

# Chip Coils



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## ● Part Numbering

### 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 |            |
|------------|------------|
| LQ         | Chip Coils |

#### ② Structure

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

#### ③ Dimensions (L×W)

| Code | Dimensions (L×W) | EIA  |
|------|------------------|------|
| 03   | 0.6×0.3mm        | 0201 |
| 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 |
| 31   | 3.2×1.6mm        | 1206 |
| 32   | 3.2×2.5mm        | 1210 |
| 3K   | 3.3×3.3mm        | 1212 |
| 43   | 4.5×3.2mm        | 1812 |
| 55   | 5.7×5.0mm        | 2220 |
| 66   | 6.3×6.3mm        | 2525 |

#### ④ Applications and Characteristics

| Code | Series | Applications and Characteristics          |
|------|--------|-------------------------------------------|
| H    | LQG    | Monolithic Air-core                       |
| N    |        | for Resonant Circuit                      |
| D    | LQM    | 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    |        | for Resonant Circuit                      |
| M    |        | for Resonant Circuit (Coating Type)       |
| D    | LQH    | for Choke                                 |
| C    |        | for Choke (Coating Type)                  |
| S    |        | for Choke (Magnetically Shielded Type)    |
| H    |        | for High-frequency Resonant Circuit       |

#### ⑤ Category

| Code | Category      |
|------|---------------|
| N    | Standard Type |
| S    |               |

#### ⑥ Inductance

Expressed by three figures. 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

| Code | Features                     | Series                  |
|------|------------------------------|-------------------------|
| 0    | Standard Type                | LQG/LQP/LQW/LQM*1/LQH*2 |
| 1    | High-Q/<br>Low DC Resistance | LQW15A/LQW18A/LQW2BH    |
|      | Standard Type                | LQM21N                  |
|      | Low DC Resistance            | LQH32C                  |
| 2    | Standard Type                | LQH32C/LQH32M/LQH3KS    |
| 3    | Low DC Resistance            | LQH32C                  |
| 5    | Low Profile Type             | LQH32C/LQH3KS           |
| 7    | Large Current Type           | LQM21F                  |

\*1 : Except LQM21N Series

\*2 : Except LQH32/LQH3K Series

#### ⑨ Electrode

•Lead (Pb) Free

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

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

10Packaging

| Code | Packaging                    | Series                           |
|------|------------------------------|----------------------------------|
| K    | Plastic Taping (ø330mm Reel) | LQH*1 /LQW□□H/LQM31F/LQM21*2     |
| L    | Plastic Taping (ø180mm Reel) | LQH/LQW□□H/LQM31F/LQM21*2        |
| B    | Bulk                         | All Series                       |
| J    | Paper Taping (ø330mm Reel)   | LQW18A/LQG/LQM18N/LQM21*3 /LQP*4 |
| D    | Paper Taping (ø180mm Reel)   | LQW□□A/LQG/LQM18N/LQM21*3 /LQP   |

\*1 Except LQH43C/LQH66S

\*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 Except LQP15T

## Products Guide

Murata's LQ□ series of 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.

| Application                | Part Number | Structure                        | Dimensions     |          | Inductance Range (H) |        |       |         |      |      |    |     |
|----------------------------|-------------|----------------------------------|----------------|----------|----------------------|--------|-------|---------|------|------|----|-----|
|                            |             |                                  | (mm)           | EIA Code | 1n                   | 10n    | 100n  | 1μ      | 10μ  | 100μ | 1m | 10m |
| High Frequency Range       | LQG15H      | Multilayer                       | 1.0<br>■ ±0.5  | 0402     | 1.0nH                |        |       | 270nH   |      |      |    |     |
|                            | LQG18H      |                                  | 1.6<br>■ ±0.8  | 0603     | 1.2nH                |        |       | 100nH   |      |      |    |     |
| Tight Inductance Tolerance | LQP03T      | Film                             | 0.6<br>■ ±0.3  | 0201     | 0.6nH                |        |       | 27nH    |      |      |    |     |
|                            | LQP15T      |                                  | 1.0<br>■ ±0.5  | 0402     | 1.0nH                |        |       | 18nH    |      |      |    |     |
|                            | LQP15M      |                                  | 1.0<br>■ ±0.5  | 0402     | 1.0nH                |        |       | 33nH    |      |      |    |     |
|                            | LQP18M      |                                  | 1.6<br>■ ±0.8  | 0603     | 1.3nH                |        |       | 100nH   |      |      |    |     |
|                            | LQW15A      | Wound (air core)                 | 1.0<br>■ ±0.5  | 0402     | 1.3nH                |        |       | 120nH   |      |      |    |     |
|                            | LQW18A      |                                  | 1.6<br>■ ±0.8  | 0603     | 2.2nH                |        |       | 470nH   |      |      |    |     |
|                            | LQW2BH      |                                  | 2.0<br>■ ±1.5  | 0805     | 2.7nH                |        |       | 470nH   |      |      |    |     |
|                            | LQW31H      |                                  | 3.2<br>■ ±1.6  | 1206     | 8.8nH                |        |       | 100nH   |      |      |    |     |
|                            | LQH31H      | Wound (ferrite core)             | 3.2<br>■ ±1.6  | 1206     |                      | 54nH   |       | 880nH   |      |      |    |     |
| General Frequency Range    | LQM18N      | Magnetically shielded multilayer | 1.6<br>■ ±0.8  | 0603     |                      | 47nH   |       | 2200nH  |      |      |    |     |
|                            | LQM21N      |                                  | 2.0<br>■ ±1.25 | 0805     |                      | 0.1μH  |       | 4.7μH   |      |      |    |     |
|                            | LQH31M      | Wound (ferrite core)             | 3.2<br>■ ±1.6  | 1206     |                      | 0.15μH |       | 100μH   |      |      |    |     |
|                            | LQH32M      |                                  | 3.2<br>■ ±2.5  | 1210     |                      |        | 1.0μH | 560μH   |      |      |    |     |
|                            | LQH43M(N)   |                                  | 4.5<br>■ ±3.2  | 1812     |                      |        | 1.0μH | 2200μH  |      |      |    |     |
| DC-DC Converter Type       | LQH2MC      | Wound                            | 2.0<br>■ ±1.6  | 0806     |                      |        |       | 4.7μH   | 82μH |      |    |     |
| Chokes                     | LQM21D      | Magnetically shielded multilayer | 2.0<br>■ ±1.25 | 0805     |                      |        | 1.0μH | 47μH    |      |      |    |     |
|                            | LQM21F      |                                  | 2.0<br>■ ±1.25 | 0805     |                      |        | 1.0μH | 47μH    |      |      |    |     |
|                            | LQM31F      |                                  | 3.2<br>■ ±1.6  | 1206     |                      |        |       | 10μH    |      |      |    |     |
|                            | LQH31C      | Wound                            | 3.2<br>■ ±1.6  | 1206     |                      | 0.12μH |       | 100μH   |      |      |    |     |
|                            | LQH32C      |                                  | 3.2<br>■ ±2.5  | 1210     |                      | 0.15μH |       | 560μH   |      |      |    |     |
|                            | LQH43C      |                                  | 4.5<br>■ ±3.2  | 1812     |                      |        | 1.0μH | 470μH   |      |      |    |     |
|                            | LQH55D      | Wound                            | 5.7<br>■ ±5.0  | 2220     |                      | 0.12μH |       | 10000μH |      |      |    |     |
|                            | LQH3KS      | Magnetically shielded            | 3.3<br>■ ±3.3  | 1212     |                      |        | 3.3μH | 2200μH  |      |      |    |     |
|                            | LQH66S      | Magnetically shielded            | 6.3<br>■ ±6.3  | 2525     |                      | 0.27μH |       | 10000μH |      |      |    |     |

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

## Selection Guide



# Chip Coils



## High Frequency Monolithic Type LQG15H/LQG18H Series

### LQG15HN Series

The LQG15HN series are chip inductors specifically designed for high frequency applications. The LQG15H series is designed to realize stable characteristics in high frequency range applying integrated multilayer process. The integrated multilayer process enables a wide range of inductance values with tight tolerance.

#### ■ Features

1. High-Q, stable inductance in high frequency is achieved by the original structure that minimizes stray capacitance. It is suitable for the high frequency circuits of mobile communication equipment.
2. The small size of LQG15H (1.0x0.5x0.5mm) is suitable for small and low profile mobile equipment.
3. The external electrodes with nickel barrier structure provide excellent solder heat resistance.
4. Wide variation in inductance value  
1-10nH (E24 step)  
10-120nH (E12 step)

#### ■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general



| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQG15HN1N0S02 | 1.0 ±0.3nH      | 100                  | 300                | 0.10 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN1N1S02 | 1.1 ±0.3nH      | 100                  | 300                | 0.10 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN1N2S02 | 1.2 ±0.3nH      | 100                  | 300                | 0.10 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN1N3S02 | 1.3 ±0.3nH      | 100                  | 300                | 0.10 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN1N5S02 | 1.5 ±0.3nH      | 100                  | 300                | 0.10 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN1N6S02 | 1.6 ±0.3nH      | 100                  | 300                | 0.10 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN1N8S02 | 1.8 ±0.3nH      | 100                  | 300                | 0.10 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN2N0S02 | 2.0 ±0.3nH      | 100                  | 300                | 0.12 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN2N2S02 | 2.2 ±0.3nH      | 100                  | 300                | 0.15 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN2N4S02 | 2.4 ±0.3nH      | 100                  | 300                | 0.16 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN2N7S02 | 2.7 ±0.3nH      | 100                  | 300                | 0.17 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN3N0S02 | 3.0 ±0.3nH      | 100                  | 300                | 0.18 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN3N3S02 | 3.3 ±0.3nH      | 100                  | 300                | 0.19 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN3N6S02 | 3.6 ±0.3nH      | 100                  | 300                | 0.19 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN3N9S02 | 3.9 ±0.3nH      | 100                  | 300                | 0.19 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN4N3S02 | 4.3 ±0.3nH      | 100                  | 300                | 0.21 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN4N7S02 | 4.7 ±0.3nH      | 100                  | 300                | 0.23 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HN5N1S02 | 5.1 ±0.3nH      | 100                  | 300                | 0.24 max.           | 8        | 100                  | 6000                                  | 0402 |

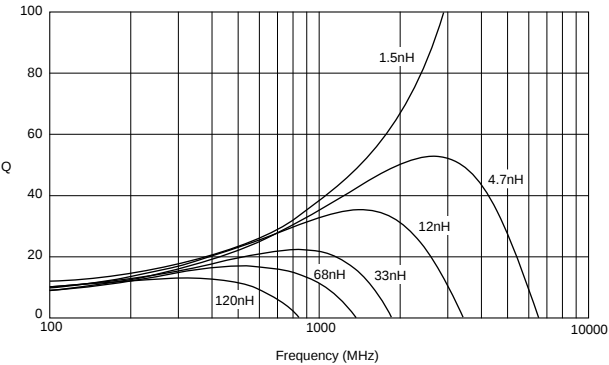
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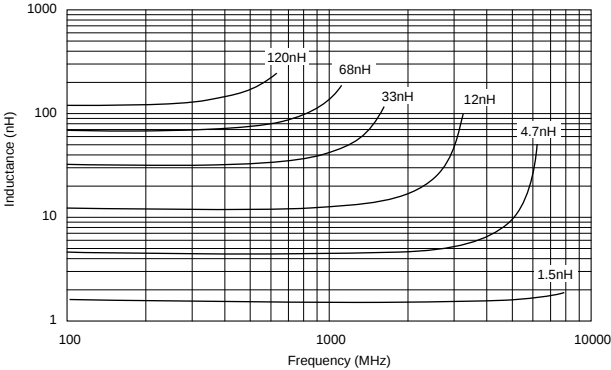
| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQG15HN5N6S02 | 5.6 ±0.3nH      | 100                  | 300                | 0.26 max.           | 8        | 100                  | 5300                                  | 0402 |
| LQG15HN6N2S02 | 6.2 ±0.3nH      | 100                  | 300                | 0.27 max.           | 8        | 100                  | 4300                                  | 0402 |
| LQG15HN6N8J02 | 6.8 ±5%         | 100                  | 300                | 0.29 max.           | 8        | 100                  | 4200                                  | 0402 |
| LQG15HN7N5J02 | 7.5 ±5%         | 100                  | 300                | 0.31 max.           | 8        | 100                  | 3900                                  | 0402 |
| LQG15HN8N2J02 | 8.2 ±5%         | 100                  | 300                | 0.33 max.           | 8        | 100                  | 3600                                  | 0402 |
| LQG15HN9N1J02 | 9.1 ±5%         | 100                  | 300                | 0.34 max.           | 8        | 100                  | 3400                                  | 0402 |
| LQG15HN10NJ02 | 10 ±5%          | 100                  | 300                | 0.35 max.           | 8        | 100                  | 3200                                  | 0402 |
| LQG15HN12NJ02 | 12 ±5%          | 100                  | 300                | 0.41 max.           | 8        | 100                  | 2800                                  | 0402 |
| LQG15HN15NJ02 | 15 ±5%          | 100                  | 300                | 0.46 max.           | 8        | 100                  | 2300                                  | 0402 |
| LQG15HN18NJ02 | 18 ±5%          | 100                  | 300                | 0.51 max.           | 8        | 100                  | 2100                                  | 0402 |
| LQG15HN22NJ02 | 22 ±5%          | 100                  | 300                | 0.58 max.           | 8        | 100                  | 1800                                  | 0402 |
| LQG15HN27NJ02 | 27 ±5%          | 100                  | 300                | 0.67 max.           | 8        | 100                  | 1600                                  | 0402 |
| LQG15HN33NJ02 | 33 ±5%          | 100                  | 200                | 0.67 max.           | 8        | 100                  | 1500                                  | 0402 |
| LQG15HN39NJ02 | 39 ±5%          | 100                  | 200                | 1.06 max.           | 8        | 100                  | 1200                                  | 0402 |
| LQG15HN47NJ02 | 47 ±5%          | 100                  | 200                | 1.15 max.           | 8        | 100                  | 1000                                  | 0402 |
| LQG15HN56NJ02 | 56 ±5%          | 100                  | 200                | 1.20 max.           | 8        | 100                  | 800                                   | 0402 |
| LQG15HN68NJ02 | 68 ±5%          | 100                  | 180                | 1.25 max.           | 8        | 100                  | 800                                   | 0402 |
| LQG15HN82NJ02 | 82 ±5%          | 100                  | 150                | 1.60 max.           | 8        | 100                  | 600                                   | 0402 |
| LQG15HNR10J02 | 100 ±5%         | 100                  | 150                | 1.60 max.           | 8        | 100                  | 600                                   | 0402 |
| LQG15HNR12J02 | 120 ±5%         | 100                  | 150                | 1.60 max.           | 8        | 100                  | 600                                   | 0402 |

Operating Temp. Range: -55°C to +125°C  
Only for reflow soldering.

Q-Frequency Characteristics



Inductance-Frequency Characteristics



## LQG15HS Series

The LQG15HS series are chip inductors specifically designed for high frequency applications. The LQG15H series is designed to realize stable characteristics in high frequency range applying integrated multilayer process. The integrated multilayer process enables a wide range of inductance values with tight tolerance.

Since recent mobile phones install color LCDs and camera modules, the power consumption becomes higher. In order to reduce power consumption a low DC resistance is strongly required. The LQG15HS has achieved the lowest DC resistance.



### ■ Features

1. High-Q, stable inductance in high frequency is achieved by the original structure that minimizes stray capacitance. It is suitable for the high frequency circuits of mobile communication equipment.
2. The small size of LQG15H (1.0x0.5x0.5mm) is suitable for small and low profile mobile equipment.
3. The external electrodes with nickel barrier structure provide excellent solder heat resistance.
4. Wide variation in inductance value
  - 1-10nH (E24 step)
  - 10-270nH (E12 step)

### ■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general

### ■ Supplements

The product with tight inductance tolerance.

Please contact our local sales or product engineers.

| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQG15HS1N0S02 | 1.0 ±0.3nH      | 100                  | 300                | 0.07 max.           | 8        | 100                  | 10000                                 | 0402 |
| LQG15HS1N1S02 | 1.1 ±0.3nH      | 100                  | 300                | 0.09 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS1N2S02 | 1.2 ±0.3nH      | 100                  | 300                | 0.09 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS1N3S02 | 1.3 ±0.3nH      | 100                  | 300                | 0.09 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS1N5S02 | 1.5 ±0.3nH      | 100                  | 300                | 0.1 max.            | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS1N6S02 | 1.6 ±0.3nH      | 100                  | 300                | 0.1 max.            | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS1N8S02 | 1.8 ±0.3nH      | 100                  | 300                | 0.1 max.            | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS2N0S02 | 2.0 ±0.3nH      | 100                  | 300                | 0.1 max.            | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS2N2S02 | 2.2 ±0.3nH      | 100                  | 300                | 0.12 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS2N4S02 | 2.4 ±0.3nH      | 100                  | 300                | 0.15 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS2N7S02 | 2.7 ±0.3nH      | 100                  | 300                | 0.15 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS3N0S02 | 3.0 ±0.3nH      | 100                  | 300                | 0.17 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS3N3S02 | 3.3 ±0.3nH      | 100                  | 300                | 0.17 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS3N6S02 | 3.6 ±0.3nH      | 100                  | 300                | 0.18 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS3N9S02 | 3.9 ±0.3nH      | 100                  | 300                | 0.18 max.           | 8        | 100                  | 6000                                  | 0402 |

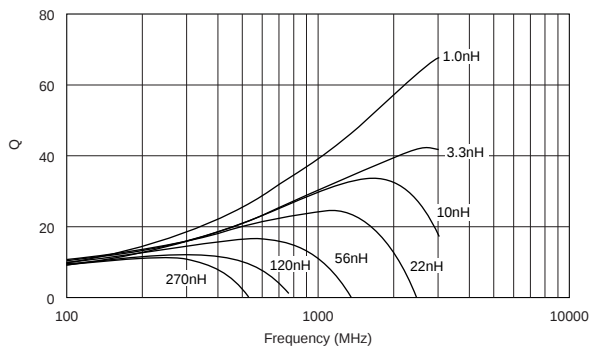
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| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQG15HS4N3S02 | 4.3 ±0.3nH      | 100                  | 300                | 0.18 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS4N7S02 | 4.7 ±0.3nH      | 100                  | 300                | 0.18 max.           | 8        | 100                  | 6000                                  | 0402 |
| LQG15HS5N1S02 | 5.1 ±0.3nH      | 100                  | 300                | 0.2 max.            | 8        | 100                  | 5300                                  | 0402 |
| LQG15HS5N6S02 | 5.6 ±0.3nH      | 100                  | 300                | 0.2 max.            | 8        | 100                  | 4500                                  | 0402 |
| LQG15HS6N2S02 | 6.2 ±0.3nH      | 100                  | 300                | 0.22 max.           | 8        | 100                  | 4500                                  | 0402 |
| LQG15HS6N8J02 | 6.8 ±5%         | 100                  | 300                | 0.24 max.           | 8        | 100                  | 4500                                  | 0402 |
| LQG15HS7N5J02 | 7.5 ±5%         | 100                  | 300                | 0.24 max.           | 8        | 100                  | 4200                                  | 0402 |
| LQG15HS8N2J02 | 8.2 ±5%         | 100                  | 300                | 0.24 max.           | 8        | 100                  | 3700                                  | 0402 |
| LQG15HS9N1J02 | 9.1 ±5%         | 100                  | 300                | 0.26 max.           | 8        | 100                  | 3400                                  | 0402 |
| LQG15HS10NJ02 | 10 ±5%          | 100                  | 300                | 0.26 max.           | 8        | 100                  | 3400                                  | 0402 |
| LQG15HS12NJ02 | 12 ±5%          | 100                  | 300                | 0.28 max.           | 8        | 100                  | 3000                                  | 0402 |
| LQG15HS15NJ02 | 15 ±5%          | 100                  | 300                | 0.32 max.           | 8        | 100                  | 2500                                  | 0402 |
| LQG15HS18NJ02 | 18 ±5%          | 100                  | 300                | 0.36 max.           | 8        | 100                  | 2200                                  | 0402 |
| LQG15HS22NJ02 | 22 ±5%          | 100                  | 300                | 0.42 max.           | 8        | 100                  | 1900                                  | 0402 |
| LQG15HS27NJ02 | 27 ±5%          | 100                  | 300                | 0.46 max.           | 8        | 100                  | 1700                                  | 0402 |
| LQG15HS33NJ02 | 33 ±5%          | 100                  | 200                | 0.58 max.           | 8        | 100                  | 1600                                  | 0402 |
| LQG15HS39NJ02 | 39 ±5%          | 100                  | 200                | 0.65 max.           | 8        | 100                  | 1200                                  | 0402 |
| LQG15HS47NJ02 | 47 ±5%          | 100                  | 200                | 0.72 max.           | 8        | 100                  | 1000                                  | 0402 |
| LQG15HS56NJ02 | 56 ±5%          | 100                  | 200                | 0.82 max.           | 8        | 100                  | 800                                   | 0402 |
| LQG15HS68NJ02 | 68 ±5%          | 100                  | 180                | 0.92 max.           | 8        | 100                  | 800                                   | 0402 |
| LQG15HS82NJ02 | 82 ±5%          | 100                  | 150                | 1.2 max.            | 8        | 100                  | 700                                   | 0402 |
| LQG15HSR10J02 | 100 ±5%         | 100                  | 150                | 1.25 max.           | 8        | 100                  | 600                                   | 0402 |
| LQG15HSR12J02 | 120 ±5%         | 100                  | 150                | 1.3 max.            | 8        | 100                  | 600                                   | 0402 |
| LQG15HSR15J02 | 150 ±5%         | 100                  | 140                | 2.99 max.           | 8        | 100                  | 550                                   | 0402 |
| LQG15HSR18J02 | 180 ±5%         | 100                  | 130                | 3.38 max.           | 8        | 100                  | 500                                   | 0402 |
| LQG15HSR22J02 | 220 ±5%         | 100                  | 120                | 3.77 max.           | 8        | 100                  | 450                                   | 0402 |
| LQG15HSR27J02 | 270 ±5%         | 100                  | 110                | 4.94 max.           | 8        | 100                  | 400                                   | 0402 |

Operating Temp. Range: -55°C to +125°C  
Only for reflow soldering.

## Q-Frequency Characteristics



## Inductance-Frequency Characteristics



Continued on the following page. ➤

Continued from the preceding page.

## Reference Data

E4991&16197A

| Part Number   | Inductance (nH)<br>100MHz | Q (typ.) |        |        |        |        | Rdc<br>(Ω typ.) | SRF<br>(MHz typ.) |
|---------------|---------------------------|----------|--------|--------|--------|--------|-----------------|-------------------|
|               |                           | 800MHz   | 900MHz | 1.8GHz | 2.0GHz | 2.4GHz |                 |                   |
| LQG15HS1N0S02 | 1.0                       | 32       | 34     | 51     | 54     | 57     | 0.03            | 11700             |
| LQG15HS1N1S02 | 1.1                       | 35       | 37     | 59     | 62     | 64     |                 | 10000             |
| LQG15HS1N2S02 | 1.2                       | 34       | 36     | 56     | 58     | 60     |                 | 8600              |
| LQG15HS1N3S02 | 1.3                       | 34       | 36     | 56     | 57     | 58     |                 | 7000              |
| LQG15HS1N5S02 | 1.5                       | 31       | 34     | 50     | 53     | 55     | 0.04            | 9700              |
| LQG15HS1N6S02 | 1.6                       | 31       | 33     | 50     | 52     | 54     |                 | 8600              |
| LQG15HS1N8S02 | 1.8                       | 31       | 33     | 48     | 49     | 50     |                 | 7500              |
| LQG15HS2N0S02 | 2.0                       | 31       | 32     | 47     | 48     | 49     |                 | 6400              |
| LQG15HS2N2S02 | 2.2                       | 32       | 34     | 48     | 49     | 50     | 0.05            | 6200              |
| LQG15HS2N4S02 | 2.4                       | 32       | 34     | 51     | 52     | 52     | 0.07            | 10000             |
| LQG15HS2N7S02 | 2.7                       | 31       | 33     | 49     | 50     | 50     | 0.08            | 8700              |
| LQG15HS3N0S02 | 3.0                       | 32       | 34     | 49     | 51     | 50     | 0.09            | 8000              |
| LQG15HS3N3S02 | 3.3                       | 31       | 33     | 46     | 47     | 46     |                 | 6700              |
| LQG15HS3N6S02 | 3.6                       | 31       | 33     | 45     | 47     | 46     | 0.1             | 8000              |
| LQG15HS3N9S02 | 3.9                       | 31       | 33     | 49     | 47     | 46     |                 | 7500              |
| LQG15HS4N3S02 | 4.3                       | 31       | 33     | 44     | 45     | 44     |                 | 6500              |
| LQG15HS4N7S02 | 4.7                       | 31       | 33     | 42     | 43     | 42     | 0.12            | 6200              |
| LQG15HS5N1S02 | 5.1                       | 31       | 33     | 44     | 45     | 42     | 0.13            | 5800              |
| LQG15HS5N6S02 | 5.6                       | 30       | 32     | 41     | 40     | 38     |                 | 5000              |
| LQG15HS6N2S02 | 6.2                       | 29       | 31     | 41     | 41     | 38     | 0.16            | 5100              |
| LQG15HS6N8J02 | 6.8                       | 29       | 30     | 40     | 40     | 37     | 0.17            | 4900              |
| LQG15HS7N5J02 | 7.5                       | 28       | 29     | 38     | 37     | 34     |                 | 4500              |
| LQG15HS8N2J02 | 8.2                       | 27       | 29     | 35     | 34     | 29     |                 | 4100              |
| LQG15HS9N1J02 | 9.1                       | 27       | 29     | 36     | 35     | 31     | 0.18            | 3900              |
| LQG15HS10NJ02 | 10                        | 27       | 29     | 35     | 33     | 28     |                 | 3200              |
| LQG15HS12NJ02 | 12                        | 26       | 27     | 28     | 24     | 18     | 0.22            | 2900              |
| LQG15HS15NJ02 | 15                        | 26       | 27     | 25     | 21     | 13     |                 | 2800              |
| LQG15HS18NJ02 | 18                        | 25       | 25     | 22     | 18     | -      | 0.26            | 2500              |
| LQG15HS22NJ02 | 22                        | 23       | 24     | 16     | -      | -      | 0.30            | 2000              |
| LQG15HS27NJ02 | 27                        | 21       | 21     | -      | -      | -      | 0.33            | 1900              |
| LQG15HS33NJ02 | 33                        | 20       | 20     | -      | -      | -      | 0.40            | 1700              |
| LQG15HS39NJ02 | 39                        | 19       | 18     | -      | -      | -      | 0.44            | 1500              |
| LQG15HS47NJ02 | 47                        | 17       | 16     | -      | -      | -      | 0.48            | 1300              |
| LQG15HS56NJ02 | 56                        | 15       | 13     | -      | -      | -      | 0.55            | 1200              |
| LQG15HS68NJ02 | 68                        | 12       | 10     | -      | -      | -      | 0.63            | 1100              |
| LQG15HS82NJ02 | 82                        | 9        | 6      | -      | -      | -      | 0.77            | 900               |
| LQG15HSR10J02 | 100                       | -        | -      | -      | -      | -      | 0.92            | 800               |
| LQG15HSR12J02 | 120                       | -        | -      | -      | -      | -      | 1.00            |                   |

## LQG18H Series

The LQG18H series is designed to realize stable characteristics in high frequency range applying integrated multilayer process.

