz	30mA	1.00Ω	45	10MHz	47MHz	Kit

Class of Magnetic Shield: Magnetic shield of ferrite

Operating Temperature Range (Self-temperature rise is not included): -40°C~+85°C

Continued on the following page.