### ■ Features

1. High-Q, stable inductance in high frequency is achieved by the original structure that minimizes stray capacitance. It is suitable for the high frequency circuits of mobile communication equipment.
2. Small size of LQG18H (1.6x0.8x0.8mm) is suitable for small, handy equipment, especially for card size equipment.
3. The external electrodes with nickel barrier structure provide excellent solder heat resistance.

### ■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general



| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQG18HN1N2S00 | 1.2 ±0.3nH      | 100                  | 500                | 0.10 max.           | 12       | 100                  | 6000                                  | 0603 |
| LQG18HN1N5S00 | 1.5 ±0.3nH      | 100                  | 500                | 0.10 max.           | 12       | 100                  | 6000                                  | 0603 |
| LQG18HN1N8S00 | 1.8 ±0.3nH      | 100                  | 500                | 0.10 max.           | 12       | 100                  | 6000                                  | 0603 |
| LQG18HN2N2S00 | 2.2 ±0.3nH      | 100                  | 500                | 0.10 max.           | 12       | 100                  | 6000                                  | 0603 |
| LQG18HN2N7S00 | 2.7 ±0.3nH      | 100                  | 500                | 0.15 max.           | 12       | 100                  | 6000                                  | 0603 |
| LQG18HN3N3S00 | 3.3 ±0.3nH      | 100                  | 500                | 0.15 max.           | 12       | 100                  | 6000                                  | 0603 |
| LQG18HN3N9S00 | 3.9 ±0.3nH      | 100                  | 450                | 0.15 max.           | 12       | 100                  | 6000                                  | 0603 |
| LQG18HN4N7S00 | 4.7 ±0.3nH      | 100                  | 450                | 0.20 max.           | 12       | 100                  | 6000                                  | 0603 |
| LQG18HN5N6S00 | 5.6 ±0.3nH      | 100                  | 430                | 0.20 max.           | 12       | 100                  | 5000                                  | 0603 |
| LQG18HN6N8J00 | 6.8 ±5%         | 100                  | 430                | 0.25 max.           | 12       | 100                  | 5000                                  | 0603 |
| LQG18HN8N2J00 | 8.2 ±5%         | 100                  | 400                | 0.25 max.           | 12       | 100                  | 4000                                  | 0603 |
| LQG18HN10NJ00 | 10 ±5%          | 100                  | 400                | 0.30 max.           | 12       | 100                  | 3500                                  | 0603 |
| LQG18HN12NJ00 | 12 ±5%          | 100                  | 400                | 0.35 max.           | 12       | 100                  | 3000                                  | 0603 |
| LQG18HN15NJ00 | 15 ±5%          | 100                  | 350                | 0.40 max.           | 12       | 100                  | 2800                                  | 0603 |
| LQG18HN18NJ00 | 18 ±5%          | 100                  | 350                | 0.45 max.           | 12       | 100                  | 2600                                  | 0603 |
| LQG18HN22NJ00 | 22 ±5%          | 100                  | 300                | 0.50 max.           | 12       | 100                  | 2300                                  | 0603 |
| LQG18HN27NJ00 | 27 ±5%          | 100                  | 300                | 0.55 max.           | 12       | 100                  | 2000                                  | 0603 |
| LQG18HN33NJ00 | 33 ±5%          | 100                  | 300                | 0.60 max.           | 12       | 100                  | 1700                                  | 0603 |
| LQG18HN39NJ00 | 39 ±5%          | 100                  | 300                | 0.65 max.           | 12       | 100                  | 1500                                  | 0603 |
| LQG18HN47NJ00 | 47 ±5%          | 100                  | 300                | 0.70 max.           | 12       | 100                  | 1200                                  | 0603 |
| LQG18HN56NJ00 | 56 ±5%          | 100                  | 300                | 0.75 max.           | 12       | 100                  | 1100                                  | 0603 |
| LQG18HN68NJ00 | 68 ±5%          | 100                  | 300                | 0.80 max.           | 12       | 100                  | 1000                                  | 0603 |
| LQG18HN82NJ00 | 82 ±5%          | 100                  | 300                | 0.85 max.           | 12       | 100                  | 900                                   | 0603 |
| LQG18HNR10J00 | 100 ±5%         | 100                  | 300                | 0.90 max.           | 12       | 100                  | 800                                   | 0603 |

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

1

■ Q-Frequency Characteristics



■ Inductance-Frequency Characteristics



# Chip Coils

**muRata**

## High Frequency Film Type LQP03T/LQP15T/LQP15M/LQP18M Series

2

### LQP03T Series

LQP03T series using Murata's original thin film technology contributes further to miniaturizing high performance equipment because the size is small and the Q-value is high.

#### ■ Features

1. Ultra small and thin size 0.6x0.3x0.3mm
2. High Q value in high frequency range
3. E24 step
  - 0.6 to 3.9nH  $\pm 0.1\text{nH}$
  - 4.3 to 10nH  $\pm 3\%$
4. E12 step
  - 0.6 to 3.9nH  $\pm 0.2\text{nH}$
  - 4.7 to 15nH  $\pm 5\%$
  - 18 to 27nH  $\pm 3\%$ ,  $\pm 5\%$

#### ■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general



| Part Number   | Inductance (nH)        | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|------------------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQP03TN0N6B00 | 0.6 $\pm 0.1\text{nH}$ | 500                  | 420                | 0.08 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN0N6C00 | 0.6 $\pm 0.2\text{nH}$ | 500                  | 420                | 0.08 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN0N7B00 | 0.7 $\pm 0.1\text{nH}$ | 500                  | 410                | 0.09 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN0N8B00 | 0.8 $\pm 0.1\text{nH}$ | 500                  | 410                | 0.09 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN0N8C00 | 0.8 $\pm 0.2\text{nH}$ | 500                  | 410                | 0.09 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN0N9B00 | 0.9 $\pm 0.1\text{nH}$ | 500                  | 400                | 0.10 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N0B00 | 1.0 $\pm 0.1\text{nH}$ | 500                  | 400                | 0.10 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N0C00 | 1.0 $\pm 0.2\text{nH}$ | 500                  | 400                | 0.10 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N1B00 | 1.1 $\pm 0.1\text{nH}$ | 500                  | 280                | 0.13 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N2B00 | 1.2 $\pm 0.1\text{nH}$ | 500                  | 280                | 0.13 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N2C00 | 1.2 $\pm 0.2\text{nH}$ | 500                  | 280                | 0.13 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N3B00 | 1.3 $\pm 0.1\text{nH}$ | 500                  | 280                | 0.16 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N5B00 | 1.5 $\pm 0.1\text{nH}$ | 500                  | 280                | 0.16 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N5C00 | 1.5 $\pm 0.2\text{nH}$ | 500                  | 280                | 0.16 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N6B00 | 1.6 $\pm 0.1\text{nH}$ | 500                  | 280                | 0.16 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N8B00 | 1.8 $\pm 0.1\text{nH}$ | 500                  | 280                | 0.16 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN1N8C00 | 1.8 $\pm 0.2\text{nH}$ | 500                  | 280                | 0.16 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN2N0B00 | 2.0 $\pm 0.1\text{nH}$ | 500                  | 220                | 0.18 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN2N2B00 | 2.2 $\pm 0.1\text{nH}$ | 500                  | 220                | 0.18 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN2N2C00 | 2.2 $\pm 0.2\text{nH}$ | 500                  | 220                | 0.18 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN2N4B00 | 2.4 $\pm 0.1\text{nH}$ | 500                  | 220                | 0.21 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN2N7B00 | 2.7 $\pm 0.1\text{nH}$ | 500                  | 220                | 0.21 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN2N7C00 | 2.7 $\pm 0.2\text{nH}$ | 500                  | 220                | 0.21 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN3N0B00 | 3.0 $\pm 0.1\text{nH}$ | 500                  | 190                | 0.30 max.           | 11       | 500                  | 6000                                  | 0201 |

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| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQP03TN3N3B00 | 3.3 ±0.1nH      | 500                  | 190                | 0.30 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN3N3C00 | 3.3 ±0.2nH      | 500                  | 190                | 0.30 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN3N6B00 | 3.6 ±0.1nH      | 500                  | 170                | 0.45 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN3N9B00 | 3.9 ±0.1nH      | 500                  | 170                | 0.45 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN3N9C00 | 3.9 ±0.2nH      | 500                  | 170                | 0.45 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN4N3H00 | 4.3 ±3%         | 500                  | 160                | 0.55 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN4N7H00 | 4.7 ±3%         | 500                  | 160                | 0.55 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN4N7J00 | 4.7 ±5%         | 500                  | 160                | 0.55 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN5N1H00 | 5.1 ±3%         | 500                  | 140                | 0.68 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN5N6H00 | 5.6 ±3%         | 500                  | 140                | 0.68 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN5N6J00 | 5.6 ±5%         | 500                  | 140                | 0.68 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN6N2H00 | 6.2 ±3%         | 500                  | 130                | 0.75 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN6N8H00 | 6.8 ±3%         | 500                  | 130                | 0.75 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN6N8J00 | 6.8 ±5%         | 500                  | 130                | 0.75 max.           | 11       | 500                  | 6000                                  | 0201 |
| LQP03TN7N5H00 | 7.5 ±3%         | 500                  | 110                | 0.86 max.           | 11       | 500                  | 5500                                  | 0201 |
| LQP03TN8N2H00 | 8.2 ±3%         | 500                  | 110                | 0.86 max.           | 11       | 500                  | 5500                                  | 0201 |
| LQP03TN8N2J00 | 8.2 ±5%         | 500                  | 110                | 0.86 max.           | 11       | 500                  | 5500                                  | 0201 |
| LQP03TN9N1H00 | 9.1 ±3%         | 500                  | 100                | 1.10 max.           | 11       | 500                  | 4500                                  | 0201 |
| LQP03TN10NH00 | 10 ±3%          | 500                  | 100                | 1.10 max.           | 11       | 500                  | 4500                                  | 0201 |
| LQP03TN10NJ00 | 10 ±5%          | 500                  | 100                | 1.10 max.           | 11       | 500                  | 4500                                  | 0201 |
| LQP03TN12NH00 | 12 ±3%          | 500                  | 90                 | 1.25 max.           | 11       | 500                  | 3700                                  | 0201 |
| LQP03TN12NJ00 | 12 ±5%          | 500                  | 90                 | 1.25 max.           | 11       | 500                  | 3700                                  | 0201 |
| LQP03TN15NH00 | 15 ±3%          | 500                  | 90                 | 1.50 max.           | 11       | 500                  | 3300                                  | 0201 |
| LQP03TN15NJ00 | 15 ±5%          | 500                  | 90                 | 1.50 max.           | 11       | 500                  | 3300                                  | 0201 |
| LQP03TN18NH00 | 18 ±3%          | 500                  | 80                 | 2.00 max.           | 11       | 500                  | 3100                                  | 0201 |
| LQP03TN18NJ00 | 18 ±5%          | 500                  | 80                 | 2.00 max.           | 11       | 500                  | 3100                                  | 0201 |
| LQP03TN22NH00 | 22 ±3%          | 500                  | 70                 | 2.60 max.           | 11       | 500                  | 2800                                  | 0201 |
| LQP03TN22NJ00 | 22 ±5%          | 500                  | 70                 | 2.60 max.           | 11       | 500                  | 2800                                  | 0201 |
| LQP03TN27NH00 | 27 ±3%          | 500                  | 70                 | 3.10 max.           | 11       | 500                  | 2500                                  | 0201 |
| LQP03TN27NJ00 | 27 ±5%          | 500                  | 70                 | 3.10 max.           | 11       | 500                  | 2500                                  | 0201 |

Operating Temp. Range: -40°C to +85°C

Only for reflow soldering.

## Q-Frequency Characteristics



## Inductance-Frequency Characteristics



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## ■ Reference Data

E4991A & 16197A

| Part Number | Inductance (nH) (typ.) |        |        |        |        | Q (Typ.) |         |         |         |         |
|-------------|------------------------|--------|--------|--------|--------|----------|---------|---------|---------|---------|
|             | 800MHz                 | 900MHz | 1.8GHz | 2.0GHz | 2.4GHz | 800MHz   | 900MHz  | 1.8GHz  | 2.0GHz  | 2.4GHz  |
| LQP03TN0N6  | 0.6                    | 0.6    | 0.6    | 0.6    | 0.6    | 50 min.  | 54 min. | 70 min. | 73 min. | 77 min. |
| LQP03TN0N7  | 0.7                    | 0.7    | 0.7    | 0.7    | 0.7    | 50 min.  | 54 min. | 70 min. | 73 min. | 77 min. |
| LQP03TN0N8  | 0.8                    | 0.8    | 0.8    | 0.8    | 0.8    | 50 min.  | 54 min. | 70 min. | 73 min. | 77 min. |
| LQP03TN0N9  | 0.9                    | 0.9    | 0.9    | 0.9    | 0.9    | 50 min.  | 54 min. | 70 min. | 73 min. | 77 min. |
| LQP03TN1N0  | 1.0                    | 1.0    | 1.0    | 1.0    | 1.0    | 50 min.  | 54 min. | 70 min. | 73 min. | 77 min. |
| LQP03TN1N1  | 1.1                    | 1.1    | 1.1    | 1.1    | 1.1    | 50 min.  | 54 min. | 70 min. | 73 min. | 77 min. |
| LQP03TN1N2  | 1.2                    | 1.2    | 1.2    | 1.2    | 1.2    | 50       | 54      | 70      | 73      | 77      |
| LQP03TN1N3  | 1.3                    | 1.3    | 1.3    | 1.3    | 1.3    | 48       | 52      | 67      | 72      | 74      |
| LQP03TN1N5  | 1.5                    | 1.5    | 1.5    | 1.5    | 1.5    | 45       | 48      | 63      | 66      | 69      |
| LQP03TN1N6  | 1.6                    | 1.6    | 1.6    | 1.6    | 1.6    | 43       | 47      | 57      | 64      | 67      |
| LQP03TN1N8  | 1.8                    | 1.8    | 1.8    | 1.8    | 1.8    | 36       | 38      | 50      | 53      | 55      |
| LQP03TN2N0  | 2.0                    | 2.0    | 2.0    | 2.0    | 2.0    | 38       | 40      | 52      | 54      | 57      |
| LQP03TN2N2  | 2.2                    | 2.2    | 2.2    | 2.2    | 2.2    | 28       | 35      | 49      | 52      | 54      |
| LQP03TN2N4  | 2.4                    | 2.4    | 2.4    | 2.4    | 2.4    | 36       | 38      | 50      | 53      | 56      |
| LQP03TN2N7  | 2.7                    | 2.7    | 2.7    | 2.7    | 2.7    | 28       | 30      | 40      | 42      | 44      |
| LQP03TN3N0  | 3.0                    | 3.0    | 3.0    | 3.0    | 3.0    | 28       | 29      | 39      | 41      | 43      |
| LQP03TN3N3  | 3.3                    | 3.3    | 3.3    | 3.3    | 3.4    | 29       | 31      | 42      | 43      | 45      |
| LQP03TN3N6  | 3.6                    | 3.6    | 3.6    | 3.7    | 3.7    | 31       | 33      | 43      | 45      | 47      |
| LQP03TN3N9  | 3.9                    | 3.9    | 3.9    | 4.0    | 4.1    | 29       | 31      | 41      | 43      | 45      |
| LQP03TN4N3  | 4.3                    | 4.3    | 4.3    | 4.4    | 4.5    | 28       | 30      | 40      | 42      | 44      |
| LQP03TN4N7  | 4.7                    | 4.7    | 4.8    | 4.9    | 5.1    | 28       | 30      | 40      | 42      | 43      |
| LQP03TN5N1  | 5.1                    | 5.1    | 5.2    | 5.3    | 5.5    | 26       | 28      | 37      | 39      | 40      |
| LQP03TN5N6  | 5.6                    | 5.6    | 5.8    | 5.9    | 6.1    | 22       | 24      | 32      | 33      | 33      |
| LQP03TN6N2  | 6.2                    | 6.2    | 6.5    | 6.6    | 6.9    | 20       | 21      | 27      | 28      | 28      |
| LQP03TN6N8  | 6.8                    | 6.8    | 7.1    | 7.4    | 7.7    | 21       | 22      | 29      | 30      | 30      |
| LQP03TN7N5  | 7.5                    | 7.5    | 7.9    | 8.2    | 8.7    | 21       | 22      | 28      | 30      | 29      |
| LQP03TN8N2  | 8.2                    | 8.2    | 8.6    | 9.1    | 9.6    | 18       | 19      | 25      | 25      | 24      |
| LQP03TN9N1  | 9.1                    | 9.1    | 9.9    | 10     | 11     | 20       | 21      | 26      | 26      | 25      |
| LQP03TN10N  | 10                     | 10     | 11     | 12     | 13     | 21       | 22      | 28      | 28      | 27      |
| LQP03TN12N  | 12                     | 12     | 13     | 14     | 16     | 21       | 22      | 27      | 27      | 25      |
| LQP03TN15N  | 15                     | 15     | 18     | 19     | 23     | 21       | 21      | 25      | 24      | 22      |
| LQP03TN18N  | 18                     | 18     | 24     | -      | -      | 18       | 19      | 20      | -       | -       |
| LQP03TN22N  | 22                     | 23     | 32     | -      | -      | 16       | 17      | 16      | -       | -       |
| LQP03TN27N  | 28                     | 29     | 47     | -      | -      | 15       | 15      | 13      | -       | -       |

## LQP15T Series

The LQP15T series offers High Q value, tight inductance tolerance with small/thin package using Murata's original film engineering technology.

### ■ Features

1. High Q value
2. Tight inductance tolerance (+/-0.1nH, +/-0.2nH, +/-3%)
3. Ultra small and tight size (1005 size, height 0.4mm)
4. Low DC resistance

### ■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general



| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQP15TN1N0B02 | 1.0 ±0.1nH      | 500                  | 300                | 0.1 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N0C02 | 1.0 ±0.2nH      | 500                  | 300                | 0.1 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N1B02 | 1.1 ±0.1nH      | 500                  | 300                | 0.1 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N1C02 | 1.1 ±0.2nH      | 500                  | 300                | 0.1 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N2B02 | 1.2 ±0.1nH      | 500                  | 300                | 0.1 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N2C02 | 1.2 ±0.2nH      | 500                  | 300                | 0.1 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N3B02 | 1.3 ±0.1nH      | 500                  | 300                | 0.15 max.           | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N3C02 | 1.3 ±0.2nH      | 500                  | 300                | 0.15 max.           | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N5B02 | 1.5 ±0.1nH      | 500                  | 300                | 0.15 max.           | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N5C02 | 1.5 ±0.2nH      | 500                  | 300                | 0.15 max.           | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N6B02 | 1.6 ±0.1nH      | 500                  | 250                | 0.15 max.           | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N6C02 | 1.6 ±0.2nH      | 500                  | 250                | 0.15 max.           | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N8B02 | 1.8 ±0.1nH      | 500                  | 250                | 0.15 max.           | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN1N8C02 | 1.8 ±0.2nH      | 500                  | 250                | 0.15 max.           | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN2N0C02 | 2.0 ±0.2nH      | 500                  | 220                | 0.2 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN2N2C02 | 2.2 ±0.2nH      | 500                  | 220                | 0.2 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN2N4C02 | 2.4 ±0.2nH      | 500                  | 220                | 0.2 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN2N7C02 | 2.7 ±0.2nH      | 500                  | 220                | 0.2 max.            | 17       | 500                  | 6000                                  | 0402 |
| LQP15TN3N0C02 | 3.0 ±0.2nH      | 500                  | 190                | 0.3 max.            | 17       | 500                  | 5500                                  | 0402 |
| LQP15TN3N3C02 | 3.3 ±0.2nH      | 500                  | 190                | 0.3 max.            | 17       | 500                  | 5500                                  | 0402 |
| LQP15TN3N6C02 | 3.6 ±0.2nH      | 500                  | 170                | 0.4 max.            | 17       | 500                  | 5500                                  | 0402 |
| LQP15TN3N9C02 | 3.9 ±0.2nH      | 500                  | 170                | 0.4 max.            | 17       | 500                  | 5500                                  | 0402 |
| LQP15TN4N7C02 | 4.7 ±0.2nH      | 500                  | 160                | 0.5 max.            | 17       | 500                  | 5000                                  | 0402 |
| LQP15TN5N6C02 | 5.6 ±0.2nH      | 500                  | 140                | 0.6 max.            | 17       | 500                  | 4500                                  | 0402 |
| LQP15TN6N8H02 | 6.8 ±3%         | 500                  | 130                | 0.7 max.            | 17       | 500                  | 3500                                  | 0402 |
| LQP15TN8N2H02 | 8.2 ±3%         | 500                  | 110                | 0.8 max.            | 17       | 500                  | 3000                                  | 0402 |
| LQP15TN10NH02 | 10 ±3%          | 500                  | 100                | 1.0 max.            | 17       | 500                  | 2500                                  | 0402 |
| LQP15TN12NH02 | 12 ±3%          | 500                  | 90                 | 1.0 max.            | 17       | 500                  | 2500                                  | 0402 |
| LQP15TN15NH02 | 15 ±3%          | 500                  | 90                 | 1.3 max.            | 17       | 500                  | 2000                                  | 0402 |
| LQP15TN18NH02 | 18 ±3%          | 500                  | 80                 | 1.5 max.            | 17       | 500                  | 1500                                  | 0402 |

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

■ Q-Frequency Characteristics



■ Inductance-Frequency Characteristics



## LQP15M Series

### ■ Features

1. Tight inductance tolerance ( $\pm 0.05\text{nH}$ ,  $\pm 0.1\text{nH}$ ,  $\pm 2\%$ ) realized by Murata's original film technology.  
Various inductance values enable assembly with no tuning.
2. Ultra small size 0402 inductor which is low profile and lightest weight in the world enables miniaturizing of mobile telecommunications equipment.  
LQP15M series weights 0.6mg/pc. while multilayer type inductor weights 0.9mg/pc.
3. High Q at high frequency range.
4. High self resonant frequency due to low stray capacitance and narrow inductance distribution provides stable inductance in high frequency circuits such as telecommunications equipment.



### ■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general

| Part Number   | Inductance (nH)         | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-------------------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQP15MN1N0B02 | 1.0 $\pm 0.1\text{nH}$  | 500                  | 400                | 0.1 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N0W02 | 1.0 $\pm 0.05\text{nH}$ | 500                  | 400                | 0.1 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N1B02 | 1.1 $\pm 0.1\text{nH}$  | 500                  | 390                | 0.1 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N1W02 | 1.1 $\pm 0.05\text{nH}$ | 500                  | 390                | 0.1 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N2B02 | 1.2 $\pm 0.1\text{nH}$  | 500                  | 390                | 0.1 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N2W02 | 1.2 $\pm 0.05\text{nH}$ | 500                  | 390                | 0.1 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N3B02 | 1.3 $\pm 0.1\text{nH}$  | 500                  | 280                | 0.2 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N3W02 | 1.3 $\pm 0.05\text{nH}$ | 500                  | 280                | 0.2 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N4W02 | 1.4 $\pm 0.05\text{nH}$ | 500                  | 280                | 0.2 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N5B02 | 1.5 $\pm 0.1\text{nH}$  | 500                  | 280                | 0.2 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N5W02 | 1.5 $\pm 0.05\text{nH}$ | 500                  | 280                | 0.2 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N6B02 | 1.6 $\pm 0.1\text{nH}$  | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N6W02 | 1.6 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N7W02 | 1.7 $\pm 0.05\text{nH}$ | 500                  | 280                | 0.2 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N8B02 | 1.8 $\pm 0.1\text{nH}$  | 500                  | 280                | 0.2 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N8W02 | 1.8 $\pm 0.05\text{nH}$ | 500                  | 280                | 0.2 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN1N9W02 | 1.9 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N0B02 | 2.0 $\pm 0.1\text{nH}$  | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N0W02 | 2.0 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N1W02 | 2.1 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N2B02 | 2.2 $\pm 0.1\text{nH}$  | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N2W02 | 2.2 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N3W02 | 2.3 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N4B02 | 2.4 $\pm 0.1\text{nH}$  | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N4W02 | 2.4 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N5W02 | 2.5 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N6W02 | 2.6 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N7B02 | 2.7 $\pm 0.1\text{nH}$  | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N7W02 | 2.7 $\pm 0.05\text{nH}$ | 500                  | 220                | 0.3 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN2N8W02 | 2.8 $\pm 0.05\text{nH}$ | 500                  | 190                | 0.4 max.            | 13       | 500                  | 6000                                  | 0402 |

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| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQP15MN2N9W02 | 2.9 ±0.05nH     | 500                  | 190                | 0.4 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N0B02 | 3.0 ±0.1nH      | 500                  | 190                | 0.4 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N0W02 | 3.0 ±0.05nH     | 500                  | 190                | 0.4 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N1W02 | 3.1 ±0.05nH     | 500                  | 190                | 0.4 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N2W02 | 3.2 ±0.05nH     | 500                  | 190                | 0.4 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N3B02 | 3.3 ±0.1nH      | 500                  | 190                | 0.4 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N3W02 | 3.3 ±0.05nH     | 500                  | 190                | 0.4 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N4W02 | 3.4 ±0.05nH     | 500                  | 170                | 0.5 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N5W02 | 3.5 ±0.05nH     | 500                  | 170                | 0.5 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N6B02 | 3.6 ±0.1nH      | 500                  | 170                | 0.5 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N6W02 | 3.6 ±0.05nH     | 500                  | 170                | 0.5 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N7W02 | 3.7 ±0.05nH     | 500                  | 170                | 0.5 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N8W02 | 3.8 ±0.05nH     | 500                  | 170                | 0.5 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N9B02 | 3.9 ±0.1nH      | 500                  | 170                | 0.5 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN3N9W02 | 3.9 ±0.05nH     | 500                  | 170                | 0.5 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN4N3B02 | 4.3 ±0.1nH      | 500                  | 160                | 0.6 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN4N7B02 | 4.7 ±0.1nH      | 500                  | 160                | 0.6 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN5N1B02 | 5.1 ±0.1nH      | 500                  | 140                | 0.7 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN5N6B02 | 5.6 ±0.1nH      | 500                  | 140                | 0.7 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN6N2B02 | 6.2 ±0.1nH      | 500                  | 130                | 0.9 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN6N8B02 | 6.8 ±0.1nH      | 500                  | 130                | 0.9 max.            | 13       | 500                  | 6000                                  | 0402 |
| LQP15MN7N5B02 | 7.5 ±0.1nH      | 500                  | 110                | 1.1 max.            | 13       | 500                  | 5500                                  | 0402 |
| LQP15MN8N2B02 | 8.2 ±0.1nH      | 500                  | 110                | 1.1 max.            | 13       | 500                  | 5500                                  | 0402 |
| LQP15MN9N1B02 | 9.1 ±0.1nH      | 500                  | 100                | 1.3 max.            | 13       | 500                  | 4500                                  | 0402 |
| LQP15MN10NG02 | 10 ±2%          | 500                  | 100                | 1.3 max.            | 13       | 500                  | 4500                                  | 0402 |
| LQP15MN12NG02 | 12 ±2%          | 500                  | 90                 | 1.6 max.            | 13       | 500                  | 3700                                  | 0402 |
| LQP15MN15NG02 | 15 ±2%          | 500                  | 90                 | 1.8 max.            | 13       | 500                  | 3300                                  | 0402 |
| LQP15MN18NG02 | 18 ±2%          | 500                  | 80                 | 2.0 max.            | 13       | 500                  | 3100                                  | 0402 |
| LQP15MN22NG02 | 22 ±2%          | 500                  | 70                 | 2.6 max.            | 13       | 500                  | 2800                                  | 0402 |
| LQP15MN27NG02 | 27 ±2%          | 500                  | 70                 | 3.1 max.            | 13       | 500                  | 2500                                  | 0402 |
| LQP15MN33NG02 | 33 ±2%          | 500                  | 60                 | 3.8 max.            | 13       | 500                  | 2100                                  | 0402 |

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

Q-Frequency Characteristics



Inductance-Frequency Characteristics



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## ■ Reference Data

E4991A+16197A

| Part Number | Inductance (nH) (Typ.) |        |        |        |        | Q (Typ.) |        |        |        |        |
|-------------|------------------------|--------|--------|--------|--------|----------|--------|--------|--------|--------|
|             | 800MHz                 | 900MHz | 1.8GHz | 2.0GHz | 2.4GHz | 800MHz   | 900MHz | 1.8GHz | 2.0GHz | 2.4GHz |
| LQP15MN1N0  | 1.0                    | 1.0    | 1.0    | 1.0    | 1.0    | 50       | 55     | 73     | 76     | 85     |
| LQP15MN1N1  | 1.1                    | 1.1    | 1.1    | 1.1    | 1.1    | 44       | 47     | 70     | 76     | 83     |
| LQP15MN1N2  | 1.2                    | 1.2    | 1.2    | 1.2    | 1.2    | 43       | 47     | 69     | 76     | 82     |
| LQP15MN1N3  | 1.3                    | 1.3    | 1.3    | 1.3    | 1.3    | 39       | 43     | 56     | 60     | 65     |
| LQP15MN1N4  | 1.4                    | 1.4    | 1.4    | 1.4    | 1.4    | 39       | 41     | 51     | 54     | 58     |
| LQP15MN1N5  | 1.5                    | 1.5    | 1.5    | 1.5    | 1.5    | 38       | 40     | 49     | 51     | 54     |
| LQP15MN1N6  | 1.6                    | 1.6    | 1.6    | 1.6    | 1.6    | 26       | 28     | 37     | 39     | 42     |
| LQP15MN1N7  | 1.7                    | 1.7    | 1.7    | 1.7    | 1.7    | 37       | 40     | 48     | 49     | 53     |
| LQP15MN1N8  | 1.8                    | 1.8    | 1.8    | 1.8    | 1.8    | 35       | 37     | 46     | 49     | 52     |
| LQP15MN1N9  | 1.9                    | 1.9    | 1.9    | 1.9    | 1.9    | 34       | 36     | 46     | 49     | 52     |
| LQP15MN2N0  | 2.0                    | 2.0    | 2.0    | 2.0    | 2.0    | 34       | 36     | 47     | 50     | 53     |
| LQP15MN2N1  | 2.1                    | 2.1    | 2.1    | 2.1    | 2.1    | 35       | 37     | 47     | 49     | 53     |
| LQP15MN2N2  | 2.2                    | 2.2    | 2.2    | 2.2    | 2.2    | 36       | 38     | 48     | 51     | 56     |
| LQP15MN2N3  | 2.3                    | 2.3    | 2.3    | 2.3    | 2.3    | 36       | 38     | 47     | 49     | 53     |
| LQP15MN2N4  | 2.4                    | 2.4    | 2.4    | 2.4    | 2.4    | 35       | 37     | 47     | 49     | 52     |
| LQP15MN2N5  | 2.5                    | 2.5    | 2.5    | 2.5    | 2.5    | 35       | 37     | 47     | 49     | 53     |
| LQP15MN2N6  | 2.6                    | 2.6    | 2.6    | 2.6    | 2.6    | 35       | 37     | 47     | 49     | 52     |
| LQP15MN2N7  | 2.7                    | 2.7    | 2.7    | 2.7    | 2.7    | 35       | 37     | 48     | 49     | 53     |
| LQP15MN2N8  | 2.8                    | 2.8    | 2.8    | 2.8    | 2.8    | 35       | 37     | 47     | 49     | 53     |
| LQP15MN2N9  | 2.9                    | 2.9    | 2.9    | 2.9    | 2.9    | 33       | 35     | 44     | 46     | 49     |
| LQP15MN3N0  | 3.0                    | 3.0    | 3.0    | 3.0    | 3.0    | 29       | 31     | 41     | 44     | 48     |
| LQP15MN3N1  | 3.1                    | 3.1    | 3.1    | 3.1    | 3.1    | 28       | 29     | 39     | 42     | 45     |
| LQP15MN3N2  | 3.2                    | 3.2    | 3.2    | 3.2    | 3.2    | 27       | 28     | 35     | 36     | 38     |
| LQP15MN3N3  | 3.3                    | 3.3    | 3.3    | 3.3    | 3.4    | 28       | 29     | 38     | 39     | 43     |
| LQP15MN3N4  | 3.4                    | 3.4    | 3.4    | 3.4    | 3.5    | 28       | 29     | 37     | 39     | 41     |
| LQP15MN3N5  | 3.5                    | 3.5    | 3.5    | 3.5    | 3.6    | 28       | 29     | 37     | 38     | 40     |
| LQP15MN3N6  | 3.6                    | 3.6    | 3.6    | 3.7    | 3.7    | 27       | 28     | 35     | 39     | 41     |
| LQP15MN3N7  | 3.7                    | 3.7    | 3.7    | 3.8    | 3.8    | 27       | 28     | 35     | 38     | 41     |
| LQP15MN3N8  | 3.8                    | 3.8    | 3.8    | 3.9    | 3.9    | 28       | 29     | 38     | 39     | 42     |
| LQP15MN3N9  | 3.9                    | 3.9    | 3.9    | 4.0    | 4.0    | 28       | 29     | 37     | 38     | 41     |
| LQP15MN4N3  | 4.3                    | 4.3    | 4.3    | 4.4    | 4.5    | 28       | 30     | 38     | 40     | 42     |
| LQP15MN4N7  | 4.7                    | 4.7    | 4.8    | 4.9    | 5.1    | 28       | 29     | 38     | 39     | 41     |
| LQP15MN5N1  | 5.1                    | 5.1    | 5.2    | 5.3    | 5.5    | 26       | 28     | 36     | 38     | 40     |
| LQP15MN5N6  | 5.6                    | 5.6    | 5.8    | 6.0    | 6.2    | 23       | 25     | 32     | 33     | 34     |
| LQP15MN6N2  | 6.2                    | 6.2    | 6.5    | 6.6    | 6.9    | 23       | 25     | 32     | 33     | 34     |
| LQP15MN6N8  | 6.8                    | 6.8    | 7.1    | 7.4    | 7.7    | 24       | 26     | 33     | 34     | 35     |
| LQP15MN7N5  | 7.5                    | 7.5    | 7.9    | 8.2    | 8.6    | 24       | 25     | 32     | 33     | 34     |
| LQP15MN8N2  | 8.2                    | 8.2    | 8.7    | 9.0    | 9.5    | 24       | 25     | 32     | 33     | 34     |
| LQP15MN9N1  | 9.1                    | 9.1    | 9.8    | 10     | 11     | 23       | 25     | 31     | 32     | 33     |
| LQP15MN10N  | 10                     | 10     | 11     | 12     | 13     | 24       | 26     | 30     | 31     | 31     |
| LQP15MN12N  | 12                     | 12     | 13     | 14     | 16     | 25       | 26     | 29     | 29     | 28     |
| LQP15MN15N  | 15                     | 15     | 18     | 19     | 23     | 23       | 25     | 26     | 27     | 25     |
| LQP15MN18N  | 18                     | 18     | 23     | -      | -      | 22       | 23     | 24     | -      | -      |
| LQP15MN22N  | 22                     | 23     | 29     | -      | -      | 22       | 23     | 22     | -      | -      |
| LQP15MN27N  | 28                     | 28     | 38     | -      | -      | 22       | 23     | 21     | -      | -      |
| LQP15MN33N  | 34                     | 35     | -      | -      | -      | 21       | 22     | -      | -      | -      |

## LQP18M Series

### ■ Features

1. Tight inductance tolerance ( $\pm 0.2\text{nH}$ ,  $\pm 2\%$ ) realized by Murata's original film technology. Various inductance values enable assembly with no tuning.
2. Small size of LQP18M series is suitable for small hand held equipment, especially for card size equipment.
3. High Q at high frequency range
4. High self resonant frequency due to low stray capacitance and narrow inductance distribution provides stable inductance in high frequency circuits such as telecommunications equipment.



### ■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general

| Part Number   | Inductance (nH)        | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|------------------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQP18MN1N3C02 | 1.3 $\pm 0.2\text{nH}$ | 500                  | 300                | 0.3 max.            | 17       | 500                  | 6000                                  | 0603 |
| LQP18MN1N5C02 | 1.5 $\pm 0.2\text{nH}$ | 500                  | 300                | 0.3 max.            | 17       | 500                  | 6000                                  | 0603 |
| LQP18MN1N8C02 | 1.8 $\pm 0.2\text{nH}$ | 500                  | 250                | 0.4 max.            | 17       | 500                  | 6000                                  | 0603 |
| LQP18MN2N2C02 | 2.2 $\pm 0.2\text{nH}$ | 500                  | 250                | 0.4 max.            | 17       | 500                  | 6000                                  | 0603 |
| LQP18MN2N7C02 | 2.7 $\pm 0.2\text{nH}$ | 500                  | 250                | 0.4 max.            | 17       | 500                  | 6000                                  | 0603 |
| LQP18MN3N3C02 | 3.3 $\pm 0.2\text{nH}$ | 500                  | 250                | 0.4 max.            | 17       | 500                  | 6000                                  | 0603 |
| LQP18MN3N9C02 | 3.9 $\pm 0.2\text{nH}$ | 500                  | 200                | 0.5 max.            | 17       | 500                  | 5900                                  | 0603 |
| LQP18MN4N7C02 | 4.7 $\pm 0.2\text{nH}$ | 500                  | 200                | 0.5 max.            | 17       | 500                  | 5200                                  | 0603 |
| LQP18MN5N6C02 | 5.6 $\pm 0.2\text{nH}$ | 500                  | 200                | 0.6 max.            | 17       | 500                  | 4700                                  | 0603 |
| LQP18MN6N8C02 | 6.8 $\pm 0.2\text{nH}$ | 500                  | 200                | 0.7 max.            | 17       | 500                  | 4300                                  | 0603 |
| LQP18MN8N2C02 | 8.2 $\pm 0.2\text{nH}$ | 500                  | 150                | 0.8 max.            | 17       | 500                  | 3600                                  | 0603 |
| LQP18MN10NG02 | 10 $\pm 2\%$           | 500                  | 150                | 1.0 max.            | 17       | 500                  | 3400                                  | 0603 |
| LQP18MN12NG02 | 12 $\pm 2\%$           | 500                  | 150                | 1.0 max.            | 17       | 500                  | 3000                                  | 0603 |
| LQP18MN15NG02 | 15 $\pm 2\%$           | 500                  | 150                | 1.3 max.            | 17       | 500                  | 2700                                  | 0603 |
| LQP18MN18NG02 | 18 $\pm 2\%$           | 500                  | 100                | 1.5 max.            | 17       | 500                  | 2300                                  | 0603 |
| LQP18MN22NG02 | 22 $\pm 2\%$           | 500                  | 100                | 1.9 max.            | 17       | 500                  | 2100                                  | 0603 |
| LQP18MN27NG02 | 27 $\pm 2\%$           | 500                  | 100                | 2.4 max.            | 17       | 500                  | 1900                                  | 0603 |
| LQP18MN33NG02 | 33 $\pm 2\%$           | 500                  | 100                | 2.8 max.            | 17       | 500                  | 1700                                  | 0603 |
| LQP18MN39NG02 | 39 $\pm 2\%$           | 500                  | 100                | 2.8 max.            | 17       | 500                  | 1400                                  | 0603 |
| LQP18MN47NG02 | 47 $\pm 2\%$           | 300                  | 100                | 2.2 max.            | 17       | 300                  | 1200                                  | 0603 |
| LQP18MN56NG02 | 56 $\pm 2\%$           | 300                  | 50                 | 3.4 max.            | 17       | 300                  | 1000                                  | 0603 |
| LQP18MN68NG02 | 68 $\pm 2\%$           | 300                  | 50                 | 3.5 max.            | 17       | 300                  | 900                                   | 0603 |
| LQP18MN82NG02 | 82 $\pm 2\%$           | 300                  | 50                 | 4.6 max.            | 17       | 300                  | 800                                   | 0603 |
| LQP18MNR10G02 | 100 $\pm 2\%$          | 300                  | 50                 | 6.1 max.            | 17       | 300                  | 700                                   | 0603 |

Operating Temp. Range:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$   
Only for reflow soldering.

■ Q-Frequency Characteristics



■ Inductance-Frequency Characteristics



# Chip Coils



## High Frequency Wound Type LQW15A/LQW18A Series

### LQW15A\_00 Series

The LQW15A series consists of air core chip coil using a miniature alumina core.  
The tight inductance tolerance ( $\pm 0.2\text{nH}$ ,  $\pm 3\%$ ) is available due to Murata's original wound technology.  
The LQW15A series has high Q value in high frequency range and high self resonant frequency. It is suitable for high frequency circuits which are used in telecommunications equipment.



### ■ Features

1. Horizontal wound structure enables tight inductance tolerance ( $\pm 0.2\text{nH}$ ,  $\pm 3\%$ )  
And tolerance of  $\pm 0.1\text{nH}$ ,  $\pm 2\%$  is available.
2. Wide variation in inductance value.
3. The subminiature dimensions (1.0x0.5mm) allow high density mounting.
4. The high self resonant frequency realizes high Q value and stable inductance at high frequency.
5. Low DC resistance design is ideal for low loss, high output and low power consumption.
6. Resin-coated surface enables excellent mounting.

### ■ Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. "Bluetooth"
4. W-LAN
5. High frequency circuits in general

| Part Number   | Inductance (nH)        | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (GHz) | EIA  |
|---------------|------------------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW15AN1N5B00 | 1.5 $\pm 0.1\text{nH}$ | 100                  | 1000               | 0.03 max.           | 10       | 250                  | 18.0                                  | 0402 |
| LQW15AN1N5C00 | 1.5 $\pm 0.2\text{nH}$ | 100                  | 1000               | 0.03 max.           | 10       | 250                  | 18.0                                  | 0402 |
| LQW15AN1N5D00 | 1.5 $\pm 0.5\text{nH}$ | 100                  | 1000               | 0.03 max.           | 10       | 250                  | 18.0                                  | 0402 |
| LQW15AN2N4B00 | 2.4 $\pm 0.1\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N4C00 | 2.4 $\pm 0.2\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N4D00 | 2.4 $\pm 0.5\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N5B00 | 2.5 $\pm 0.1\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N5C00 | 2.5 $\pm 0.2\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N5D00 | 2.5 $\pm 0.5\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N7B00 | 2.7 $\pm 0.1\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N7C00 | 2.7 $\pm 0.2\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N7D00 | 2.7 $\pm 0.5\text{nH}$ | 100                  | 850                | 0.05 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N9B00 | 2.9 $\pm 0.1\text{nH}$ | 100                  | 750                | 0.07 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N9C00 | 2.9 $\pm 0.2\text{nH}$ | 100                  | 750                | 0.07 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN2N9D00 | 2.9 $\pm 0.5\text{nH}$ | 100                  | 750                | 0.07 max.           | 20       | 250                  | 15.0                                  | 0402 |
| LQW15AN3N9B00 | 3.9 $\pm 0.1\text{nH}$ | 100                  | 750                | 0.07 max.           | 25       | 250                  | 10.0                                  | 0402 |
| LQW15AN3N9C00 | 3.9 $\pm 0.2\text{nH}$ | 100                  | 750                | 0.07 max.           | 25       | 250                  | 10.0                                  | 0402 |
| LQW15AN3N9D00 | 3.9 $\pm 0.5\text{nH}$ | 100                  | 750                | 0.07 max.           | 25       | 250                  | 10.0                                  | 0402 |

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| Part Number   | Inductance<br>(nH) | Test Frequency<br>(MHz) | Rated<br>Current<br>(mA) | DC Resistance<br>(ohm) | Q<br>(min.) | Test Frequency<br>(MHz) | Self Resonance<br>Frequency (min.)<br>(GHz) | EIA  |
|---------------|--------------------|-------------------------|--------------------------|------------------------|-------------|-------------------------|---------------------------------------------|------|
| LQW15AN4N1B00 | 4.1 ±0.1nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 10.0                                        | 0402 |
| LQW15AN4N1C00 | 4.1 ±0.2nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 10.0                                        | 0402 |
| LQW15AN4N1D00 | 4.1 ±0.5nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 10.0                                        | 0402 |
| LQW15AN4N3B00 | 4.3 ±0.1nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 10.0                                        | 0402 |
| LQW15AN4N3C00 | 4.3 ±0.2nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 10.0                                        | 0402 |
| LQW15AN4N3D00 | 4.3 ±0.5nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 10.0                                        | 0402 |
| LQW15AN4N7B00 | 4.7 ±0.1nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN4N7C00 | 4.7 ±0.2nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN4N7D00 | 4.7 ±0.5nH         | 100                     | 750                      | 0.07 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN5N1B00 | 5.1 ±0.1nH         | 100                     | 600                      | 0.12 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN5N1C00 | 5.1 ±0.2nH         | 100                     | 600                      | 0.12 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN5N1D00 | 5.1 ±0.5nH         | 100                     | 600                      | 0.12 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN5N8B00 | 5.8 ±0.1nH         | 100                     | 700                      | 0.12 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN5N8C00 | 5.8 ±0.2nH         | 100                     | 700                      | 0.12 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN5N8D00 | 5.8 ±0.5nH         | 100                     | 700                      | 0.12 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN6N2B00 | 6.2 ±0.1nH         | 100                     | 700                      | 0.09 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN6N2C00 | 6.2 ±0.2nH         | 100                     | 700                      | 0.09 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN6N2D00 | 6.2 ±0.5nH         | 100                     | 700                      | 0.09 max.              | 25          | 250                     | 8.0                                         | 0402 |
| LQW15AN6N8G00 | 6.8 ±2%            | 100                     | 700                      | 0.09 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN6N8H00 | 6.8 ±3%            | 100                     | 700                      | 0.09 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN6N8J00 | 6.8 ±5%            | 100                     | 700                      | 0.09 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN7N3G00 | 7.3 ±2%            | 100                     | 570                      | 0.13 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN7N3H00 | 7.3 ±3%            | 100                     | 570                      | 0.13 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN7N3J00 | 7.3 ±5%            | 100                     | 570                      | 0.13 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN7N5G00 | 7.5 ±2%            | 100                     | 570                      | 0.13 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN7N5H00 | 7.5 ±3%            | 100                     | 570                      | 0.13 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN7N5J00 | 7.5 ±5%            | 100                     | 570                      | 0.13 max.              | 25          | 250                     | 6.0                                         | 0402 |
| LQW15AN8N2G00 | 8.2 ±2%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN8N2H00 | 8.2 ±3%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN8N2J00 | 8.2 ±5%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN8N7G00 | 8.7 ±2%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN8N7H00 | 8.7 ±3%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN8N7J00 | 8.7 ±5%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN9N1G00 | 9.1 ±2%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN9N1H00 | 9.1 ±3%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN9N1J00 | 9.1 ±5%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN9N5G00 | 9.5 ±2%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN9N5H00 | 9.5 ±3%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN9N5J00 | 9.5 ±5%            | 100                     | 540                      | 0.14 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN10NG00 | 10 ±2%             | 100                     | 500                      | 0.17 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN10NH00 | 10 ±3%             | 100                     | 500                      | 0.17 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN10NJ00 | 10 ±5%             | 100                     | 500                      | 0.17 max.              | 25          | 250                     | 5.5                                         | 0402 |
| LQW15AN11NG00 | 11 ±2%             | 100                     | 500                      | 0.14 max.              | 30          | 250                     | 5.5                                         | 0402 |
| LQW15AN11NH00 | 11 ±3%             | 100                     | 500                      | 0.14 max.              | 30          | 250                     | 5.5                                         | 0402 |
| LQW15AN11NJ00 | 11 ±5%             | 100                     | 500                      | 0.14 max.              | 30          | 250                     | 5.5                                         | 0402 |
| LQW15AN12NG00 | 12 ±2%             | 100                     | 500                      | 0.14 max.              | 30          | 250                     | 5.5                                         | 0402 |
| LQW15AN12NH00 | 12 ±3%             | 100                     | 500                      | 0.14 max.              | 30          | 250                     | 5.5                                         | 0402 |
| LQW15AN12NJ00 | 12 ±5%             | 100                     | 500                      | 0.14 max.              | 30          | 250                     | 5.5                                         | 0402 |
| LQW15AN13NG00 | 13 ±2%             | 100                     | 430                      | 0.21 max.              | 25          | 250                     | 5.0                                         | 0402 |
| LQW15AN13NH00 | 13 ±3%             | 100                     | 430                      | 0.21 max.              | 25          | 250                     | 5.0                                         | 0402 |
| LQW15AN13NJ00 | 13 ±5%             | 100                     | 430                      | 0.21 max.              | 25          | 250                     | 5.0                                         | 0402 |
| LQW15AN15NG00 | 15 ±2%             | 100                     | 460                      | 0.16 max.              | 30          | 250                     | 5.0                                         | 0402 |
| LQW15AN15NH00 | 15 ±3%             | 100                     | 460                      | 0.16 max.              | 30          | 250                     | 5.0                                         | 0402 |
| LQW15AN15NJ00 | 15 ±5%             | 100                     | 460                      | 0.16 max.              | 30          | 250                     | 5.0                                         | 0402 |
| LQW15AN16NG00 | 16 ±2%             | 100                     | 370                      | 0.24 max.              | 25          | 250                     | 4.5                                         | 0402 |
| LQW15AN16NH00 | 16 ±3%             | 100                     | 370                      | 0.24 max.              | 25          | 250                     | 4.5                                         | 0402 |
| LQW15AN16NJ00 | 16 ±5%             | 100                     | 370                      | 0.24 max.              | 25          | 250                     | 4.5                                         | 0402 |

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| Part Number   | Inductance<br>(nH) | Test Frequency<br>(MHz) | Rated<br>Current<br>(mA) | DC Resistance<br>(ohm) | Q<br>(min.) | Test Frequency<br>(MHz) | Self Resonance<br>Frequency (min.)<br>(GHz) | EIA  |
|---------------|--------------------|-------------------------|--------------------------|------------------------|-------------|-------------------------|---------------------------------------------|------|
| LQW15AN18NG00 | 18 ±2%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.5                                         | 0402 |
| LQW15AN18NH00 | 18 ±3%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.5                                         | 0402 |
| LQW15AN18NJ00 | 18 ±5%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.5                                         | 0402 |
| LQW15AN19NG00 | 19 ±2%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.5                                         | 0402 |
| LQW15AN19NH00 | 19 ±3%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.5                                         | 0402 |
| LQW15AN19NJ00 | 19 ±5%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.5                                         | 0402 |
| LQW15AN20NG00 | 20 ±2%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.0                                         | 0402 |
| LQW15AN20NH00 | 20 ±3%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.0                                         | 0402 |
| LQW15AN20NJ00 | 20 ±5%             | 100                     | 370                      | 0.27 max.              | 25          | 250                     | 4.0                                         | 0402 |
| LQW15AN22NG00 | 22 ±2%             | 100                     | 310                      | 0.30 max.              | 25          | 250                     | 4.0                                         | 0402 |
| LQW15AN22NH00 | 22 ±3%             | 100                     | 310                      | 0.30 max.              | 25          | 250                     | 4.0                                         | 0402 |
| LQW15AN22NJ00 | 22 ±5%             | 100                     | 310                      | 0.30 max.              | 25          | 250                     | 4.0                                         | 0402 |
| LQW15AN23NG00 | 23 ±2%             | 100                     | 310                      | 0.30 max.              | 25          | 250                     | 3.8                                         | 0402 |
| LQW15AN23NH00 | 23 ±3%             | 100                     | 310                      | 0.30 max.              | 25          | 250                     | 3.8                                         | 0402 |
| LQW15AN23NJ00 | 23 ±5%             | 100                     | 310                      | 0.30 max.              | 25          | 250                     | 3.8                                         | 0402 |
| LQW15AN24NG00 | 24 ±2%             | 100                     | 280                      | 0.52 max.              | 25          | 250                     | 3.5                                         | 0402 |
| LQW15AN24NH00 | 24 ±3%             | 100                     | 280                      | 0.52 max.              | 25          | 250                     | 3.5                                         | 0402 |
| LQW15AN24NJ00 | 24 ±5%             | 100                     | 280                      | 0.52 max.              | 25          | 250                     | 3.5                                         | 0402 |
| LQW15AN27NG00 | 27 ±2%             | 100                     | 280                      | 0.52 max.              | 25          | 250                     | 3.5                                         | 0402 |
| LQW15AN27NH00 | 27 ±3%             | 100                     | 280                      | 0.52 max.              | 25          | 250                     | 3.5                                         | 0402 |
| LQW15AN27NJ00 | 27 ±5%             | 100                     | 280                      | 0.52 max.              | 25          | 250                     | 3.5                                         | 0402 |
| LQW15AN30NG00 | 30 ±2%             | 100                     | 270                      | 0.58 max.              | 25          | 250                     | 3.3                                         | 0402 |
| LQW15AN30NH00 | 30 ±3%             | 100                     | 270                      | 0.58 max.              | 25          | 250                     | 3.3                                         | 0402 |
| LQW15AN30NJ00 | 30 ±5%             | 100                     | 270                      | 0.58 max.              | 25          | 250                     | 3.3                                         | 0402 |
| LQW15AN33NG00 | 33 ±2%             | 100                     | 260                      | 0.63 max.              | 25          | 250                     | 3.2                                         | 0402 |
| LQW15AN33NH00 | 33 ±3%             | 100                     | 260                      | 0.63 max.              | 25          | 250                     | 3.2                                         | 0402 |
| LQW15AN33NJ00 | 33 ±5%             | 100                     | 260                      | 0.63 max.              | 25          | 250                     | 3.2                                         | 0402 |
| LQW15AN36NG00 | 36 ±2%             | 100                     | 260                      | 0.63 max.              | 25          | 250                     | 3.1                                         | 0402 |
| LQW15AN36NH00 | 36 ±3%             | 100                     | 260                      | 0.63 max.              | 25          | 250                     | 3.1                                         | 0402 |
| LQW15AN36NJ00 | 36 ±5%             | 100                     | 260                      | 0.63 max.              | 25          | 250                     | 3.1                                         | 0402 |
| LQW15AN39NG00 | 39 ±2%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN39NH00 | 39 ±3%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN39NJ00 | 39 ±5%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN40NG00 | 40 ±2%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN40NH00 | 40 ±3%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN40NJ00 | 40 ±5%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN43NG00 | 43 ±2%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN43NH00 | 43 ±3%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN43NJ00 | 43 ±5%             | 100                     | 250                      | 0.70 max.              | 25          | 250                     | 3.0                                         | 0402 |
| LQW15AN47NG00 | 47 ±2%             | 100                     | 210                      | 1.08 max.              | 25          | 200                     | 2.9                                         | 0402 |
| LQW15AN47NH00 | 47 ±3%             | 100                     | 210                      | 1.08 max.              | 25          | 200                     | 2.9                                         | 0402 |
| LQW15AN47NJ00 | 47 ±5%             | 100                     | 210                      | 1.08 max.              | 25          | 200                     | 2.9                                         | 0402 |
| LQW15AN51NG00 | 51 ±2%             | 100                     | 210                      | 1.08 max.              | 25          | 200                     | 2.85                                        | 0402 |
| LQW15AN51NH00 | 51 ±3%             | 100                     | 210                      | 1.08 max.              | 25          | 200                     | 2.85                                        | 0402 |
| LQW15AN51NJ00 | 51 ±5%             | 100                     | 210                      | 1.08 max.              | 25          | 200                     | 2.85                                        | 0402 |
| LQW15AN56NG00 | 56 ±2%             | 100                     | 200                      | 1.17 max.              | 25          | 200                     | 2.8                                         | 0402 |
| LQW15AN56NH00 | 56 ±3%             | 100                     | 200                      | 1.17 max.              | 25          | 200                     | 2.8                                         | 0402 |
| LQW15AN56NJ00 | 56 ±5%             | 100                     | 200                      | 1.17 max.              | 25          | 200                     | 2.8                                         | 0402 |
| LQW15AN62NG00 | 62 ±2%             | 100                     | 145                      | 1.82 max.              | 20          | 200                     | 2.6                                         | 0402 |
| LQW15AN62NH00 | 62 ±3%             | 100                     | 145                      | 1.82 max.              | 20          | 200                     | 2.6                                         | 0402 |
| LQW15AN62NJ00 | 62 ±5%             | 100                     | 145                      | 1.82 max.              | 20          | 200                     | 2.6                                         | 0402 |
| LQW15AN68NG00 | 68 ±2%             | 100                     | 140                      | 1.96 max.              | 20          | 200                     | 2.5                                         | 0402 |
| LQW15AN68NJ00 | 68 ±5%             | 100                     | 140                      | 1.96 max.              | 20          | 200                     | 2.5                                         | 0402 |
| LQW15AN72NG00 | 72 ±2%             | 100                     | 135                      | 2.10 max.              | 20          | 150                     | 2.5                                         | 0402 |
| LQW15AN72NJ00 | 72 ±5%             | 100                     | 135                      | 2.10 max.              | 20          | 150                     | 2.5                                         | 0402 |
| LQW15AN75NG00 | 75 ±2%             | 100                     | 135                      | 2.10 max.              | 20          | 150                     | 2.4                                         | 0402 |
| LQW15AN75NJ00 | 75 ±5%             | 100                     | 135                      | 2.10 max.              | 20          | 150                     | 2.4                                         | 0402 |

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| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (GHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW15AN82NG00 | 82 ±2%          | 100                  | 130                | 2.24 max.           | 20       | 150                  | 2.3                                   | 0402 |
| LQW15AN82NJ00 | 82 ±5%          | 100                  | 130                | 2.24 max.           | 20       | 150                  | 2.3                                   | 0402 |
| LQW15AN91NG00 | 91 ±2%          | 100                  | 125                | 2.38 max.           | 20       | 150                  | 2.1                                   | 0402 |
| LQW15AN91NJ00 | 91 ±5%          | 100                  | 125                | 2.38 max.           | 20       | 150                  | 2.1                                   | 0402 |
| LQW15ANR10J00 | 100 ±5%         | 100                  | 120                | 2.52 max.           | 20       | 150                  | 1.5                                   | 0402 |
| LQW15ANR12J00 | 120 ±5%         | 100                  | 110                | 2.66 max.           | 20       | 150                  | 1.0                                   | 0402 |

Operating Temp. Range: -55°C to +125°C  
Only for reflow soldering.

■ Q-Frequency Characteristics



■ Inductance-Frequency Characteristics



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## ■ Reference Data

### LQW15AN 00

E4991A & 16197A

| Part Number | Inductance (nH) | Q (Typ.) |        |        |        |        |        |        |
|-------------|-----------------|----------|--------|--------|--------|--------|--------|--------|
|             | Nominal         | 300MHz   | 800MHz | 900MHz | 1.5GHz | 1.8GHz | 2.0GHz | 2.4GHz |
| LQW15AN1N5  | 1.5             | 30       | 55     | 60     | 65     | 90     | 100    | 115    |
| LQW15AN2N4  | 2.4             | 40       | 65     | 67     | 80     | 98     | 108    | 120    |
| LQW15AN2N5  | 2.5             | 40       | 65     | 67     | 88     | 90     | 100    | 110    |
| LQW15AN2N7  | 2.7             | 40       | 67     | 73     | 85     | 100    | 105    | 120    |
| LQW15AN2N9  | 2.9             | 33       | 53     | 58     | 75     | 80     | 85     | 92     |
| LQW15AN3N9  | 3.9             | 35       | 58     | 61     | 82     | 88     | 92     | 100    |
| LQW15AN4N1  | 4.1             | 35       | 58     | 61     | 82     | 88     | 92     | 100    |
| LQW15AN4N3  | 4.3             | 35       | 58     | 61     | 90     | 88     | 92     | 100    |
| LQW15AN4N7  | 4.7             | 40       | 65     | 67     | 85     | 88     | 92     | 95     |
| LQW15AN5N1  | 5.1             | 35       | 60     | 65     | 78     | 85     | 90     | 95     |
| LQW15AN5N8  | 5.8             | 40       | 63     | 67     | 85     | 88     | 92     | 105    |
| LQW15AN6N2  | 6.2             | 40       | 63     | 65     | 80     | 90     | 95     | 105    |
| LQW15AN6N8  | 6.8             | 45       | 70     | 72     | 90     | 96     | 100    | 103    |
| LQW15AN7N3  | 7.3             | 38       | 58     | 63     | 75     | 88     | 90     | 92     |
| LQW15AN7N5  | 7.5             | 38       | 58     | 63     | 75     | 88     | 90     | 92     |
| LQW15AN8N2  | 8.2             | 40       | 62     | 67     | 80     | 90     | 95     | 102    |
| LQW15AN8N7  | 8.7             | 40       | 60     | 62     | 80     | 85     | 90     | 92     |
| LQW15AN9N1  | 9.1             | 40       | 62     | 68     | 85     | 90     | 92     | 95     |
| LQW15AN9N5  | 9.5             | 40       | 62     | 68     | 85     | 90     | 92     | 95     |
| LQW15AN10N  | 10              | 38       | 60     | 65     | 75     | 82     | 85     | 84     |
| LQW15AN11N  | 11              | 40       | 65     | 70     | 90     | 105    | 110    | 120    |
| LQW15AN12N  | 12              | 40       | 60     | 62     | 80     | 85     | 90     | 91     |
| LQW15AN13N  | 13              | 40       | 60     | 62     | 70     | 72     | 71     | 67     |
| LQW15AN15N  | 15              | 40       | 60     | 65     | 80     | 85     | 88     | 90     |
| LQW15AN16N  | 16              | 40       | 60     | 63     | 80     | 90     | 100    | 110    |
| LQW15AN18N  | 18              | 40       | 63     | 65     | 80     | 88     | 87     | 85     |
| LQW15AN19N  | 19              | 37       | 57     | 62     | 78     | 80     | 82     | 83     |
| LQW15AN20N  | 20              | 37       | 57     | 62     | 78     | 80     | 82     | 83     |
| LQW15AN22N  | 22              | 35       | 55     | 58     | 73     | 75     | 78     | -      |
| LQW15AN23N  | 23              | 35       | 55     | 58     | 73     | 75     | 78     | -      |
| LQW15AN24N  | 24              | 35       | 50     | 50     | 48     | 42     | -      | -      |
| LQW15AN27N  | 27              | 35       | 55     | 56     | 60     | 58     | -      | -      |
| LQW15AN30N  | 30              | 35       | 55     | 58     | 65     | 68     | -      | -      |
| LQW15AN33N  | 33              | 35       | 55     | 56     | 60     | 53     | -      | -      |
| LQW15AN36N  | 36              | 35       | 52     | 52     | 48     | 42     | -      | -      |
| LQW15AN39N  | 39              | 35       | 55     | 56     | 62     | -      | -      | -      |
| LQW15AN40N  | 40              | 35       | 55     | 56     | 62     | -      | -      | -      |
| LQW15AN43N  | 43              | 35       | 55     | 56     | 62     | -      | -      | -      |
| LQW15AN47N  | 47              | 34       | 52     | 54     | 60     | -      | -      | -      |
| LQW15AN51N  | 51              | 34       | 52     | 54     | 60     | -      | -      | -      |
| LQW15AN56N  | 56              | 36       | 53     | 55     | 50     | -      | -      | -      |
| LQW15AN62N  | 62              | 33       | 51     | 52     | -      | -      | -      | -      |
| LQW15AN68N  | 68              | 35       | 49     | 52     | -      | -      | -      | -      |
| LQW15AN72N  | 72              | 33       | 49     | 52     | -      | -      | -      | -      |
| LQW15AN75N  | 75              | 33       | 49     | 52     | -      | -      | -      | -      |
| LQW15AN82N  | 82              | 35       | 49     | 50     | -      | -      | -      | -      |
| LQW15AN91N  | 91              | 35       | 52     | 53     | -      | -      | -      | -      |
| LQW15ANR10  | 100             | 30       | 43     | 43     | -      | -      | -      | -      |
| LQW15ANR12  | 120             | 28       | 30     | 23     | -      | -      | -      | -      |

## LQW15A\_10 Series (High Q/Low DC Resistance Type)

### ■ Features

Lower DC resistance approximately by 50% than current type. Higher Q by 20%, larger rated current by 20%.

Inductance range: 1.3 to 5.6nH

Inductance tolerance:  $\pm 0.2$  or  $0.5\text{nH}$

Q (Typ.): 83 to 122 (at 1GHz)

DC Resistance: 0.017 to 0.051 ohm

Rated Current: 800 to 1200mA



(in mm)

### ■ Applications

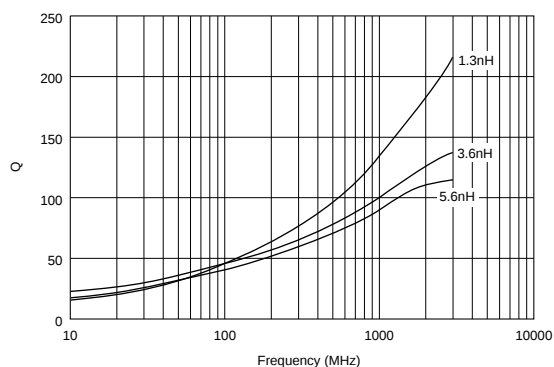
1. Cellular phone and Base station
2. W-CDMA, GSM, N-CDMA, PDC
3. Higher Q -- Matching circuit for antenna, SAWFIL
4. Lower Rdc -- Choke coil for IF, RF circuit like PA  
Equipment with high frequency circuits  
(Wireless LAN, etc.)

| Part Number   | Inductance (nH)        | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (GHz) | EIA  |
|---------------|------------------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW15AN1N3C10 | $1.3 \pm 0.2\text{nH}$ | 100                  | 1200               | 0.017 max.          | 20       | 250                  | 16.0                                  | 0402 |
| LQW15AN1N3D10 | $1.3 \pm 0.5\text{nH}$ | 100                  | 1200               | 0.017 max.          | 20       | 250                  | 16.0                                  | 0402 |
| LQW15AN2N2C10 | $2.2 \pm 0.2\text{nH}$ | 100                  | 1000               | 0.027 max.          | 25       | 250                  | 14.0                                  | 0402 |
| LQW15AN2N2D10 | $2.2 \pm 0.5\text{nH}$ | 100                  | 1000               | 0.027 max.          | 25       | 250                  | 14.0                                  | 0402 |
| LQW15AN2N4D10 | $2.4 \pm 0.5\text{nH}$ | 100                  | 1000               | 0.027 max.          | 25       | 250                  | 14.0                                  | 0402 |
| LQW15AN3N3D10 | $3.3 \pm 0.5\text{nH}$ | 100                  | 900                | 0.040 max.          | 30       | 250                  | 12.0                                  | 0402 |
| LQW15AN3N6C10 | $3.6 \pm 0.2\text{nH}$ | 100                  | 900                | 0.040 max.          | 30       | 250                  | 9.5                                   | 0402 |
| LQW15AN3N6D10 | $3.6 \pm 0.5\text{nH}$ | 100                  | 900                | 0.040 max.          | 30       | 250                  | 9.5                                   | 0402 |
| LQW15AN3N9D10 | $3.9 \pm 0.5\text{nH}$ | 100                  | 900                | 0.040 max.          | 30       | 250                  | 7.0                                   | 0402 |
| LQW15AN4N7D10 | $4.7 \pm 0.5\text{nH}$ | 100                  | 800                | 0.051 max.          | 30       | 250                  | 8.0                                   | 0402 |
| LQW15AN5N1C10 | $5.1 \pm 0.2\text{nH}$ | 100                  | 800                | 0.051 max.          | 30       | 250                  | 8.0                                   | 0402 |
| LQW15AN5N1D10 | $5.1 \pm 0.5\text{nH}$ | 100                  | 800                | 0.051 max.          | 30       | 250                  | 8.0                                   | 0402 |
| LQW15AN5N6C10 | $5.6 \pm 0.2\text{nH}$ | 100                  | 800                | 0.051 max.          | 30       | 250                  | 8.0                                   | 0402 |
| LQW15AN5N6D10 | $5.6 \pm 0.5\text{nH}$ | 100                  | 800                | 0.051 max.          | 30       | 250                  | 8.0                                   | 0402 |

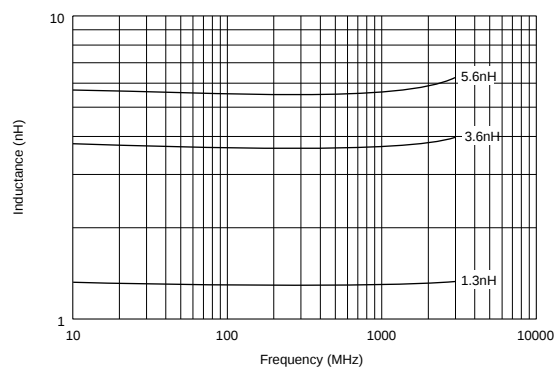
Operating Temp. Range:  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

Only for reflow soldering.

### ■ Q-Frequency Characteristics



### ■ Inductance-Frequency Characteristics



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## Reference Data

### LQW15AN 10

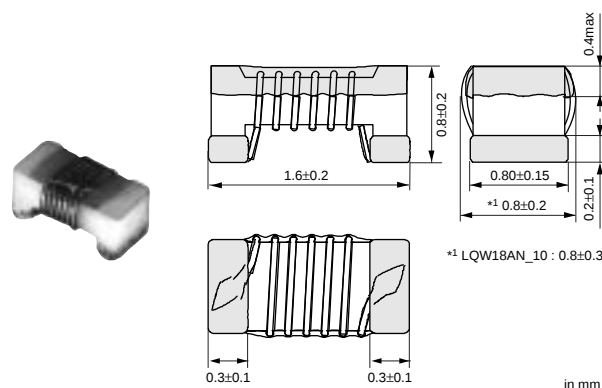
E4991A & 16197A

| Part Number | Inductance (nH) | Q (Typ.) |        |        |        |        |        |        |
|-------------|-----------------|----------|--------|--------|--------|--------|--------|--------|
|             | Nominal         | 800MHz   | 900MHz | 1.0GHz | 1.5GHz | 1.8GHz | 2.0GHz | 2.4GHz |
| LQW15AN1N3  | 1.3             | 90       | 95     | 100    | 130    | 145    | 160    | 180    |
| LQW15AN2N2  | 2.2             | 85       | 90     | 95     | 115    | 130    | 140    | 160    |
| LQW15AN2N4  | 2.4             | 80       | 85     | 90     | 110    | 130    | 140    | 160    |
| LQW15AN3N3  | 3.3             | 80       | 85     | 90     | 110    | 120    | 128    | 140    |
| LQW15AN3N6  | 3.6             | 73       | 75     | 85     | 100    | 110    | 115    | 130    |
| LQW15AN3N9  | 3.9             | 75       | 80     | 83     | 95     | 110    | 115    | 120    |
| LQW15AN4N7  | 4.7             | 75       | 80     | 85     | 100    | 113    | 120    | 132    |
| LQW15AN5N1  | 5.1             | 75       | 80     | 85     | 100    | 110    | 115    | 128    |
| LQW15AN5N6  | 5.6             | 70       | 75     | 78     | 95     | 100    | 105    | 110    |

### LQW18A\_00 Series

#### Features

1. Broad range of inductance (2.2nH to 470nH) with E24 step line up.
2. Horizontal wound structure enables tight inductance tolerance (+/-0.2nH, +/-2%). Stable circuit operation is possible.
3. The subminiature dimensions (1.6x0.8mm) allow high density mounting.
4. The high self resonant frequency realizes high Q value and stable inductance at high frequency.
5. Low DC resistance design is ideal for low loss, high output and low power consumption.
6. Resin-coated surface enables excellent mounting.



#### Applications

1. High frequency circuits of mobile phones such as PA, ANT, VCO, SAW, etc.
2. Mobile phones such as GSM, CDMA, PDC, etc.
3. Bluetooth
4. W-LAN
5. High frequency circuits in general

| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW18AN2N2D00 | 2.2 ±0.5nH      | 100                  | 700                | 0.049 max.          | 16       | 250                  | 6000                                  | 0603 |
| LQW18AN3N6C00 | 3.6 ±0.2nH      | 100                  | 850                | 0.059 max.          | 25       | 250                  | 6000                                  | 0603 |
| LQW18AN3N6D00 | 3.6 ±0.5nH      | 100                  | 850                | 0.059 max.          | 25       | 250                  | 6000                                  | 0603 |
| LQW18AN3N9C00 | 3.9 ±0.2nH      | 100                  | 850                | 0.059 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN3N9D00 | 3.9 ±0.5nH      | 100                  | 850                | 0.059 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN4N3C00 | 4.3 ±0.2nH      | 100                  | 850                | 0.059 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN4N3D00 | 4.3 ±0.5nH      | 100                  | 850                | 0.059 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN4N7D00 | 4.7 ±0.5nH      | 100                  | 850                | 0.059 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN5N6C00 | 5.6 ±0.2nH      | 100                  | 750                | 0.082 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN5N6D00 | 5.6 ±0.5nH      | 100                  | 750                | 0.082 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN6N2C00 | 6.2 ±0.2nH      | 100                  | 750                | 0.082 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN6N2D00 | 6.2 ±0.5nH      | 100                  | 750                | 0.082 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN6N8C00 | 6.8 ±0.2nH      | 100                  | 750                | 0.082 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN6N8D00 | 6.8 ±0.5nH      | 100                  | 750                | 0.082 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN7N5D00 | 7.5 ±0.5nH      | 100                  | 750                | 0.082 max.          | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN8N2D00 | 8.2 ±0.5nH      | 100                  | 650                | 0.11 max.           | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN8N7D00 | 8.7 ±0.5nH      | 100                  | 650                | 0.11 max.           | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN9N1D00 | 9.1 ±0.5nH      | 100                  | 650                | 0.11 max.           | 35       | 250                  | 6000                                  | 0603 |
| LQW18AN9N5D00 | 9.5 ±0.5nH      | 100                  | 650                | 0.11 max.           | 35       | 250                  | 6000                                  | 0603 |

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| Part Number   | Inductance<br>(nH) | Test Frequency<br>(MHz) | Rated<br>Current<br>(mA) | DC Resistance<br>(ohm) | Q<br>(min.) | Test Frequency<br>(MHz) | Self Resonance<br>Frequency (min.)<br>(MHz) | EIA  |
|---------------|--------------------|-------------------------|--------------------------|------------------------|-------------|-------------------------|---------------------------------------------|------|
| LQW18AN10NG00 | 10 ±2%             | 100                     | 650                      | 0.11 max.              | 35          | 250                     | 6000                                        | 0603 |
| LQW18AN10NJ00 | 10 ±5%             | 100                     | 650                      | 0.11 max.              | 35          | 250                     | 6000                                        | 0603 |
| LQW18AN11NG00 | 11 ±2%             | 100                     | 650                      | 0.11 max.              | 35          | 250                     | 6000                                        | 0603 |
| LQW18AN11NJ00 | 11 ±5%             | 100                     | 650                      | 0.11 max.              | 35          | 250                     | 6000                                        | 0603 |
| LQW18AN12NG00 | 12 ±2%             | 100                     | 600                      | 0.13 max.              | 35          | 250                     | 6000                                        | 0603 |
| LQW18AN12NJ00 | 12 ±5%             | 100                     | 600                      | 0.13 max.              | 35          | 250                     | 6000                                        | 0603 |
| LQW18AN13NG00 | 13 ±2%             | 100                     | 600                      | 0.13 max.              | 35          | 250                     | 6000                                        | 0603 |
| LQW18AN13NJ00 | 13 ±5%             | 100                     | 600                      | 0.13 max.              | 35          | 250                     | 6000                                        | 0603 |
| LQW18AN15NG00 | 15 ±2%             | 100                     | 600                      | 0.13 max.              | 40          | 250                     | 6000                                        | 0603 |
| LQW18AN15NJ00 | 15 ±5%             | 100                     | 600                      | 0.13 max.              | 40          | 250                     | 6000                                        | 0603 |
| LQW18AN16NG00 | 16 ±2%             | 100                     | 550                      | 0.16 max.              | 40          | 250                     | 5500                                        | 0603 |
| LQW18AN16NJ00 | 16 ±5%             | 100                     | 550                      | 0.16 max.              | 40          | 250                     | 5500                                        | 0603 |
| LQW18AN18NG00 | 18 ±2%             | 100                     | 550                      | 0.16 max.              | 40          | 250                     | 5500                                        | 0603 |
| LQW18AN18NJ00 | 18 ±5%             | 100                     | 550                      | 0.16 max.              | 40          | 250                     | 5500                                        | 0603 |
| LQW18AN20NG00 | 20 ±2%             | 100                     | 550                      | 0.16 max.              | 40          | 250                     | 4900                                        | 0603 |
| LQW18AN20NJ00 | 20 ±5%             | 100                     | 550                      | 0.16 max.              | 40          | 250                     | 4900                                        | 0603 |
| LQW18AN22NG00 | 22 ±2%             | 100                     | 500                      | 0.17 max.              | 40          | 250                     | 4600                                        | 0603 |
| LQW18AN22NJ00 | 22 ±5%             | 100                     | 500                      | 0.17 max.              | 40          | 250                     | 4600                                        | 0603 |
| LQW18AN24NG00 | 24 ±2%             | 100                     | 500                      | 0.21 max.              | 40          | 250                     | 3800                                        | 0603 |
| LQW18AN24NJ00 | 24 ±5%             | 100                     | 500                      | 0.21 max.              | 40          | 250                     | 3800                                        | 0603 |
| LQW18AN27NG00 | 27 ±2%             | 100                     | 440                      | 0.21 max.              | 40          | 250                     | 3700                                        | 0603 |
| LQW18AN27NJ00 | 27 ±5%             | 100                     | 440                      | 0.21 max.              | 40          | 250                     | 3700                                        | 0603 |
| LQW18AN30NG00 | 30 ±2%             | 100                     | 420                      | 0.23 max.              | 40          | 250                     | 3300                                        | 0603 |
| LQW18AN30NJ00 | 30 ±5%             | 100                     | 420                      | 0.23 max.              | 40          | 250                     | 3300                                        | 0603 |
| LQW18AN33NG00 | 33 ±2%             | 100                     | 420                      | 0.23 max.              | 40          | 250                     | 3200                                        | 0603 |
| LQW18AN33NJ00 | 33 ±5%             | 100                     | 420                      | 0.23 max.              | 40          | 250                     | 3200                                        | 0603 |
| LQW18AN36NG00 | 36 ±2%             | 100                     | 400                      | 0.26 max.              | 40          | 250                     | 2900                                        | 0603 |
| LQW18AN36NJ00 | 36 ±5%             | 100                     | 400                      | 0.26 max.              | 40          | 250                     | 2900                                        | 0603 |
| LQW18AN39NG00 | 39 ±2%             | 100                     | 400                      | 0.26 max.              | 40          | 250                     | 2800                                        | 0603 |
| LQW18AN39NJ00 | 39 ±5%             | 100                     | 400                      | 0.26 max.              | 40          | 250                     | 2800                                        | 0603 |
| LQW18AN43NG00 | 43 ±2%             | 100                     | 380                      | 0.29 max.              | 40          | 200                     | 2700                                        | 0603 |
| LQW18AN43NJ00 | 43 ±5%             | 100                     | 380                      | 0.29 max.              | 40          | 200                     | 2700                                        | 0603 |
| LQW18AN47NG00 | 47 ±2%             | 100                     | 380                      | 0.29 max.              | 38          | 200                     | 2600                                        | 0603 |
| LQW18AN47NJ00 | 47 ±5%             | 100                     | 380                      | 0.29 max.              | 38          | 200                     | 2600                                        | 0603 |
| LQW18AN51NG00 | 51 ±2%             | 100                     | 370                      | 0.33 max.              | 38          | 200                     | 2500                                        | 0603 |
| LQW18AN51NJ00 | 51 ±5%             | 100                     | 370                      | 0.33 max.              | 38          | 200                     | 2500                                        | 0603 |
| LQW18AN56NG00 | 56 ±2%             | 100                     | 360                      | 0.35 max.              | 38          | 200                     | 2400                                        | 0603 |
| LQW18AN56NJ00 | 56 ±5%             | 100                     | 360                      | 0.35 max.              | 38          | 200                     | 2400                                        | 0603 |
| LQW18AN62NG00 | 62 ±2%             | 100                     | 280                      | 0.51 max.              | 38          | 200                     | 2300                                        | 0603 |
| LQW18AN62NJ00 | 62 ±5%             | 100                     | 280                      | 0.51 max.              | 38          | 200                     | 2300                                        | 0603 |
| LQW18AN68NG00 | 68 ±2%             | 100                     | 340                      | 0.38 max.              | 38          | 200                     | 2200                                        | 0603 |
| LQW18AN68NJ00 | 68 ±5%             | 100                     | 340                      | 0.38 max.              | 38          | 200                     | 2200                                        | 0603 |
| LQW18AN72NG00 | 72 ±2%             | 100                     | 270                      | 0.56 max.              | 34          | 150                     | 2100                                        | 0603 |
| LQW18AN72NJ00 | 72 ±5%             | 100                     | 270                      | 0.56 max.              | 34          | 150                     | 2100                                        | 0603 |
| LQW18AN75NG00 | 75 ±2%             | 100                     | 270                      | 0.56 max.              | 34          | 150                     | 2050                                        | 0603 |
| LQW18AN75NJ00 | 75 ±5%             | 100                     | 270                      | 0.56 max.              | 34          | 150                     | 2050                                        | 0603 |
| LQW18AN82NG00 | 82 ±2%             | 100                     | 250                      | 0.60 max.              | 34          | 150                     | 2000                                        | 0603 |
| LQW18AN82NJ00 | 82 ±5%             | 100                     | 250                      | 0.60 max.              | 34          | 150                     | 2000                                        | 0603 |
| LQW18AN91NG00 | 91 ±2%             | 100                     | 230                      | 0.64 max.              | 34          | 150                     | 1900                                        | 0603 |
| LQW18AN91NJ00 | 91 ±5%             | 100                     | 230                      | 0.64 max.              | 34          | 150                     | 1900                                        | 0603 |
| LQW18ANR10G00 | 100 ±2%            | 100                     | 220                      | 0.68 max.              | 34          | 150                     | 1800                                        | 0603 |
| LQW18ANR10J00 | 100 ±5%            | 100                     | 220                      | 0.68 max.              | 34          | 150                     | 1800                                        | 0603 |
| LQW18ANR11G00 | 110 ±2%            | 100                     | 200                      | 1.2 max.               | 32          | 150                     | 1350                                        | 0603 |
| LQW18ANR11J00 | 110 ±5%            | 100                     | 200                      | 1.2 max.               | 32          | 150                     | 1350                                        | 0603 |
| LQW18ANR12G00 | 120 ±2%            | 100                     | 180                      | 1.3 max.               | 32          | 150                     | 1600                                        | 0603 |
| LQW18ANR12J00 | 120 ±5%            | 100                     | 180                      | 1.3 max.               | 32          | 150                     | 1600                                        | 0603 |
| LQW18ANR13G00 | 130 ±2%            | 100                     | 170                      | 1.4 max.               | 32          | 150                     | 1450                                        | 0603 |

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| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW18ANR13J00 | 130 ±5%         | 100                  | 170                | 1.4 max.            | 32       | 150                  | 1450                                  | 0603 |
| LQW18ANR15G00 | 150 ±2%         | 100                  | 160                | 1.5 max.            | 32       | 150                  | 1400                                  | 0603 |
| LQW18ANR15J00 | 150 ±5%         | 100                  | 160                | 1.5 max.            | 32       | 150                  | 1400                                  | 0603 |
| LQW18ANR16G00 | 160 ±2%         | 100                  | 150                | 2.1 max.            | 32       | 150                  | 1350                                  | 0603 |
| LQW18ANR16J00 | 160 ±5%         | 100                  | 150                | 2.1 max.            | 32       | 150                  | 1350                                  | 0603 |
| LQW18ANR18G00 | 180 ±2%         | 100                  | 140                | 2.2 max.            | 25       | 100                  | 1300                                  | 0603 |
| LQW18ANR18J00 | 180 ±5%         | 100                  | 140                | 2.2 max.            | 25       | 100                  | 1300                                  | 0603 |
| LQW18ANR20G00 | 200 ±2%         | 100                  | 120                | 2.4 max.            | 25       | 100                  | 1250                                  | 0603 |
| LQW18ANR20J00 | 200 ±5%         | 100                  | 120                | 2.4 max.            | 25       | 100                  | 1250                                  | 0603 |
| LQW18ANR22G00 | 220 ±2%         | 100                  | 120                | 2.5 max.            | 25       | 100                  | 1200                                  | 0603 |
| LQW18ANR22J00 | 220 ±5%         | 100                  | 120                | 2.5 max.            | 25       | 100                  | 1200                                  | 0603 |
| LQW18ANR27G00 | 270 ±2%         | 100                  | 110                | 3.4 max.            | 30       | 100                  | 960                                   | 0603 |
| LQW18ANR27J00 | 270 ±5%         | 100                  | 110                | 3.4 max.            | 30       | 100                  | 960                                   | 0603 |
| LQW18ANR33G00 | 330 ±2%         | 100                  | 85                 | 5.5 max.            | 30       | 100                  | 800                                   | 0603 |
| LQW18ANR33J00 | 330 ±5%         | 100                  | 85                 | 5.5 max.            | 30       | 100                  | 800                                   | 0603 |
| LQW18ANR39G00 | 390 ±2%         | 100                  | 80                 | 6.2 max.            | 30       | 100                  | 800                                   | 0603 |
| LQW18ANR39J00 | 390 ±5%         | 100                  | 80                 | 6.2 max.            | 30       | 100                  | 800                                   | 0603 |
| LQW18ANR47G00 | 470 ±2%         | 100                  | 75                 | 7.0 max.            | 30       | 100                  | 700                                   | 0603 |
| LQW18ANR47J00 | 470 ±5%         | 100                  | 75                 | 7.0 max.            | 30       | 100                  | 700                                   | 0603 |

Operating Temp. Range: -55°C to +125°C  
Only for reflow soldering.

Q-Frequency Characteristics



Inductance-Frequency Characteristics



## LQW18A\_10 Series (High Q/Low DC Resistance Type)

### ■ Features

DC Resistance is about 50% less than current type.  
Q is about 10% higher, and allowable current is about 20% higher than current type. Tight inductance tolerance is available.

### ■ Applications

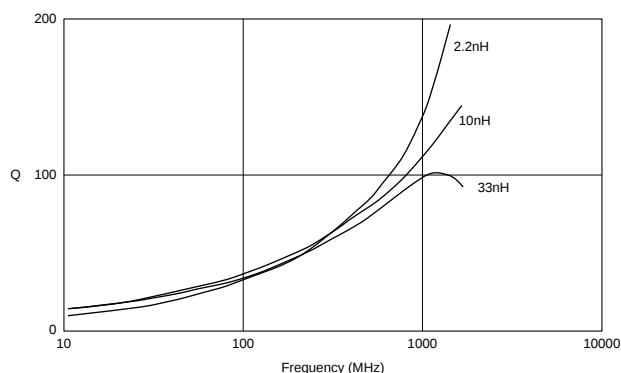
Cellular phone and Base station.  
W-CDMA, GSM, N-CDMA, PDC.  
Higher Q -- Matching circuit for antenna, SAWFIL.  
Lower Rdc -- Choke coil for IF, RF circuit like PA.  
Equipment with high frequency circuits  
(Wireless LAN etc.)



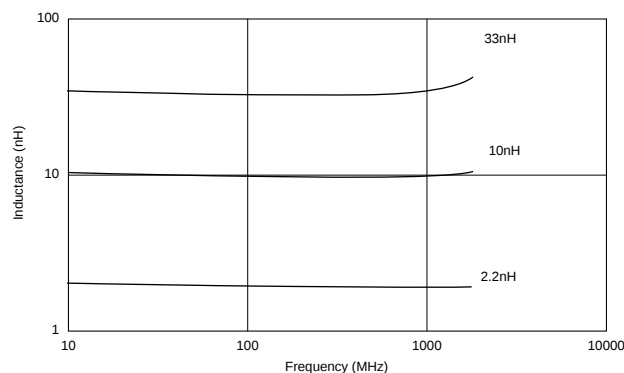
| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW18AN2N2D10 | 2.2 ±0.5nH      | 100                  | 1400               | 0.018 max.          | 25       | 250                  | 18000                                 | 0603 |
| LQW18AN3N9C10 | 3.9 ±0.2nH      | 100                  | 1000               | 0.032 max.          | 38       | 250                  | 11000                                 | 0603 |
| LQW18AN3N9D10 | 3.9 ±0.5nH      | 100                  | 1000               | 0.032 max.          | 38       | 250                  | 11000                                 | 0603 |
| LQW18AN5N6D10 | 5.6 ±0.5nH      | 100                  | 900                | 0.045 max.          | 38       | 250                  | 10000                                 | 0603 |
| LQW18AN6N8C10 | 6.8 ±0.2nH      | 100                  | 900                | 0.045 max.          | 38       | 250                  | 7000                                  | 0603 |
| LQW18AN6N8D10 | 6.8 ±0.5nH      | 100                  | 900                | 0.045 max.          | 38       | 250                  | 7000                                  | 0603 |
| LQW18AN8N2D10 | 8.2 ±0.5nH      | 100                  | 800                | 0.058 max.          | 38       | 250                  | 7000                                  | 0603 |
| LQW18AN10NG10 | 10 ±2%          | 100                  | 800                | 0.058 max.          | 38       | 250                  | 5000                                  | 0603 |
| LQW18AN10NJ10 | 10 ±5%          | 100                  | 800                | 0.058 max.          | 38       | 250                  | 5000                                  | 0603 |
| LQW18AN12NG10 | 12 ±2%          | 100                  | 750                | 0.071 max.          | 38       | 250                  | 5000                                  | 0603 |
| LQW18AN12NJ10 | 12 ±5%          | 100                  | 750                | 0.071 max.          | 38       | 250                  | 5000                                  | 0603 |
| LQW18AN15NJ10 | 15 ±5%          | 100                  | 700                | 0.085 max.          | 42       | 250                  | 4500                                  | 0603 |
| LQW18AN18NG10 | 18 ±2%          | 100                  | 700                | 0.085 max.          | 42       | 250                  | 3500                                  | 0603 |
| LQW18AN18NJ10 | 18 ±5%          | 100                  | 700                | 0.085 max.          | 42       | 250                  | 3500                                  | 0603 |
| LQW18AN22NG10 | 22 ±2%          | 100                  | 640                | 0.099 max.          | 42       | 250                  | 3200                                  | 0603 |
| LQW18AN22NJ10 | 22 ±5%          | 100                  | 640                | 0.099 max.          | 42       | 250                  | 3200                                  | 0603 |
| LQW18AN27NG10 | 27 ±2%          | 100                  | 590                | 0.116 max.          | 42       | 250                  | 2800                                  | 0603 |
| LQW18AN27NJ10 | 27 ±5%          | 100                  | 590                | 0.116 max.          | 42       | 250                  | 2800                                  | 0603 |
| LQW18AN33NJ10 | 33 ±5%          | 100                  | 550                | 0.132 max.          | 42       | 250                  | 2500                                  | 0603 |

Operating Temp. Range: -55°C to +125°C  
Only for reflow soldering.

### ■ Q-Frequency Characteristics



### ■ Inductance-Frequency Characteristics



# Chip Coils



## High Frequency Wound Type LQW2BH/LQW31H Series

LQW2BH series consists of air-core chip coil using a sub-miniature alumina core as a bobbin. The series has excellent solder heat resistance. Both flow and reflow soldering methods can be employed.

### ■ Features (LQW2BH\_03)

1. Inductance: 3.3 to 470nH (Wide inductance ranges)
2. High self-resonant frequency characteristics
3. High Q value and highly stable inductance in high frequency
4. Low DC resistance and large rated current

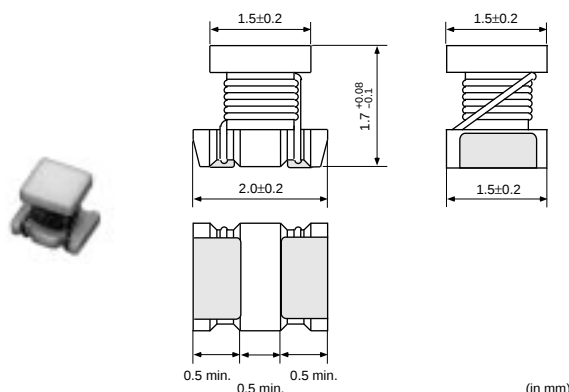
### ■ Features (LQW2BH\_13)

LQW2BH\_13 using thick wire has higher Q value than existing LQW2BH\_03 series.

1. Inductance: 2.7 to 27nH
2. DC resistance: 0.02 to 0.06 ohm
3. Q value: 85 to 95 (Typ.) at 800MHz
4. Rated current: 900 to 1900mA

### ■ Applications

1. High frequency circuit in telecommunications equipment, such as DECT, PHS, PCS, PCN, GSM and CDMA.
2. Impedance Matching
  - PA module
  - SAW filter
3. Resonance circuit
  - VCO



(in mm)

### LQW2BH\_03 Series

| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW2BHN3N3D03 | 3.3 ±0.5nH      | 100                  | 910                | 0.05 max.           | 10       | 250                  | 6000                                  | 0805 |
| LQW2BHN6N8D03 | 6.8 ±0.5nH      | 100                  | 680                | 0.11 max.           | 20       | 250                  | 5400                                  | 0805 |
| LQW2BHN8N2D03 | 8.2 ±0.5nH      | 100                  | 630                | 0.12 max.           | 20       | 250                  | 3900                                  | 0805 |
| LQW2BHN10NJ03 | 10 ±5%          | 100                  | 1320               | 0.03 max.           | 30       | 250                  | 3300                                  | 0805 |
| LQW2BHN12NJ03 | 12 ±5%          | 100                  | 680                | 0.11 max.           | 30       | 250                  | 3200                                  | 0805 |
| LQW2BHN15NJ03 | 15 ±5%          | 100                  | 630                | 0.12 max.           | 30       | 250                  | 2700                                  | 0805 |
| LQW2BHN18NJ03 | 18 ±5%          | 100                  | 690                | 0.10 max.           | 30       | 250                  | 2600                                  | 0805 |
| LQW2BHN22NJ03 | 22 ±5%          | 100                  | 720                | 0.09 max.           | 30       | 250                  | 2100                                  | 0805 |
| LQW2BHN27NJ03 | 27 ±5%          | 100                  | 540                | 0.17 max.           | 40       | 250                  | 2300                                  | 0805 |
| LQW2BHN33NG03 | 33 ±2%          | 100                  | 570                | 0.15 max.           | 40       | 250                  | 1900                                  | 0805 |
| LQW2BHN33NJ03 | 33 ±5%          | 100                  | 570                | 0.15 max.           | 40       | 250                  | 1900                                  | 0805 |
| LQW2BHN39NG03 | 39 ±2%          | 100                  | 730                | 0.09 max.           | 40       | 250                  | 1700                                  | 0805 |
| LQW2BHN39NJ03 | 39 ±5%          | 100                  | 730                | 0.09 max.           | 40       | 250                  | 1700                                  | 0805 |
| LQW2BHN47NG03 | 47 ±2%          | 100                  | 450                | 0.23 max.           | 40       | 200                  | 1600                                  | 0805 |
| LQW2BHN47NJ03 | 47 ±5%          | 100                  | 450                | 0.23 max.           | 40       | 200                  | 1600                                  | 0805 |
| LQW2BHN56NG03 | 56 ±2%          | 100                  | 430                | 0.26 max.           | 40       | 200                  | 1500                                  | 0805 |
| LQW2BHN56NJ03 | 56 ±5%          | 100                  | 430                | 0.26 max.           | 40       | 200                  | 1500                                  | 0805 |

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| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW2BHN68NG03 | 68 ±2%          | 100                  | 460                | 0.23 max.           | 40       | 200                  | 1200                                  | 0805 |
| LQW2BHN68NJ03 | 68 ±5%          | 100                  | 460                | 0.23 max.           | 40       | 200                  | 1200                                  | 0805 |
| LQW2BHN82NG03 | 82 ±2%          | 100                  | 320                | 0.42 max.           | 40       | 150                  | 1100                                  | 0805 |
| LQW2BHN82NJ03 | 82 ±5%          | 100                  | 320                | 0.42 max.           | 40       | 150                  | 1100                                  | 0805 |
| LQW2BHNR10G03 | 100 ±2%         | 100                  | 270                | 0.55 max.           | 35       | 150                  | 900                                   | 0805 |
| LQW2BHNR10J03 | 100 ±5%         | 100                  | 350                | 0.38 max.           | 40       | 150                  | 900                                   | 0805 |
| LQW2BHNR12G03 | 120 ±2%         | 100                  | 320                | 0.40 max.           | 40       | 150                  | 750                                   | 0805 |
| LQW2BHNR12J03 | 120 ±5%         | 100                  | 320                | 0.40 max.           | 40       | 150                  | 750                                   | 0805 |
| LQW2BHNR15G03 | 150 ±2%         | 100                  | 260                | 0.68 max.           | 30       | 150                  | 350                                   | 0805 |
| LQW2BHNR15J03 | 150 ±5%         | 100                  | 390                | 0.47 max.           | 30       | 150                  | 350                                   | 0805 |
| LQW2BHNR18G03 | 180 ±2%         | 100                  | 250                | 0.71 max.           | 35       | 100                  | 700                                   | 0805 |
| LQW2BHNR18J03 | 180 ±5%         | 100                  | 250                | 0.71 max.           | 35       | 100                  | 700                                   | 0805 |
| LQW2BHNR22G03 | 220 ±2%         | 100                  | 240                | 0.70 max.           | 35       | 100                  | 500                                   | 0805 |
| LQW2BHNR22J03 | 220 ±5%         | 100                  | 240                | 0.70 max.           | 35       | 100                  | 500                                   | 0805 |
| LQW2BHNR27J03 | 270 ±5%         | 10                   | 190                | 2.00 max.           | 15       | 25.2                 | 550                                   | 0805 |
| LQW2BHNR27K03 | 270 ±10%        | 10                   | 190                | 2.00 max.           | 15       | 25.2                 | 550                                   | 0805 |
| LQW2BHNR33J03 | 330 ±5%         | 10                   | 180                | 2.20 max.           | 15       | 25.2                 | 500                                   | 0805 |
| LQW2BHNR33K03 | 330 ±10%        | 10                   | 180                | 2.20 max.           | 15       | 25.2                 | 500                                   | 0805 |
| LQW2BHNR39J03 | 390 ±5%         | 10                   | 170                | 2.50 max.           | 15       | 25.2                 | 400                                   | 0805 |
| LQW2BHNR39K03 | 390 ±10%        | 10                   | 170                | 2.50 max.           | 15       | 25.2                 | 400                                   | 0805 |
| LQW2BHNR47J03 | 470 ±5%         | 10                   | 160                | 2.80 max.           | 15       | 25.2                 | 350                                   | 0805 |
| LQW2BHNR47K03 | 470 ±10%        | 10                   | 160                | 2.80 max.           | 15       | 25.2                 | 350                                   | 0805 |

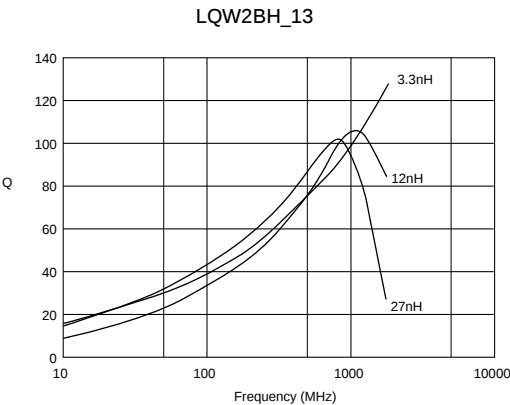
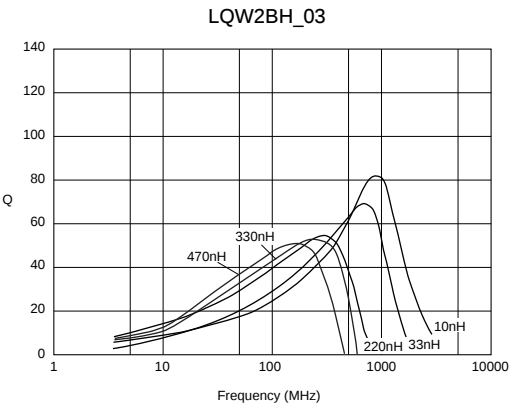
Operating Temp. Range: -25°C to +85°C

## LQW2BH\_13 Series (High Q/Low DC Resistance Type)

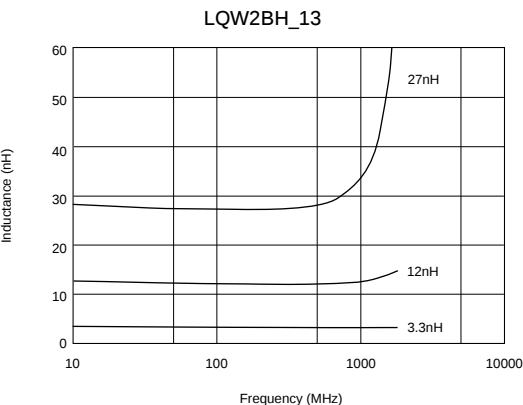
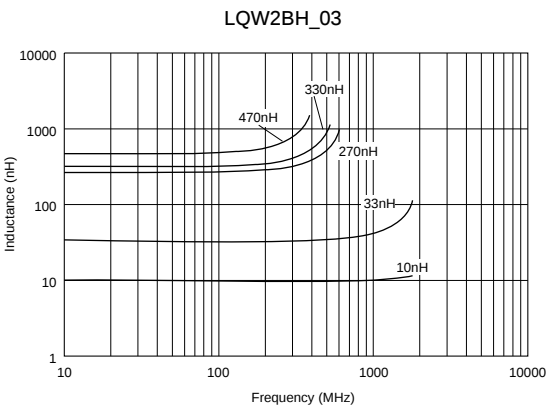
| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW2BHN2N7D13 | 2.7 ±0.5nH      | 100                  | 1900               | 0.02 max.           | 20       | 250                  | 6000                                  | 0805 |
| LQW2BHN3N1D13 | 3.1 ±0.5nH      | 100                  | 1800               | 0.02 max.           | 20       | 250                  | 6000                                  | 0805 |
| LQW2BHN3N3D13 | 3.3 ±0.5nH      | 100                  | 1700               | 0.02 max.           | 20       | 250                  | 6000                                  | 0805 |
| LQW2BHN5N6D13 | 5.6 ±0.5nH      | 100                  | 1500               | 0.02 max.           | 35       | 250                  | 6000                                  | 0805 |
| LQW2BHN6N8D13 | 6.8 ±0.5nH      | 100                  | 1400               | 0.02 max.           | 35       | 250                  | 5400                                  | 0805 |
| LQW2BHN8N6D13 | 8.6 ±0.5nH      | 100                  | 1300               | 0.03 max.           | 35       | 250                  | 3900                                  | 0805 |
| LQW2BHN10NJ13 | 10 ±5%          | 100                  | 1320               | 0.03 max.           | 35       | 250                  | 3300                                  | 0805 |
| LQW2BHN12NK13 | 12 ±10%         | 100                  | 1100               | 0.04 max.           | 40       | 250                  | 3200                                  | 0805 |
| LQW2BHN15NK13 | 15 ±10%         | 100                  | 1000               | 0.04 max.           | 40       | 250                  | 3100                                  | 0805 |
| LQW2BHN18NK13 | 18.8 ±10%       | 100                  | 1000               | 0.05 max.           | 40       | 250                  | 2600                                  | 0805 |
| LQW2BHN21NK13 | 21 ±10%         | 100                  | 950                | 0.05 max.           | 40       | 250                  | 2200                                  | 0805 |
| LQW2BHN27NK13 | 27 ±10%         | 100                  | 900                | 0.06 max.           | 40       | 250                  | 1800                                  | 0805 |

Operating Temp. Range: -25°C to +85°C

Q-Frequency Characteristics



Inductance-Frequency Characteristics



## LQW31H Series

LQW31H series is alumina-core-type chip inductor for high frequency circuit. Its low dc resistance and high Q due to 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%)



| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQW31HN8N8J03 | 8.8 ±5%         | 100                  | 750                | 0.029 ±40%          | 50       | 436                  | 1000                                  | 1206 |
| LQW31HN8N8K03 | 8.8 ±10%        | 100                  | 750                | 0.029 ±40%          | 50       | 436                  | 1000                                  | 1206 |
| LQW31HN15NJ03 | 14.7 ±5%        | 100                  | 680                | 0.035 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN15NK03 | 14.7 ±10%       | 100                  | 680                | 0.035 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN17NJ03 | 17 ±5%          | 100                  | 650                | 0.037 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN17NK03 | 17 ±10%         | 100                  | 650                | 0.037 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN23NJ03 | 23 ±5%          | 100                  | 590                | 0.046 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN23NK03 | 23 ±10%         | 100                  | 590                | 0.046 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN27NJ03 | 27 ±5%          | 100                  | 560                | 0.051 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN27NK03 | 27 ±10%         | 100                  | 560                | 0.051 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN33NJ03 | 33 ±5%          | 100                  | 530                | 0.057 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN33NK03 | 33 ±10%         | 100                  | 530                | 0.057 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN39NJ03 | 39 ±5%          | 100                  | 490                | 0.067 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN39NK03 | 39 ±10%         | 100                  | 490                | 0.067 ±40%          | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN47NJ03 | 47 ±5%          | 100                  | 380                | 0.11 ±40%           | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN47NK03 | 47 ±10%         | 100                  | 380                | 0.11 ±40%           | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN56NJ03 | 56 ±5%          | 100                  | 330                | 0.14 ±40%           | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN56NK03 | 56 ±10%         | 100                  | 330                | 0.14 ±40%           | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN64NJ03 | 64 ±5%          | 100                  | 290                | 0.18 ±40%           | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN64NK03 | 64 ±10%         | 100                  | 290                | 0.18 ±40%           | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN84NJ03 | 84 ±5%          | 100                  | 240                | 0.28 ±40%           | 60       | 436                  | 1000                                  | 1206 |
| LQW31HN84NK03 | 84 ±10%         | 100                  | 240                | 0.28 ±40%           | 60       | 436                  | 1000                                  | 1206 |
| LQW31HNR10J03 | 100 ±5%         | 100                  | 230                | 0.3 ±40%            | 60       | 436                  | 900                                   | 1206 |
| LQW31HNR10K03 | 100 ±10%        | 100                  | 230                | 0.3 ±40%            | 60       | 436                  | 900                                   | 1206 |

Operating Temp. Range: -25°C to +85°C

### ■ Q-Frequency Characteristics



# Chip Coils

**muRata**

## High Frequency Wound Type LQH31H Series

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

### ■ Features

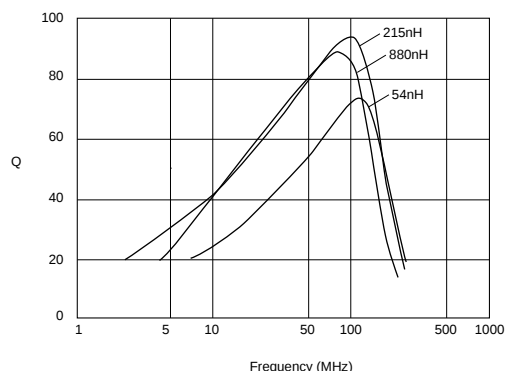
1. Inductance range from 54 to 880nH
2. High Q value and stable inductance in high frequency range from 30 to 150MHz
3. Both flow and reflow soldering methods can be employed for excellent solder heat resistance.



| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQH31HN54NK03 | 54 ±10%         | 1                    | 920                | 0.035 ±30%          | 50       | 100                  | 800                                   | 1206 |
| LQH31HN95NK03 | 95 ±10%         | 1                    | 790                | 0.047 ±30%          | 60       | 100                  | 650                                   | 1206 |
| LQH31HNR14J03 | 145 ±5%         | 1                    | 700                | 0.061 ±30%          | 60       | 100                  | 500                                   | 1206 |
| LQH31HNR14K03 | 145 ±10%        | 1                    | 700                | 0.061 ±30%          | 60       | 100                  | 500                                   | 1206 |
| LQH31HNR21J03 | 215 ±5%         | 1                    | 520                | 0.11 ±30%           | 60       | 100                  | 430                                   | 1206 |
| LQH31HNR21K03 | 215 ±10%        | 1                    | 520                | 0.11 ±30%           | 60       | 100                  | 430                                   | 1206 |
| LQH31HNR29J03 | 290 ±5%         | 1                    | 420                | 0.17 ±30%           | 60       | 100                  | 360                                   | 1206 |
| LQH31HNR29K03 | 290 ±10%        | 1                    | 420                | 0.17 ±30%           | 60       | 100                  | 360                                   | 1206 |
| LQH31HNR39J03 | 390 ±5%         | 1                    | 330                | 0.26 ±30%           | 60       | 100                  | 300                                   | 1206 |
| LQH31HNR39K03 | 390 ±10%        | 1                    | 330                | 0.26 ±30%           | 60       | 100                  | 300                                   | 1206 |
| LQH31HNR50J03 | 500 ±5%         | 1                    | 260                | 0.44 ±30%           | 60       | 100                  | 270                                   | 1206 |
| LQH31HNR50K03 | 500 ±10%        | 1                    | 260                | 0.44 ±30%           | 60       | 100                  | 270                                   | 1206 |
| LQH31HNR61J03 | 610 ±5%         | 1                    | 250                | 0.48 ±30%           | 60       | 100                  | 240                                   | 1206 |
| LQH31HNR61K03 | 610 ±10%        | 1                    | 250                | 0.48 ±30%           | 60       | 100                  | 240                                   | 1206 |
| LQH31HNR75J03 | 750 ±5%         | 1                    | 190                | 0.79 ±30%           | 60       | 100                  | 220                                   | 1206 |
| LQH31HNR75K03 | 750 ±10%        | 1                    | 190                | 0.79 ±30%           | 60       | 100                  | 220                                   | 1206 |
| LQH31HNR88J03 | 880 ±5%         | 1                    | 180                | 0.86 ±30%           | 60       | 100                  | 200                                   | 1206 |
| LQH31HNR88K03 | 880 ±10%        | 1                    | 180                | 0.86 ±30%           | 60       | 100                  | 200                                   | 1206 |

Operating Temp. Range: -25°C to +85°C

### ■ Q-Frequency Characteristics



# Chip Coils



## for General Use Monolithic Type LQM18N/LQM21N Series

### LQM18N Series

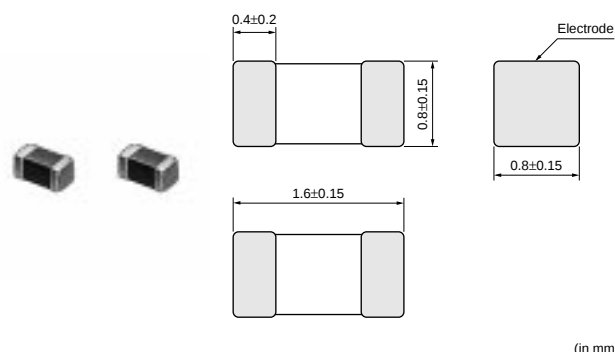
The LQM18N series of magnetically shielded chip coils was developed by using original multilayer process technology and magnetic materials. Compact size is suitable for high density mounting. Shielded construction is not affected by interference from peripheral components.

#### ■ Features

1. Magnetically shielded structure provides excellent characteristics in crosstalk and magnetic coupling.
2. Compact size (1.6x0.8mm) and light weight
3. The external electrodes with nickel barrier structure provide excellent solder heat resistance. Both flow and reflow soldering can be applicable.

#### ■ Applications

1. Resonance circuit, traps, filter circuits
2. RF choke in telecommunications equipment, cordless phones, radio equipment



| Part Number   | Inductance (nH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQM18NN47NM00 | 47 ±20%         | 50                   | 50                 | 0.30 max.           | 10       | 50                   | 260                                   | 0603 |
| LQM18NN68NM00 | 68 ±20%         | 50                   | 50                 | 0.30 max.           | 10       | 50                   | 250                                   | 0603 |
| LQM18NN82NM00 | 82 ±20%         | 50                   | 50                 | 0.30 max.           | 10       | 50                   | 245                                   | 0603 |
| LQM18NNR10K00 | 100 ±10%        | 25                   | 50                 | 0.50 max.           | 15       | 25                   | 240                                   | 0603 |
| LQM18NNR12K00 | 120 ±10%        | 25                   | 50                 | 0.50 max.           | 15       | 25                   | 205                                   | 0603 |
| LQM18NNR15K00 | 150 ±10%        | 25                   | 50                 | 0.60 max.           | 15       | 25                   | 180                                   | 0603 |
| LQM18NNR18K00 | 180 ±10%        | 25                   | 50                 | 0.60 max.           | 15       | 25                   | 165                                   | 0603 |
| LQM18NNR22K00 | 220 ±10%        | 25                   | 50                 | 0.80 max.           | 15       | 25                   | 150                                   | 0603 |
| LQM18NNR27K00 | 270 ±10%        | 25                   | 50                 | 0.80 max.           | 15       | 25                   | 136                                   | 0603 |
| LQM18NNR33K00 | 330 ±10%        | 25                   | 35                 | 0.85 max.           | 15       | 25                   | 125                                   | 0603 |
| LQM18NNR39K00 | 390 ±10%        | 25                   | 35                 | 1.00 max.           | 15       | 25                   | 110                                   | 0603 |
| LQM18NNR47K00 | 470 ±10%        | 25                   | 35                 | 1.35 max.           | 15       | 25                   | 105                                   | 0603 |
| LQM18NNR56K00 | 560 ±10%        | 25                   | 35                 | 1.55 max.           | 15       | 25                   | 95                                    | 0603 |
| LQM18NNR68K00 | 680 ±10%        | 25                   | 35                 | 1.70 max.           | 15       | 25                   | 90                                    | 0603 |
| LQM18NNR82K00 | 820 ±10%        | 25                   | 35                 | 2.10 max.           | 15       | 25                   | 85                                    | 0603 |
| LQM18NN1R0K00 | 1000 ±10%       | 10                   | 25                 | 0.60 max.           | 35       | 10                   | 75                                    | 0603 |
| LQM18NN1R2K00 | 1200 ±10%       | 10                   | 25                 | 0.80 max.           | 35       | 10                   | 65                                    | 0603 |
| LQM18NN1R5K00 | 1500 ±10%       | 10                   | 25                 | 0.80 max.           | 35       | 10                   | 60                                    | 0603 |
| LQM18NN1R8K00 | 1800 ±10%       | 10                   | 25                 | 0.95 max.           | 35       | 10                   | 55                                    | 0603 |
| LQM18NN2R2K00 | 2200 ±10%       | 10                   | 15                 | 1.15 max.           | 35       | 10                   | 50                                    | 0603 |

Operating Temp. Range: -40°C to +85°C

## ■ Q-Frequency Characteristics



## ■ Inductance-Frequency Characteristics



### LQM21N Series

#### ■ Features

The LQM21N series consists of magnetically shielded chip inductors developed using Murata's original multilayer process technology and magnetic materials. The miniature size of 2.0x1.25mm enables compact design of electric equipment. Inductance range from 0.1 micro H to 4.7 micro H is available.

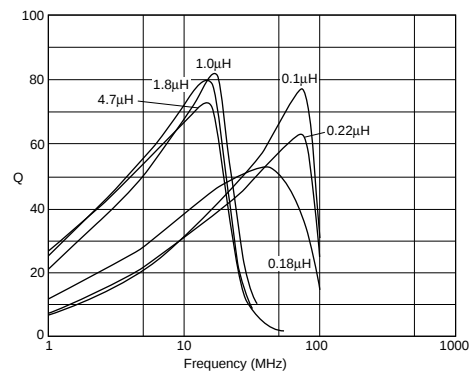


|                |                           |          |
|----------------|---------------------------|----------|
| Dimension of t | Inductance : 0.1 to 2.2μH | 0.85±0.2 |
|                | Inductance : 2.7 to 4.7μH | 1.25±0.2 |

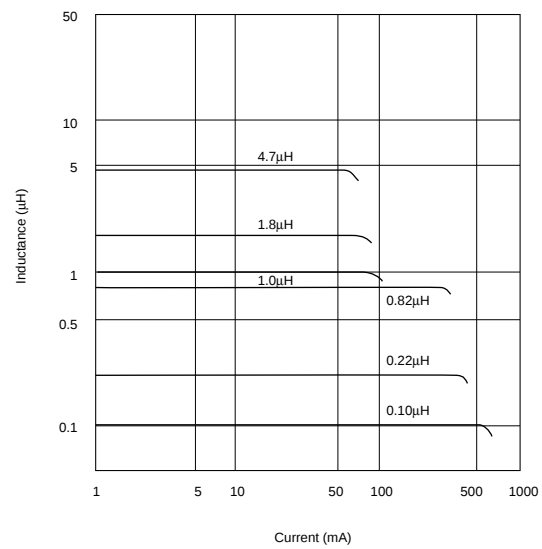
| Part Number   | Inductance (μH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQM21NNR10K10 | 0.1 ±10%        | 25                   | 250                | 0.26 max.           | 20       | 25                   | 340                                   | 0805 |
| LQM21NNR12K10 | 0.12 ±10%       | 25                   | 250                | 0.29 max.           | 20       | 25                   | 310                                   | 0805 |
| LQM21NNR15K10 | 0.15 ±10%       | 25                   | 250                | 0.32 max.           | 20       | 25                   | 270                                   | 0805 |
| LQM21NNR18K10 | 0.18 ±10%       | 25                   | 250                | 0.35 max.           | 20       | 25                   | 250                                   | 0805 |
| LQM21NNR22K10 | 0.22 ±10%       | 25                   | 250                | 0.38 max.           | 20       | 25                   | 220                                   | 0805 |
| LQM21NNR27K10 | 0.27 ±10%       | 25                   | 250                | 0.42 max.           | 20       | 25                   | 200                                   | 0805 |
| LQM21NNR33K10 | 0.33 ±10%       | 25                   | 250                | 0.48 max.           | 20       | 25                   | 180                                   | 0805 |
| LQM21NNR39K10 | 0.39 ±10%       | 25                   | 200                | 0.53 max.           | 25       | 25                   | 165                                   | 0805 |
| LQM21NNR47K10 | 0.47 ±10%       | 25                   | 200                | 0.57 max.           | 25       | 25                   | 150                                   | 0805 |
| LQM21NNR56K10 | 0.56 ±10%       | 25                   | 150                | 0.63 max.           | 25       | 25                   | 140                                   | 0805 |
| LQM21NNR68K10 | 0.68 ±10%       | 25                   | 150                | 0.72 max.           | 25       | 25                   | 125                                   | 0805 |
| LQM21NNR82K10 | 0.82 ±10%       | 25                   | 150                | 0.81 max.           | 25       | 25                   | 115                                   | 0805 |
| LQM21NN1R0K10 | 1 ±10%          | 10                   | 50                 | 0.40 max.           | 45       | 10                   | 107                                   | 0805 |
| LQM21NN1R2K10 | 1.2 ±10%        | 10                   | 50                 | 0.47 max.           | 45       | 10                   | 97                                    | 0805 |
| LQM21NN1R5K10 | 1.5 ±10%        | 10                   | 50                 | 0.50 max.           | 45       | 10                   | 87                                    | 0805 |
| LQM21NN1R8K10 | 1.8 ±10%        | 10                   | 50                 | 0.57 max.           | 45       | 10                   | 80                                    | 0805 |
| LQM21NN2R2K10 | 2.2 ±10%        | 10                   | 30                 | 0.63 max.           | 45       | 10                   | 71                                    | 0805 |
| LQM21NN2R7K10 | 2.7 ±10%        | 10                   | 30                 | 0.69 max.           | 45       | 10                   | 66                                    | 0805 |
| LQM21NN3R3K10 | 3.3 ±10%        | 10                   | 30                 | 0.80 max.           | 45       | 10                   | 59                                    | 0805 |
| LQM21NN3R9K10 | 3.9 ±10%        | 10                   | 30                 | 0.89 max.           | 45       | 10                   | 53                                    | 0805 |
| LQM21NN4R7K10 | 4.7 ±10%        | 10                   | 30                 | 1.00 max.           | 45       | 10                   | 47                                    | 0805 |

Operating Temp. Range: -40°C to +85°C

■ Q-Frequency Characteristics



■ Inductance-Current Characteristics



# Chip Coils



## for General Use Wound Type LQH31M/LQH32M/LQH43M (N) Series

### LQH31M Series

LQH31M series consists of wound type chip coils using Murata's original ferrite core and auto winding technology.

#### ■ Features

1. Wide inductance range from 0.15 to 100 micro H
2. High Q value at high frequencies and low DC resistance
3. Small size (3.2x1.6x1.8mm) and tight pitch mounting
4. Low DC resistance and large current
5. Both flow and reflow soldering heat resistance



| Part Number   | Inductance (μH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQH31MNR15K03 | 0.15 ±10%       | 1                    | 250                | 0.39 ±40%           | 20       | 25                   | 250                                   | 1206 |
| LQH31MNR22K03 | 0.22 ±10%       | 1                    | 240                | 0.43 ±40%           | 20       | 25                   | 250                                   | 1206 |
| LQH31MNR33K03 | 0.33 ±10%       | 1                    | 230                | 0.45 ±40%           | 30       | 25                   | 250                                   | 1206 |
| LQH31MNR47K03 | 0.47 ±10%       | 1                    | 215                | 0.83 ±40%           | 30       | 25                   | 200                                   | 1206 |
| LQH31MNR56K03 | 0.56 ±10%       | 1                    | 200                | 0.61 ±40%           | 30       | 25                   | 180                                   | 1206 |
| LQH31MNR68K03 | 0.68 ±10%       | 1                    | 190                | 0.67 ±40%           | 30       | 25                   | 160                                   | 1206 |
| LQH31MNR82K03 | 0.82 ±10%       | 1                    | 185                | 0.73 ±40%           | 30       | 25                   | 120                                   | 1206 |
| LQH31MN1R0K03 | 1.0 ±10%        | 1                    | 175                | 0.49 ±30%           | 35       | 10                   | 100                                   | 1206 |
| LQH31MN1R2K03 | 1.2 ±10%        | 1                    | 165                | 0.9 ±30%            | 35       | 10                   | 90                                    | 1206 |
| LQH31MN1R5J03 | 1.5 ±5%         | 1                    | 155                | 1.0 ±30%            | 35       | 10                   | 75                                    | 1206 |
| LQH31MN1R5K03 | 1.5 ±10%        | 1                    | 155                | 1.0 ±30%            | 35       | 10                   | 75                                    | 1206 |
| LQH31MN1R8J03 | 1.8 ±5%         | 1                    | 150                | 1.6 ±30%            | 35       | 10                   | 60                                    | 1206 |
| LQH31MN1R8K03 | 1.8 ±10%        | 1                    | 150                | 1.6 ±30%            | 35       | 10                   | 60                                    | 1206 |
| LQH31MN2R2J03 | 2.2 ±5%         | 1                    | 140                | 0.7 ±30%            | 35       | 10                   | 50                                    | 1206 |
| LQH31MN2R2K03 | 2.2 ±10%        | 1                    | 140                | 0.7 ±30%            | 35       | 10                   | 50                                    | 1206 |
| LQH31MN2R7J03 | 2.7 ±5%         | 1                    | 135                | 0.55 ±30%           | 35       | 10                   | 43                                    | 1206 |
| LQH31MN2R7K03 | 2.7 ±10%        | 1                    | 135                | 0.55 ±30%           | 35       | 10                   | 43                                    | 1206 |
| LQH31MN3R3J03 | 3.3 ±5%         | 1                    | 130                | 1.4 ±30%            | 35       | 8                    | 38                                    | 1206 |
| LQH31MN3R3K03 | 3.3 ±10%        | 1                    | 130                | 1.4 ±30%            | 35       | 8                    | 38                                    | 1206 |
| LQH31MN3R9J03 | 3.9 ±5%         | 1                    | 125                | 1.5 ±30%            | 35       | 8                    | 35                                    | 1206 |
| LQH31MN3R9K03 | 3.9 ±10%        | 1                    | 125                | 1.5 ±30%            | 35       | 8                    | 35                                    | 1206 |
| LQH31MN4R7J03 | 4.7 ±5%         | 1                    | 120                | 1.7 ±30%            | 35       | 8                    | 31                                    | 1206 |
| LQH31MN4R7K03 | 4.7 ±10%        | 1                    | 120                | 1.7 ±30%            | 35       | 8                    | 31                                    | 1206 |
| LQH31MN5R6J03 | 5.6 ±5%         | 1                    | 115                | 1.8 ±30%            | 35       | 8                    | 28                                    | 1206 |
| LQH31MN5R6K03 | 5.6 ±10%        | 1                    | 115                | 1.8 ±30%            | 35       | 8                    | 28                                    | 1206 |
| LQH31MN6R8J03 | 6.8 ±5%         | 1                    | 110                | 2.0 ±30%            | 35       | 8                    | 25                                    | 1206 |
| LQH31MN6R8K03 | 6.8 ±10%        | 1                    | 110                | 2.0 ±30%            | 35       | 8                    | 25                                    | 1206 |
| LQH31MN8R2J03 | 8.2 ±5%         | 1                    | 105                | 2.2 ±30%            | 35       | 8                    | 23                                    | 1206 |
| LQH31MN8R2K03 | 8.2 ±10%        | 1                    | 105                | 2.2 ±30%            | 35       | 8                    | 23                                    | 1206 |
| LQH31MN100J03 | 10 ±5%          | 1                    | 100                | 2.5 ±30%            | 35       | 5                    | 20                                    | 1206 |
| LQH31MN100K03 | 10 ±10%         | 1                    | 100                | 2.5 ±30%            | 35       | 5                    | 20                                    | 1206 |
| LQH31MN120J03 | 12 ±5%          | 1                    | 95                 | 2.7 ±30%            | 35       | 5                    | 18                                    | 1206 |
| LQH31MN120K03 | 12 ±10%         | 1                    | 95                 | 2.7 ±30%            | 35       | 5                    | 18                                    | 1206 |
| LQH31MN150J03 | 15 ±5%          | 1                    | 90                 | 3.0 ±30%            | 35       | 5                    | 16                                    | 1206 |
| LQH31MN150K03 | 15 ±10%         | 1                    | 90                 | 3 ±30%              | 35       | 5                    | 16                                    | 1206 |
| LQH31MN180J03 | 18 ±5%          | 1                    | 85                 | 3.4 ±30%            | 35       | 5                    | 15                                    | 1206 |

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| Part Number   | Inductance (μH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency (MHz) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|----------|----------------------|---------------------------------------|------|
| LQH31MN180K03 | 18 ±10%         | 1                    | 85                 | 3.4 ±30%            | 35       | 5                    | 15                                    | 1206 |
| LQH31MN220J03 | 22 ±5%          | 1                    | 85                 | 3.1 ±30%            | 40       | 2.5                  | 14                                    | 1206 |
| LQH31MN220K03 | 22 ±10%         | 1                    | 85                 | 3.1 ±30%            | 40       | 2.5                  | 14                                    | 1206 |
| LQH31MN270J03 | 27 ±5%          | 1                    | 85                 | 3.4 ±30%            | 40       | 2.5                  | 13                                    | 1206 |
| LQH31MN270K03 | 27 ±10%         | 1                    | 85                 | 3.4 ±30%            | 40       | 2.5                  | 13                                    | 1206 |
| LQH31MN330J03 | 33 ±5%          | 1                    | 80                 | 3.8 ±30%            | 40       | 2.5                  | 12                                    | 1206 |
| LQH31MN330K03 | 33 ±10%         | 1                    | 80                 | 3.8 ±30%            | 40       | 2.5                  | 12                                    | 1206 |
| LQH31MN390J03 | 39 ±5%          | 1                    | 55                 | 7.2 ±30%            | 40       | 2.5                  | 11                                    | 1206 |
| LQH31MN390K03 | 39 ±10%         | 1                    | 55                 | 7.2 ±30%            | 40       | 2.5                  | 11                                    | 1206 |
| LQH31MN470J03 | 47 ±5%          | 1                    | 55                 | 8 ±30%              | 40       | 2.5                  | 10                                    | 1206 |
| LQH31MN470K03 | 47 ±10%         | 1                    | 55                 | 8.0 ±30%            | 40       | 2.5                  | 10                                    | 1206 |
| LQH31MN560J03 | 56 ±5%          | 1                    | 50                 | 8.9 ±30%            | 40       | 2.5                  | 9                                     | 1206 |
| LQH31MN560K03 | 56 ±10%         | 1                    | 50                 | 8.9 ±30%            | 40       | 2.5                  | 9                                     | 1206 |
| LQH31MN680J03 | 68 ±5%          | 1                    | 50                 | 9.9 ±30%            | 40       | 2.5                  | 8.5                                   | 1206 |
| LQH31MN680K03 | 68 ±10%         | 1                    | 50                 | 9.9 ±30%            | 40       | 2.5                  | 8.5                                   | 1206 |
| LQH31MN820J03 | 82 ±5%          | 1                    | 45                 | 11 ±30%             | 40       | 2.5                  | 7.5                                   | 1206 |
| LQH31MN820K03 | 82 ±10%         | 1                    | 45                 | 11 ±30%             | 40       | 2.5                  | 7.5                                   | 1206 |
| LQH31MN101J03 | 100 ±5%         | 1                    | 45                 | 12 ±30%             | 40       | 2.5                  | 7                                     | 1206 |
| LQH31MN101K03 | 100 ±10%        | 1                    | 45                 | 12 ±30%             | 40       | 2.5                  | 7                                     | 1206 |

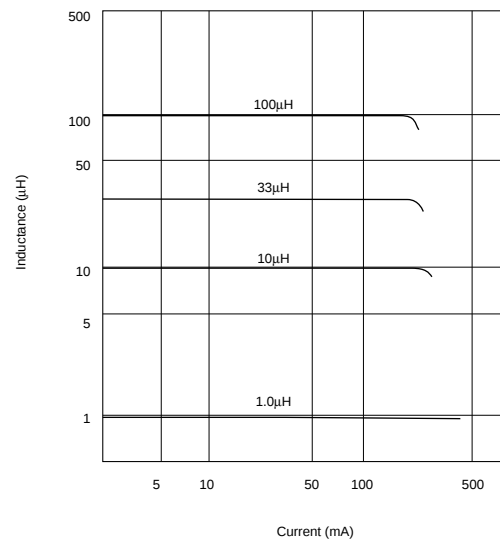
Operating Temp. Range: -25°C to +85°C

7

## Q-Frequency Characteristics



## Inductance-Current Characteristics



## Coupling Coefficient

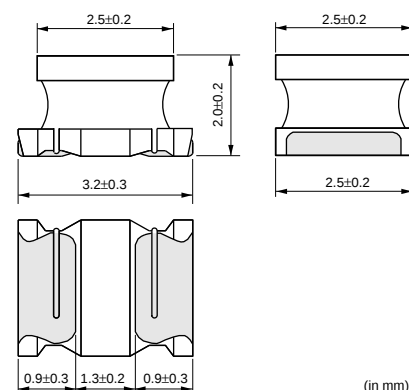


## LQH32M Series

LQH32M series consists of miniature chip inductors wound on a special ferrite core.

### ■ Features

1. High Q value at high frequencies and low DC resistance
2. Wide inductance range from 1.0 to 560 micro H



(in mm)

| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|----------|----------------|---------------------------------------|------|
| LQH32MN1R0M23 | 1.0 ±20%        | 1MHz           | 445                | 0.5 max.            | 20       | 1MHz           | 100                                   | 1210 |
| LQH32MN1R2M23 | 1.2 ±20%        | 1MHz           | 425                | 0.6 max.            | 20       | 1MHz           | 100                                   | 1210 |
| LQH32MN1R5K23 | 1.5 ±10%        | 1MHz           | 400                | 0.6 max.            | 20       | 1MHz           | 75                                    | 1210 |
| LQH32MN1R8K23 | 1.8 ±10%        | 1MHz           | 390                | 0.7 max.            | 20       | 1MHz           | 60                                    | 1210 |
| LQH32MN2R2K23 | 2.2 ±10%        | 1MHz           | 370                | 0.8 max.            | 20       | 1MHz           | 50                                    | 1210 |
| LQH32MN2R7K23 | 2.7 ±10%        | 1MHz           | 320                | 0.9 max.            | 20       | 1MHz           | 43                                    | 1210 |
| LQH32MN3R3K23 | 3.3 ±10%        | 1MHz           | 300                | 1.0 max.            | 20       | 1MHz           | 38                                    | 1210 |
| LQH32MN3R9K23 | 3.9 ±10%        | 1MHz           | 290                | 1.1 max.            | 20       | 1MHz           | 35                                    | 1210 |
| LQH32MN4R7K23 | 4.7 ±10%        | 1MHz           | 270                | 1.2 max.            | 20       | 1MHz           | 31                                    | 1210 |
| LQH32MN5R6K23 | 5.6 ±10%        | 1MHz           | 250                | 1.3 max.            | 20       | 1MHz           | 28                                    | 1210 |
| LQH32MN6R8K23 | 6.8 ±10%        | 1MHz           | 240                | 1.5 max.            | 20       | 1MHz           | 25                                    | 1210 |
| LQH32MN8R2K23 | 8.2 ±10%        | 1MHz           | 225                | 1.6 max.            | 20       | 1MHz           | 23                                    | 1210 |
| LQH32MN100J23 | 10 ±5%          | 1MHz           | 190                | 1.8 max.            | 35       | 1MHz           | 20                                    | 1210 |
| LQH32MN100K23 | 10 ±10%         | 1MHz           | 190                | 1.8 max.            | 35       | 1MHz           | 20                                    | 1210 |
| LQH32MN120J23 | 12 ±5%          | 1MHz           | 180                | 2.0 max.            | 35       | 1MHz           | 18                                    | 1210 |
| LQH32MN120K23 | 12 ±10%         | 1MHz           | 180                | 2.0 max.            | 35       | 1MHz           | 18                                    | 1210 |
| LQH32MN150J23 | 15 ±5%          | 1MHz           | 170                | 2.2 max.            | 35       | 1MHz           | 16                                    | 1210 |
| LQH32MN150K23 | 15 ±10%         | 1MHz           | 170                | 2.2 max.            | 35       | 1MHz           | 16                                    | 1210 |
| LQH32MN180J23 | 18 ±5%          | 1MHz           | 165                | 2.5 max.            | 35       | 1MHz           | 15                                    | 1210 |
| LQH32MN180K23 | 18 ±10%         | 1MHz           | 165                | 2.5 max.            | 35       | 1MHz           | 15                                    | 1210 |
| LQH32MN220J23 | 22 ±5%          | 1MHz           | 150                | 2.8 max.            | 35       | 1MHz           | 14                                    | 1210 |
| LQH32MN220K23 | 22 ±10%         | 1MHz           | 150                | 2.8 max.            | 35       | 1MHz           | 14                                    | 1210 |
| LQH32MN270J23 | 27 ±5%          | 1MHz           | 125                | 3.1 max.            | 35       | 1MHz           | 13                                    | 1210 |
| LQH32MN270K23 | 27 ±10%         | 1MHz           | 125                | 3.1 max.            | 35       | 1MHz           | 13                                    | 1210 |
| LQH32MN330J23 | 33 ±5%          | 1MHz           | 115                | 3.5 max.            | 40       | 1MHz           | 12                                    | 1210 |
| LQH32MN330K23 | 33 ±10%         | 1MHz           | 115                | 3.5 max.            | 40       | 1MHz           | 12                                    | 1210 |
| LQH32MN390J23 | 39 ±5%          | 1MHz           | 110                | 3.9 max.            | 40       | 1MHz           | 11                                    | 1210 |
| LQH32MN390K23 | 39 ±10%         | 1MHz           | 110                | 3.9 max.            | 40       | 1MHz           | 11                                    | 1210 |
| LQH32MN470J23 | 47 ±5%          | 1MHz           | 100                | 4.3 max.            | 40       | 1MHz           | 11                                    | 1210 |
| LQH32MN470K23 | 47 ±10%         | 1MHz           | 100                | 4.3 max.            | 40       | 1MHz           | 11                                    | 1210 |
| LQH32MN560J23 | 56 ±5%          | 1MHz           | 85                 | 4.9 max.            | 40       | 1MHz           | 10                                    | 1210 |
| LQH32MN560K23 | 56 ±10%         | 1MHz           | 85                 | 4.9 max.            | 40       | 1MHz           | 10                                    | 1210 |
| LQH32MN680J23 | 68 ±5%          | 1MHz           | 80                 | 5.5 max.            | 40       | 1MHz           | 9                                     | 1210 |
| LQH32MN680K23 | 68 ±10%         | 1MHz           | 80                 | 5.5 max.            | 40       | 1MHz           | 9                                     | 1210 |
| LQH32MN820J23 | 82 ±5%          | 1MHz           | 70                 | 6.2 max.            | 40       | 1MHz           | 8.5                                   | 1210 |
| LQH32MN820K23 | 82 ±10%         | 1MHz           | 70                 | 6.2 max.            | 40       | 1MHz           | 8.5                                   | 1210 |
| LQH32MN101J23 | 100 ±5%         | 1MHz           | 80                 | 7.0 max.            | 40       | 796kHz         | 8                                     | 1210 |
| LQH32MN101K23 | 100 ±10%        | 1MHz           | 80                 | 7.0 max.            | 40       | 796kHz         | 8                                     | 1210 |
| LQH32MN121J23 | 120 ±5%         | 1MHz           | 75                 | 8.0 max.            | 40       | 796kHz         | 7.5                                   | 1210 |
| LQH32MN121K23 | 120 ±10%        | 1MHz           | 75                 | 8.0 max.            | 40       | 796kHz         | 7.5                                   | 1210 |
| LQH32MN151J23 | 150 ±5%         | 1MHz           | 70                 | 9.3 max.            | 40       | 796kHz         | 7                                     | 1210 |
| LQH32MN151K23 | 150 ±10%        | 1MHz           | 70                 | 9.3 max.            | 40       | 796kHz         | 7                                     | 1210 |

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| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|----------|----------------|---------------------------------------|------|
| LQH32MN181J23 | 180 ±5%         | 1MHz           | 65                 | 10.2 max.           | 40       | 796kHz         | 6                                     | 1210 |
| LQH32MN181K23 | 180 ±10%        | 1MHz           | 65                 | 10.2 max.           | 40       | 796kHz         | 6                                     | 1210 |
| LQH32MN221J23 | 220 ±5%         | 1MHz           | 65                 | 11.8 max.           | 40       | 796kHz         | 5.5                                   | 1210 |
| LQH32MN221K23 | 220 ±10%        | 1MHz           | 65                 | 11.8 max.           | 40       | 796kHz         | 5.5                                   | 1210 |
| LQH32MN271J23 | 270 ±5%         | 1MHz           | 65                 | 12.5 max.           | 40       | 796kHz         | 5                                     | 1210 |
| LQH32MN271K23 | 270 ±10%        | 1MHz           | 65                 | 12.5 max.           | 40       | 796kHz         | 5                                     | 1210 |
| LQH32MN331J23 | 330 ±5%         | 1MHz           | 65                 | 13.0 max.           | 40       | 796kHz         | 5                                     | 1210 |
| LQH32MN331K23 | 330 ±10%        | 1MHz           | 65                 | 13.0 max.           | 40       | 796kHz         | 5                                     | 1210 |
| LQH32MN391J23 | 390 ±5%         | 1MHz           | 50                 | 22.0 max.           | 50       | 796kHz         | 5                                     | 1210 |
| LQH32MN391K23 | 390 ±10%        | 1MHz           | 50                 | 22.0 max.           | 50       | 796kHz         | 5                                     | 1210 |
| LQH32MN471J23 | 470 ±5%         | 1kHz           | 45                 | 25.0 max.           | 50       | 796kHz         | 5                                     | 1210 |
| LQH32MN471K23 | 470 ±10%        | 1kHz           | 45                 | 25.0 max.           | 50       | 796kHz         | 5                                     | 1210 |
| LQH32MN561J23 | 560 ±5%         | 1kHz           | 40                 | 28.0 max.           | 50       | 796kHz         | 5                                     | 1210 |
| LQH32MN561K23 | 560 ±10%        | 1kHz           | 40                 | 28.0 max.           | 50       | 796kHz         | 5                                     | 1210 |

Operating Temp. Range: -25°C to +85°C

■ Q-Frequency Characteristics



■ Inductance-Current Characteristics



## LQH43M/N Series

LQH43M/N series consists of wound type chip coils for general use by Murata's original auto winding technology and ferrite core.

### ■ Features

1. High Q value at high frequency and low DC resistance
2. Wide inductance range from 1.0 to 2200 micro H
3. Large current and large inductance



(in mm)

| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|----------|----------------|---------------------------------------|------|
| LQH43MN1R0M03 | 1.0 ±20%        | 1MHz           | 500                | 0.20 max.           | 20       | 1MHz           | 120                                   | 1812 |
| LQH43MN1R2M03 | 1.2 ±20%        | 1MHz           | 500                | 0.20 max.           | 20       | 1MHz           | 100                                   | 1812 |
| LQH43MN1R5M03 | 1.5 ±20%        | 1MHz           | 500                | 0.30 max.           | 20       | 1MHz           | 85                                    | 1812 |
| LQH43MN1R8M03 | 1.8 ±20%        | 1MHz           | 500                | 0.30 max.           | 20       | 1MHz           | 75                                    | 1812 |
| LQH43MN2R2M03 | 2.2 ±20%        | 1MHz           | 500                | 0.30 max.           | 20       | 1MHz           | 62                                    | 1812 |
| LQH43MN2R7M03 | 2.7 ±20%        | 1MHz           | 500                | 0.32 max.           | 20       | 1MHz           | 53                                    | 1812 |
| LQH43MN3R3M03 | 3.3 ±20%        | 1MHz           | 500                | 0.35 max.           | 20       | 1MHz           | 47                                    | 1812 |
| LQH43MN3R9M03 | 3.9 ±20%        | 1MHz           | 500                | 0.38 max.           | 20       | 1MHz           | 41                                    | 1812 |
| LQH43MN4R7K03 | 4.7 ±10%        | 1MHz           | 500                | 0.40 max.           | 30       | 1MHz           | 38                                    | 1812 |
| LQH43MN5R6K03 | 5.6 ±10%        | 1MHz           | 500                | 0.47 max.           | 30       | 1MHz           | 33                                    | 1812 |
| LQH43MN6R8K03 | 6.8 ±10%        | 1MHz           | 450                | 0.50 max.           | 30       | 1MHz           | 31                                    | 1812 |
| LQH43MN8R2K03 | 8.2 ±10%        | 1MHz           | 450                | 0.56 max.           | 30       | 1MHz           | 27                                    | 1812 |
| LQH43MN100J03 | 10 ±5%          | 1MHz           | 400                | 0.56 max.           | 35       | 1MHz           | 23                                    | 1812 |
| LQH43MN100K03 | 10 ±10%         | 1MHz           | 400                | 0.56 max.           | 35       | 1MHz           | 23                                    | 1812 |
| LQH43MN120J03 | 12 ±5%          | 1MHz           | 380                | 0.62 max.           | 35       | 1MHz           | 21                                    | 1812 |
| LQH43MN120K03 | 12 ±10%         | 1MHz           | 380                | 0.62 max.           | 35       | 1MHz           | 21                                    | 1812 |
| LQH43MN150J03 | 15 ±5%          | 1MHz           | 360                | 0.73 max.           | 35       | 1MHz           | 19                                    | 1812 |
| LQH43MN150K03 | 15 ±10%         | 1MHz           | 360                | 0.73 max.           | 35       | 1MHz           | 19                                    | 1812 |
| LQH43MN180J03 | 18 ±5%          | 1MHz           | 340                | 0.82 max.           | 35       | 1MHz           | 17                                    | 1812 |
| LQH43MN180K03 | 18 ±10%         | 1MHz           | 340                | 0.82 max.           | 35       | 1MHz           | 17                                    | 1812 |
| LQH43MN220J03 | 22 ±5%          | 1MHz           | 320                | 0.94 max.           | 35       | 1MHz           | 15                                    | 1812 |
| LQH43MN220K03 | 22 ±10%         | 1MHz           | 320                | 0.94 max.           | 35       | 1MHz           | 15                                    | 1812 |
| LQH43MN270J03 | 27 ±5%          | 1MHz           | 300                | 1.1 max.            | 35       | 1MHz           | 14                                    | 1812 |
| LQH43MN270K03 | 27 ±10%         | 1MHz           | 300                | 1.1 max.            | 35       | 1MHz           | 14                                    | 1812 |
| LQH43MN330J03 | 33 ±5%          | 1MHz           | 270                | 1.2 max.            | 35       | 1MHz           | 12                                    | 1812 |
| LQH43MN330K03 | 33 ±10%         | 1MHz           | 270                | 1.2 max.            | 35       | 1MHz           | 12                                    | 1812 |
| LQH43MN390J03 | 39 ±5%          | 1MHz           | 240                | 1.4 max.            | 35       | 1MHz           | 11                                    | 1812 |
| LQH43MN390K03 | 39 ±10%         | 1MHz           | 240                | 1.4 max.            | 35       | 1MHz           | 11                                    | 1812 |
| LQH43MN470J03 | 47 ±5%          | 1MHz           | 220                | 1.5 max.            | 35       | 1MHz           | 10                                    | 1812 |
| LQH43MN470K03 | 47 ±10%         | 1MHz           | 220                | 1.5 max.            | 35       | 1MHz           | 10                                    | 1812 |
| LQH43MN560J03 | 56 ±5%          | 1MHz           | 200                | 1.7 max.            | 35       | 1MHz           | 9.3                                   | 1812 |
| LQH43MN560K03 | 56 ±10%         | 1MHz           | 200                | 1.7 max.            | 35       | 1MHz           | 9.3                                   | 1812 |
| LQH43MN680J03 | 68 ±5%          | 1MHz           | 180                | 1.9 max.            | 35       | 1MHz           | 8.4                                   | 1812 |
| LQH43MN680K03 | 68 ±10%         | 1MHz           | 180                | 1.9 max.            | 35       | 1MHz           | 8.4                                   | 1812 |
| LQH43MN820J03 | 82 ±5%          | 1MHz           | 170                | 2.2 max.            | 35       | 1MHz           | 7.5                                   | 1812 |
| LQH43MN820K03 | 82 ±10%         | 1MHz           | 170                | 2.2 max.            | 35       | 1MHz           | 7.5                                   | 1812 |
| LQH43MN101J03 | 100 ±5%         | 1MHz           | 160                | 2.5 max.            | 40       | 796kHz         | 6.8                                   | 1812 |
| LQH43MN101K03 | 100 ±10%        | 1MHz           | 160                | 2.5 max.            | 40       | 796kHz         | 6.8                                   | 1812 |
| LQH43MN121J03 | 120 ±5%         | 1MHz           | 150                | 3.0 max.            | 40       | 796kHz         | 6.2                                   | 1812 |
| LQH43MN121K03 | 120 ±10%        | 1MHz           | 150                | 3.0 max.            | 40       | 796kHz         | 6.2                                   | 1812 |
| LQH43MN151J03 | 150 ±5%         | 1MHz           | 130                | 3.7 max.            | 40       | 796kHz         | 5.5                                   | 1812 |
| LQH43MN151K03 | 150 ±10%        | 1MHz           | 130                | 3.7 max.            | 40       | 796kHz         | 5.5                                   | 1812 |

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| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Q (min.) | Test Frequency | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|----------|----------------|---------------------------------------|------|
| LQH43MN181J03 | 180 ±5%         | 1MHz           | 120                | 4.5 max.            | 40       | 796kHz         | 5                                     | 1812 |
| LQH43MN181K03 | 180 ±10%        | 1MHz           | 120                | 4.5 max.            | 40       | 796kHz         | 5                                     | 1812 |
| LQH43MN221J03 | 220 ±5%         | 1MHz           | 110                | 5.4 max.            | 40       | 796kHz         | 4.5                                   | 1812 |
| LQH43MN221K03 | 220 ±10%        | 1MHz           | 110                | 5.4 max.            | 40       | 796kHz         | 4.5                                   | 1812 |
| LQH43MN271J03 | 270 ±5%         | 1MHz           | 100                | 6.8 max.            | 40       | 796kHz         | 4                                     | 1812 |
| LQH43MN271K03 | 270 ±10%        | 1MHz           | 100                | 6.8 max.            | 40       | 796kHz         | 4                                     | 1812 |
| LQH43MN331J03 | 330 ±5%         | 1MHz           | 95                 | 8.2 max.            | 40       | 796kHz         | 3.6                                   | 1812 |
| LQH43MN331K03 | 330 ±10%        | 1MHz           | 95                 | 8.2 max.            | 40       | 796kHz         | 3.6                                   | 1812 |
| LQH43MN391J03 | 390 ±5%         | 1MHz           | 90                 | 9.7 max.            | 40       | 796kHz         | 3.3                                   | 1812 |
| LQH43MN391K03 | 390 ±10%        | 1MHz           | 90                 | 9.7 max.            | 40       | 796kHz         | 3.3                                   | 1812 |
| LQH43MN471J03 | 470 ±5%         | 1kHz           | 80                 | 11.8 max.           | 40       | 796kHz         | 3                                     | 1812 |
| LQH43MN471K03 | 470 ±10%        | 1kHz           | 80                 | 11.8 max.           | 40       | 796kHz         | 3                                     | 1812 |
| LQH43MN561J03 | 560 ±5%         | 1kHz           | 70                 | 14.5 max.           | 40       | 796kHz         | 2.7                                   | 1812 |
| LQH43MN561K03 | 560 ±10%        | 1kHz           | 70                 | 14.5 max.           | 40       | 796kHz         | 2.7                                   | 1812 |
| LQH43MN681J03 | 680 ±5%         | 1kHz           | 65                 | 17.0 max.           | 40       | 796kHz         | 2.5                                   | 1812 |
| LQH43MN681K03 | 680 ±10%        | 1kHz           | 65                 | 17.0 max.           | 40       | 796kHz         | 2.5                                   | 1812 |
| LQH43MN821J03 | 820 ±5%         | 1kHz           | 60                 | 20.5 max.           | 40       | 796kHz         | 2.2                                   | 1812 |
| LQH43MN821K03 | 820 ±10%        | 1kHz           | 60                 | 20.5 max.           | 40       | 796kHz         | 2.2                                   | 1812 |
| LQH43MN102J03 | 1000 ±5%        | 1kHz           | 50                 | 25.0 max.           | 40       | 252kHz         | 2                                     | 1812 |
| LQH43MN102K03 | 1000 ±10%       | 1kHz           | 50                 | 25.0 max.           | 40       | 252kHz         | 2                                     | 1812 |
| LQH43MN122J03 | 1200 ±5%        | 1kHz           | 45                 | 30.0 max.           | 40       | 252kHz         | 1.8                                   | 1812 |
| LQH43MN122K03 | 1200 ±10%       | 1kHz           | 45                 | 30.0 max.           | 40       | 252kHz         | 1.8                                   | 1812 |
| LQH43MN152J03 | 1500 ±5%        | 1kHz           | 40                 | 37.0 max.           | 40       | 252kHz         | 1.6                                   | 1812 |
| LQH43MN152K03 | 1500 ±10%       | 1kHz           | 40                 | 37.0 max.           | 40       | 252kHz         | 1.6                                   | 1812 |
| LQH43NN182J03 | 1800 ±5%        | 1kHz           | 35                 | 45.0 max.           | 40       | 252kHz         | 1.5                                   | 1812 |
| LQH43NN182K03 | 1800 ±10%       | 1kHz           | 35                 | 45.0 max.           | 40       | 252kHz         | 1.5                                   | 1812 |
| LQH43NN222J03 | 2200 ±5%        | 1kHz           | 30                 | 50.0 max.           | 40       | 252kHz         | 1.3                                   | 1812 |
| LQH43NN222K03 | 2200 ±10%       | 1kHz           | 30                 | 50.0 max.           | 40       | 252kHz         | 1.3                                   | 1812 |

Operating Temp. Range: -25°C to +85°C

Q-Frequency Characteristics



Inductance-Current Characteristics



# Chip Coils

**muRata**

## for DC-DC Converter WoundType LQH2MC Series

### ■ Features

1. Wound type with 0.95mm low-profile
2. Size: 2.0x1.6mm
3. Rated current: 300mA (4.7 micro H)
4. Wide inductance range: 4.7 to 82 micro H

### ■ Applications

For DC-DC converter



(in mm)

| Part Number   | Inductance (μH) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) |
|---------------|-----------------|--------------------|---------------------|---------------------------------------|
| LQH2MCN4R7M02 | 4.7 ±20%        | 300                | 0.8 ±30%            | 60                                    |
| LQH2MCN5R6M02 | 5.6 ±20%        | 280                | 0.9 ±30%            | 60                                    |
| LQH2MCN6R8M02 | 6.8 ±20%        | 255                | 1.0 ±30%            | 55                                    |
| LQH2MCN8R2M02 | 8.2 ±20%        | 235                | 1.1 ±30%            | 50                                    |
| LQH2MCN100K02 | 10 ±10%         | 225                | 1.2 ±30%            | 48                                    |
| LQH2MCN120K02 | 12 ±10%         | 210                | 1.4 ±30%            | 44                                    |
| LQH2MCN150K02 | 15 ±10%         | 200                | 1.6 ±30%            | 40                                    |
| LQH2MCN180K02 | 18 ±10%         | 190                | 1.8 ±30%            | 35                                    |
| LQH2MCN220K02 | 22 ±10%         | 185                | 2.1 ±30%            | 30                                    |
| LQH2MCN270K02 | 27 ±10%         | 180                | 2.5 ±30%            | 30                                    |
| LQH2MCN330K02 | 33 ±10%         | 160                | 2.8 ±30%            | 28                                    |
| LQH2MCN390K02 | 39 ±20%         | 125                | 4.4 ±30%            | 24                                    |
| LQH2MCN470K02 | 47 ±20%         | 120                | 5.1 ±30%            | 18                                    |
| LQH2MCN560K02 | 56 ±20%         | 110                | 5.7 ±30%            | 17                                    |
| LQH2MCN680K02 | 68 ±20%         | 100                | 6.6 ±30%            | 14                                    |
| LQH2MCN820K02 | 82 ±20%         | 90                 | 7.5 ±30%            | 14                                    |

Operating Temp. Range: -40°C to +85°C

Only for reflow soldering.

### ■ Inductance-Frequency Characteristics



### ■ Inductance-Current Characteristics



Chip Coils



for Choke Monolithic Type LQM21D/LQM21F/LQM31F Series

LQM21D Series

The LQM21D series consists of magnetically shielded chip inductors. It has less than half the DC resistance of our conventional monolithic chip inductors as well as high inductance.

■ Features

- 1. The inductors have very low DC resistance.
- 2. The series has an inductance range of 1.0 micro H to 47 micro H.
- 3. Magnetically shielded structure provides excellent crosstalk characteristics.
- 4. Compact (2.0x1.25mm) and lightweight
- 5. Outstanding solder heat resistance. Either flow or reflow soldering methods can be employed.



|                |                          |          |
|----------------|--------------------------|----------|
| Dimension of t | Inductance : 1.0 to 10μH | 0.85±0.2 |
|                | Inductance : 22 to 47μH  | 1.25±0.2 |

| Part Number   | Inductance (μH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|---------------------------------------|------|
| LQM21DN1R0N00 | 1.0 ±30%        | 1                    | 60                 | 0.10 max.           | 75                                    | 0805 |
| LQM21DN2R2N00 | 2.2 ±30%        | 1                    | 40                 | 0.17 max.           | 50                                    | 0805 |
| LQM21DN4R7N00 | 4.7 ±30%        | 1                    | 30                 | 0.30 max.           | 35                                    | 0805 |
| LQM21DN100N00 | 10 ±30%         | 1                    | 15                 | 0.50 max.           | 24                                    | 0805 |
| LQM21DN220N00 | 22 ±30%         | 1                    | 13                 | 0.65 max.           | 16                                    | 0805 |
| LQM21DN470N00 | 47 ±30%         | 1                    | 7                  | 1.20 max.           | 7.5                                   | 0805 |

Operating Temp. Range: -40°C to +85°C

■ Impedance-Frequency Characteristics



## LQM21F\_00 Series

The LQM21F series consists of magnetically shielded chip coils based on Murata's technologies of multilayer process and magnetic materials. Excellent direct current characteristics are realized by using magnetic materials which have excellent saturation characteristics. The inductance of LQM21F is four times as large as that of conventional items.



|                |                                |          |
|----------------|--------------------------------|----------|
| Dimension of t | Inductance : 1.0 to 10 $\mu$ H | 0.85±0.2 |
|                | Inductance : 22 to 47 $\mu$ H  | 1.25±0.2 |

### ■ Features

1. LQM21F series is suitable for power line choke because of its excellent direct current characteristics. The series has larger rated current (60mA at 10 micro H) than conventional rated current.
2. Low DC resistance is realized.
3. The crosstalk characteristics are excellent because of the use of magnetically shielded structure.
4. Small size (2.0x1.25mm) and light weight
5. The series has excellent solder heat resistance. Both flow and reflow soldering can be employed.

| Part Number   | Inductance ( $\mu$ H) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------------|----------------------|--------------------|---------------------|---------------------------------------|------|
| LQM21FN1R0N00 | 1.0 $\pm$ 30%         | 1                    | 220                | 0.20 $\pm$ 30%      | 105                                   | 0805 |
| LQM21FN2R2N00 | 2.2 $\pm$ 30%         | 1                    | 150                | 0.28 $\pm$ 30%      | 70                                    | 0805 |
| LQM21FN4R7N00 | 4.7 $\pm$ 30%         | 1                    | 80                 | 0.30 $\pm$ 30%      | 25                                    | 0805 |
| LQM21FN100N00 | 10 $\pm$ 30%          | 1                    | 60                 | 0.50 $\pm$ 30%      | 15                                    | 0805 |
| LQM21FN220N00 | 22 $\pm$ 30%          | 1                    | 13                 | 0.35 $\pm$ 30%      | 15                                    | 0805 |
| LQM21FN470N00 | 47 $\pm$ 30%          | 1                    | 7                  | 0.60 $\pm$ 30%      | 7.5                                   | 0805 |

Operating Temp. Range: -40°C to +85°C

### ■ Inductance-Current Characteristics



### ■ Impedance-Frequency Characteristics



LQM21F\_70 Series

■ Features

Rated Current is larger than previous (LQM21F\_00) series.

Rated Current: 100mA (10 micro H)



| Part Number   | Inductance ( $\mu$ H) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------------|----------------------|--------------------|---------------------|---------------------------------------|------|
| LQM21FN4R7M70 | $4.7 \pm 20\%$        | 1                    | 120                | $0.35 \pm 30\%$     | 25                                    | 0805 |
| LQM21FN100M70 | $10 \pm 20\%$         | 1                    | 100                | $0.60 \pm 30\%$     | 15                                    | 0805 |

Operating Temp. Range: -55°C to +125°C

■ Inductance-Current Characteristics



■ Impedance-Frequency Characteristics



LQM31F Series

LQM31F series consists of magnetically shielded chip coils based on Murata's technologies of multilayer process and magnetic materials. Excellent direct current characteristics and low DC resistance are realized by using magnetic materials which have excellent saturation characteristics and high permeability.

■ Features

- 1. LQM31F series is suitable for power line choke because of its excellent direct current characteristics and large rated current (70mA at 10 micro H).
- 2. Low DC resistance is realized.
- 3. The crosstalk characteristics are excellent because of magnetically shielded structure.
- 4. Low profile 1.0mm
- 5. The series has excellent solder heat resistance. Both flow and reflow soldering can be employed.

■ Applications

Circuits for DC power line choke of telecommunications equipment such as PDAs, Note-PCs, digital cameras, MD and DVD-RAM



| Part Number   | Inductance (μH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|---------------------------------------|------|
| LQM31FN100M00 | 10 ±20%         | 1                    | 70                 | 0.50 max.           | 20                                    | 1206 |

Operating Temp. Range: -40°C to +85°C

■ Impedance-Frequency Characteristics



■ Inductance-Current Characteristics



# Chip Coils

**muRata**

## for Choke Wound Type LQH31C/LQH32C/LQH43C Series

### LQH31C Series

#### ■ Features

LQH31C series consists of miniature chip inductors with low DC resistance, high current capacity, and high impedance characteristics. It is suitable for use as choke coils in DC power supply circuits. High rated current up to 970mA is available.



| Part Number   | Inductance (μH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|---------------------------------------|------|
| LQH31CNR12M03 | 0.12 ±20%       | 1                    | 970                | 0.08 ±40%           | 250                                   | 1206 |
| LQH31CNR22M03 | 0.22 ±20%       | 1                    | 850                | 0.1 ±40%            | 250                                   | 1206 |
| LQH31CNR47M03 | 0.47 ±20%       | 1                    | 700                | 0.15 ±40%           | 180                                   | 1206 |
| LQH31CN1R0M03 | 1.0 ±20%        | 1                    | 510                | 0.28 ±30%           | 100                                   | 1206 |
| LQH31CN2R2M03 | 2.2 ±20%        | 1                    | 430                | 0.41 ±30%           | 50                                    | 1206 |
| LQH31CN4R7M03 | 4.7 ±20%        | 1                    | 340                | 0.65 ±30%           | 31                                    | 1206 |
| LQH31CN100K03 | 10 ±10%         | 1                    | 230                | 1.3 ±30%            | 20                                    | 1206 |
| LQH31CN220K03 | 22 ±10%         | 1                    | 160                | 3.0 ±30%            | 14                                    | 1206 |
| LQH31CN470K03 | 47 ±10%         | 1                    | 100                | 8.0 ±30%            | 10                                    | 1206 |
| LQH31CN101K03 | 100 ±10%        | 1                    | 80                 | 12 ±30%             | 7                                     | 1206 |

Operating Temp. Range: -25°C to +85°C

10

#### ■ Impedance-Frequency Characteristics



#### ■ Inductance-Current Characteristics



LQH32C series consists of miniature chip coils with low DC resistance, high current capacity, and high impedance characteristics. These features are made possible by the development of Murata's innovative automatic wound techniques.

### ■ Features (LQH32C\_23/\_33)

1. Low DC resistance, high rated current and high inductance. Inductance: 0.15 to 560 micro H.
2. The series exhibits low voltage drops and small variations in inductance with respect to temperature rise and DC current level. This makes them excellent for use as power supply line choke coils.
3. The series has excellent solder heat resistance. Both flow and reflow soldering methods can be employed.



LQH32C\_23/\_33

### LQH32C\_23 Series

| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|---------------------------------------|------|
| LQH32CN1R0M23 | 1.0 ±20%        | 1MHz           | 800                | 0.09 ±30%           | 96                                    | 1210 |
| LQH32CN2R2M23 | 2.2 ±20%        | 1MHz           | 600                | 0.13 ±30%           | 64                                    | 1210 |
| LQH32CN4R7M23 | 4.7 ±20%        | 1MHz           | 450                | 0.2 ±30%            | 43                                    | 1210 |
| LQH32CN100K23 | 10 ±10%         | 1MHz           | 300                | 0.44 ±30%           | 26                                    | 1210 |
| LQH32CN220K23 | 22 ±10%         | 1MHz           | 250                | 0.71 ±30%           | 19                                    | 1210 |
| LQH32CN470K23 | 47 ±10%         | 1MHz           | 170                | 1.3 ±30%            | 15                                    | 1210 |
| LQH32CN101K23 | 100 ±10%        | 1MHz           | 100                | 3.5 ±30%            | 10                                    | 1210 |
| LQH32CN221K23 | 220 ±10%        | 1MHz           | 70                 | 8.4 ±30%            | 6.8                                   | 1210 |
| LQH32CN331K23 | 330 ±10%        | 1MHz           | 60                 | 10 ±30%             | 5.6                                   | 1210 |
| LQH32CN391K23 | 390 ±10%        | 1MHz           | 60                 | 17 ±30%             | 5                                     | 1210 |
| LQH32CN471K23 | 470 ±10%        | 1kHz           | 60                 | 19 ±30%             | 5                                     | 1210 |
| LQH32CN561K23 | 560 ±10%        | 1kHz           | 60                 | 22 ±30%             | 5                                     | 1210 |

Operating Temp. Range: -25°C to +85°C

10

### LQH32C\_33 Series (Low DC Resistance Type)

| Part Number   | Inductance (μH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|---------------------------------------|------|
| LQH32CNR15M33 | 0.15 ±20%       | 1                    | 1450               | 0.028 ±30%          | 400                                   | 1210 |
| LQH32CNR27M33 | 0.27 ±20%       | 1                    | 1250               | 0.034 ±30%          | 250                                   | 1210 |
| LQH32CNR47M33 | 0.47 ±20%       | 1                    | 1100               | 0.042 ±30%          | 150                                   | 1210 |
| LQH32CN1R0M33 | 1.0 ±20%        | 1                    | 1000               | 0.06 ±30%           | 100                                   | 1210 |
| LQH32CN2R2M33 | 2.2 ±20%        | 1                    | 790                | 0.097 ±30%          | 64                                    | 1210 |
| LQH32CN4R7M33 | 4.7 ±20%        | 1                    | 650                | 0.15 ±30%           | 43                                    | 1210 |
| LQH32CN100K33 | 10 ±10%         | 1                    | 450                | 0.3 ±30%            | 26                                    | 1210 |

Operating Temp. Range: -25°C to +85°C

■ Impedance-Frequency Characteristics



■ Inductance-Current Characteristics



## LQH32C\_53 Series (Low Profile Type)

LQH32C\_53 series consists of miniature chip coils with low DC resistance, high current capacity, and high impedance characteristics. These features are made possible by the development of Murata's innovative wound techniques. They are excellent for use as choke coils in DC power supply circuits. The LQH32C\_53 series has achieved Max 1.7mm height and high rated current.



### ■ Features

1. The series has a wide inductance range of 1.0 to 100 micro H.
2. The series exhibit low voltage drops and small variations in inductance with respect to temperature rise and DC current level. This makes them excellent for use as power supply line choke coils.
3. The series has excellent solder heat resistance. Both flow and reflow soldering methods can be employed.

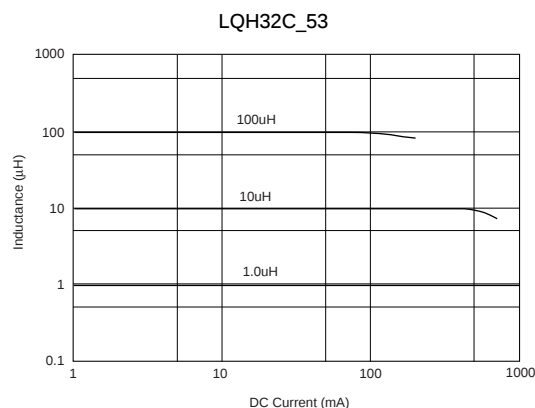
| Part Number   | Inductance (μH) | Test Frequency (MHz) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|---------------------------------------|------|
| LQH32CN1R0M53 | 1.0 ±20%        | 1                    | 1000               | 0.060 ±30%          | 100                                   | 1210 |
| LQH32CN2R2M53 | 2.2 ±20%        | 1                    | 790                | 0.097 ±30%          | 64                                    | 1210 |
| LQH32CN4R7M53 | 4.7 ±20%        | 1                    | 650                | 0.15 ±30%           | 43                                    | 1210 |
| LQH32CN100K53 | 10 ±10%         | 1                    | 450                | 0.30 ±30%           | 26                                    | 1210 |
| LQH32CN150K53 | 15 ±10%         | 1                    | 300                | 0.58 ±30%           | 26                                    | 1210 |
| LQH32CN220K53 | 22 ±10%         | 1                    | 250                | 0.71 ±30%           | 19                                    | 1210 |
| LQH32CN330K53 | 33 ±10%         | 1                    | 200                | 1.1 ±30%            | 17                                    | 1210 |
| LQH32CN470K53 | 47 ±10%         | 1                    | 170                | 1.3 ±30%            | 15                                    | 1210 |
| LQH32CN680K53 | 68 ±10%         | 1                    | 130                | 2.2 ±30%            | 12                                    | 1210 |
| LQH32CN101K53 | 100 ±10%        | 1                    | 100                | 3.5 ±30%            | 10                                    | 1210 |

Operating Temp. Range: -25°C to +85°C

### ■ Impedance-Frequency Characteristics



### ■ Inductance-Current Characteristics



## LQH43C Series

LQH43C series consists of miniature chip inductors with low DC resistance, high current capacity, and high impedance characteristics. It is suitable for use as choke coils in DC power supply circuits.

### ■ Features

1. Various inductance ranges are available.
2. The series exhibits low voltage drops and small change in inductance with respect to temperature rise and DC current level. This makes them excellent to use as power supply line choke coils.
3. Small size 4.5x3.2mm and realized low height 2.8mm max.
4. The series has excellent solder heat resistance. Both flow and reflow soldering methods can be employed.



| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|---------------------------------------|------|
| LQH43CN1R0M03 | 1.0 ±20%        | 1MHz           | 1080               | 0.08 max.           | 100                                   | 1812 |
| LQH43CN1R5M03 | 1.5 ±20%        | 1MHz           | 1000               | 0.09 max.           | 85                                    | 1812 |
| LQH43CN2R2M03 | 2.2 ±20%        | 1MHz           | 900                | 0.11 max.           | 60                                    | 1812 |
| LQH43CN3R3M03 | 3.3 ±20%        | 1MHz           | 800                | 0.13 max.           | 47                                    | 1812 |
| LQH43CN4R7M03 | 4.7 ±20%        | 1MHz           | 750                | 0.15 max.           | 35                                    | 1812 |
| LQH43CN6R8M03 | 6.8 ±20%        | 1MHz           | 720                | 0.20 max.           | 30                                    | 1812 |
| LQH43CN100K03 | 10 ±10%         | 1MHz           | 650                | 0.24 max.           | 23                                    | 1812 |
| LQH43CN150K03 | 15 ±10%         | 1MHz           | 570                | 0.32 max.           | 20                                    | 1812 |
| LQH43CN220K03 | 22 ±10%         | 1MHz           | 420                | 0.6 max.            | 15                                    | 1812 |
| LQH43CN330K03 | 33 ±10%         | 1MHz           | 310                | 1.0 max.            | 12                                    | 1812 |
| LQH43CN470K03 | 47 ±10%         | 1MHz           | 280                | 1.1 max.            | 10                                    | 1812 |
| LQH43CN680K03 | 68 ±10%         | 1MHz           | 220                | 1.7 max.            | 8.4                                   | 1812 |
| LQH43CN101K03 | 100 ±10%        | 1MHz           | 190                | 2.2 max.            | 6.8                                   | 1812 |
| LQH43CN151K03 | 150 ±10%        | 1MHz           | 130                | 3.5 max.            | 5.5                                   | 1812 |
| LQH43CN221K03 | 220 ±10%        | 1MHz           | 110                | 4.0 max.            | 4.5                                   | 1812 |
| LQH43CN331K03 | 330 ±10%        | 1MHz           | 100                | 6.8 max.            | 3.6                                   | 1812 |
| LQH43CN471K03 | 470 ±10%        | 1kHz           | 90                 | 8.5 max.            | 3.0                                   | 1812 |

Operating Temp. Range: -25°C to +85°C

### ■ Impedance-Frequency Characteristics



### ■ Inductance-Current Characteristics



Chip Coils



for Choke Magnetic Shielded Type LQH3KS Series

LQH3KS\_23 Series

■ Features

- 1. Low profile dimension (2.1mm max.) and small size of 1212 (3.3x3.3mm) are suitable for portable equipment.
- 2. The series has low DC Resistance.
- 3. Large inductance of 560 to 2200 micro H
- 4. Magnetically shielded structure prevents interference occurring between peripheral components.



| Part Number   | Inductance (μH) | Test Frequency (kHz) | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------------|--------------------|---------------------|---------------------------------------|------|
| LQH3KSN561N23 | 560 ±30%        | 100                  | 50                 | 7.8 ±30%            | 3.0                                   | 1212 |
| LQH3KSN681N23 | 680 ±30%        | 100                  | 40                 | 9.1 ±30%            | 2.6                                   | 1212 |
| LQH3KSN102N23 | 1000 ±30%       | 10                   | 30                 | 11 ±30%             | 2.1                                   | 1212 |
| LQH3KSN152N23 | 1500 ±30%       | 10                   | 25                 | 23 ±30%             | 1.7                                   | 1212 |
| LQH3KSN222N23 | 2200 ±30%       | 10                   | 20                 | 28 ±30%             | 1.5                                   | 1212 |

Operating Temp. Range: -25°C to +85°C  
Only for reflow soldering.

■ Impedance-Frequency Characteristics



■ Inductance-Current Characteristics



## LQH3KS\_53 Series (Low Profile Type)

LQH3KS\_53 series is miniature chip inductor with high current capacity and low DC resistance. These features are achieved by Murata's innovative winding technology.

### ■ Features

1. Low profile (1.8mm max.) and small size (3.3x3.3mm)
2. The series has large inductance of 3.3 to 820 micro H.
3. Low DC resistance



| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|---------------------------------------|------|
| LQH3KSN3R3N53 | 3.3 ±30%        | 1MHz           | 320                | 0.07 ±30%           | 50                                    | 1212 |
| LQH3KSN4R7N53 | 4.7 ±30%        | 1MHz           | 260                | 0.09 ±30%           | 42                                    | 1212 |
| LQH3KSN6R8N53 | 6.8 ±30%        | 1MHz           | 210                | 0.10 ±30%           | 35                                    | 1212 |
| LQH3KSN100M53 | 10 ±20%         | 1MHz           | 180                | 0.17 ±30%           | 28                                    | 1212 |
| LQH3KSN220M53 | 22 ±20%         | 1MHz           | 120                | 0.40 ±30%           | 19                                    | 1212 |
| LQH3KSN330M53 | 33 ±20%         | 1MHz           | 100                | 0.50 ±30%           | 16                                    | 1212 |
| LQH3KSN471M53 | 470 ±20%        | 100kHz         | 30                 | 6.90 ±30%           | 4.2                                   | 1212 |
| LQH3KSN561M53 | 560 ±20%        | 100kHz         | 30                 | 7.60 ±30%           | 3.8                                   | 1212 |
| LQH3KSN821M53 | 820 ±20%        | 100kHz         | 20                 | 15.5 ±30%           | 3.2                                   | 1212 |

Operating Temp. Range: -25°C to +85°C  
Only for reflow soldering.

### ■ Impedance-Frequency Characteristics



### ■ Inductance-Current Characteristics



# Chip Coils

**muRata**

## for Choke Wound/Magnetic Shielded Type LQH55D/LQH66S Series

### LQH55D Series

LQH55D series are winding type coils for choke by using high performance thick wire wound technology.

#### ■ Features

1. Low direct current resistance, large current capacity and large inductance
2. For DC-DC converters and DC power supply circuits



| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|---------------------------------------|------|
| LQH55DNR12M03 | 0.12 ±20%       | 1MHz           | 6000               | 0.007 ±40%          | 450                                   | 2220 |
| LQH55DNR27M03 | 0.27 ±20%       | 1MHz           | 5300               | 0.010 ±40%          | 300                                   | 2220 |
| LQH55DNR47M03 | 0.47 ±20%       | 1MHz           | 4800               | 0.013 ±40%          | 200                                   | 2220 |
| LQH55DN1R0M03 | 1.0 ±20%        | 1MHz           | 4000               | 0.019 ±40%          | 150                                   | 2220 |
| LQH55DN1R5M03 | 1.5 ±20%        | 1MHz           | 3700               | 0.022 ±40%          | 110                                   | 2220 |
| LQH55DN2R2M03 | 2.2 ±20%        | 1MHz           | 3200               | 0.029 ±40%          | 80                                    | 2220 |
| LQH55DN3R3M03 | 3.3 ±20%        | 1MHz           | 2900               | 0.036 ±40%          | 40                                    | 2220 |
| LQH55DN4R7M03 | 4.7 ±20%        | 1MHz           | 2700               | 0.041 ±40%          | 30                                    | 2220 |
| LQH55DN6R8M03 | 6.8 ±20%        | 1MHz           | 2000               | 0.074 ±40%          | 25                                    | 2220 |
| LQH55DN100M03 | 10 ±20%         | 1MHz           | 1700               | 0.093 ±40%          | 20                                    | 2220 |
| LQH55DN150M03 | 15 ±20%         | 1MHz           | 1400               | 0.15 ±40%           | 17                                    | 2220 |
| LQH55DN220M03 | 22 ±20%         | 1MHz           | 1200               | 0.19 ±40%           | 15                                    | 2220 |
| LQH55DN330M03 | 33 ±20%         | 1MHz           | 900                | 0.32 ±40%           | 12                                    | 2220 |
| LQH55DN470M03 | 47 ±20%         | 1MHz           | 800                | 0.40 ±40%           | 10                                    | 2220 |
| LQH55DN680M03 | 68 ±20%         | 1MHz           | 640                | 0.67 ±40%           | 7.6                                   | 2220 |
| LQH55DN101M03 | 100 ±20%        | 100kHz         | 560                | 0.86 ±40%           | 6.5                                   | 2220 |
| LQH55DN151M03 | 150 ±20%        | 100kHz         | 420                | 1.9 ±40%            | 5.0                                   | 2220 |
| LQH55DN221M03 | 220 ±20%        | 100kHz         | 320                | 2.4 ±40%            | 4.0                                   | 2220 |
| LQH55DN331M03 | 330 ±20%        | 100kHz         | 270                | 4.4 ±40%            | 3.1                                   | 2220 |
| LQH55DN471M03 | 470 ±20%        | 100kHz         | 240                | 5.4 ±40%            | 2.4                                   | 2220 |
| LQH55DN681M03 | 680 ±20%        | 100kHz         | 190                | 8.1 ±40%            | 1.9                                   | 2220 |
| LQH55DN102M03 | 1000 ±20%       | 10kHz          | 150                | 10.3 ±40%           | 1.7                                   | 2220 |
| LQH55DN222M03 | 2200 ±20%       | 10kHz          | 100                | 21.5 ±40%           | 1.2                                   | 2220 |
| LQH55DN472M03 | 4700 ±20%       | 10kHz          | 70                 | 43.6 ±40%           | 0.8                                   | 2220 |
| LQH55DN103M03 | 10000 ±20%      | 10kHz          | 50                 | 100 ±40%            | 0.5                                   | 2220 |

Operating Temp. Range: -25°C to +80°C

Only for reflow soldering.

## ■ Impedance-Frequency Characteristics



## ■ Inductance-Current Characteristics

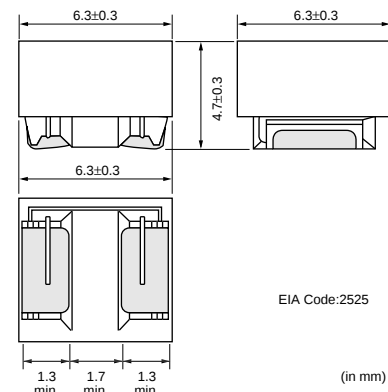


### LQH66S Series

LQH66S series are magnetic shielded type coils for choke by using high performance thick wire wound technology.

#### ■ Features

1. Low direct current resistance, large current capacity and large inductance
2. High density mounting
3. For DC-DC converters and DC power supply circuits



| Part Number   | Inductance (μH) | Test Frequency | Rated Current (mA) | DC Resistance (ohm) | Self Resonance Frequency (min.) (MHz) | EIA  |
|---------------|-----------------|----------------|--------------------|---------------------|---------------------------------------|------|
| LQH66SNR27M03 | 0.27 ±20%       | 1MHz           | 6000               | 0.007 ±40%          | 300                                   | 2525 |
| LQH66SNR68M03 | 0.68 ±20%       | 1MHz           | 5300               | 0.010 ±40%          | 180                                   | 2525 |
| LQH66SN1R0M03 | 1.0 ±20%        | 1MHz           | 4700               | 0.013 ±40%          | 150                                   | 2525 |
| LQH66SN1R5M03 | 1.5 ±20%        | 1MHz           | 3800               | 0.016 ±40%          | 110                                   | 2525 |
| LQH66SN2R2M03 | 2.2 ±20%        | 1MHz           | 3300               | 0.019 ±40%          | 80                                    | 2525 |
| LQH66SN3R3M03 | 3.3 ±20%        | 1MHz           | 2600               | 0.022 ±40%          | 40                                    | 2525 |
| LQH66SN4R7M03 | 4.7 ±20%        | 1MHz           | 2200               | 0.025 ±40%          | 30                                    | 2525 |
| LQH66SN6R8M03 | 6.8 ±20%        | 1MHz           | 1800               | 0.029 ±40%          | 25                                    | 2525 |
| LQH66SN100M03 | 10 ±20%         | 1MHz           | 1600               | 0.036 ±40%          | 20                                    | 2525 |
| LQH66SN150M03 | 15 ±20%         | 1MHz           | 1300               | 0.069 ±40%          | 17                                    | 2525 |
| LQH66SN220M03 | 22 ±20%         | 1MHz           | 1100               | 0.087 ±40%          | 15                                    | 2525 |
| LQH66SN330M03 | 33 ±20%         | 1MHz           | 860                | 0.14 ±40%           | 12                                    | 2525 |
| LQH66SN470M03 | 47 ±20%         | 1MHz           | 760                | 0.17 ±40%           | 10                                    | 2525 |
| LQH66SN680M03 | 68 ±20%         | 1MHz           | 600                | 0.29 ±40%           | 7.6                                   | 2525 |
| LQH66SN101M03 | 100 ±20%        | 100kHz         | 520                | 0.36 ±40%           | 6.5                                   | 2525 |
| LQH66SN151M03 | 150 ±20%        | 100kHz         | 420                | 0.63 ±40%           | 5.0                                   | 2525 |
| LQH66SN221M03 | 220 ±20%        | 100kHz         | 350                | 0.79 ±40%           | 4.0                                   | 2525 |
| LQH66SN331M03 | 330 ±20%        | 100kHz         | 280                | 1.8 ±40%            | 3.2                                   | 2525 |
| LQH66SN471M03 | 470 ±20%        | 100kHz         | 240                | 2.2 ±40%            | 2.5                                   | 2525 |
| LQH66SN681M03 | 680 ±20%        | 100kHz         | 200                | 3.9 ±40%            | 2.0                                   | 2525 |
| LQH66SN102M03 | 1000 ±20%       | 10kHz          | 160                | 4.9 ±40%            | 1.7                                   | 2525 |
| LQH66SN222M03 | 2200 ±20%       | 10kHz          | 100                | 9.4 ±40%            | 1.2                                   | 2525 |
| LQH66SN472M03 | 4700 ±20%       | 10kHz          | 70                 | 19.5 ±40%           | 0.8                                   | 2525 |
| LQH66SN103M03 | 10000 ±20%      | 10kHz          | 50                 | 39.7 ±40%           | 0.5                                   | 2525 |

Operating Temp. Range: -25°C to +80°C Only for reflow soldering.

■ Impedance-Frequency Characteristics



■ Inductance-Current Characteristics



## ⚠Caution/Notice

### ■ ⚠Caution (Rating)

Do not use products beyond the rated current as this may create excessive heat.

### ■ Notice (Storage and Operating Condition)

#### <Operating Environment>

Do not use products in chemical atmosphere such as chlorine gas, acid or sulfide gas.

#### <Storage Requirements>

##### 1. Storage Period

LQG/LQM series should be used within 6 months; the other products should be used within 12 months.

Check solderability if this period is exceeded.

##### 2. Storage conditions

(1) Store products in a warehouse in compliance with the following conditions:

Temperature: -10 to 40 degree C.

Humidity: 30 to 70% (relative humidity)

Do not subject products to rapid changes in temperature and humidity.

Do not store them in chemical atmosphere such as one containing sulfurous acid gas or alkaline gas.

This will prevent electrode oxidation which causes poor solderability and possible corrosion of coils.

- (2) Do not store products in bulk packaging to prevent collision among coils which causes core chipping and wire breakage.
- (3) Store products on pallets to protect from humidity, dust, etc.
- (4) Avoid heat shock, vibration, direct sunlight, etc.

⚠Caution/Notice

■ Notice (Soldering and Mounting)

1. Standard Land Dimensions

A high Q value is achieved when the PCB electrode land pattern is designed so that it does not project beyond the chip coil electrode.

Land Pattern  
Solder Resist  
(in mm)

| Series                                                                                                                                                       | Standard Land Dimensions                                                            |                            |                                                                                     |         |         |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------|---------|---------|---------|
| LQG15H<br>LQG18H<br>LQM18N<br>LQM21N/21D/21F<br>LQM31F<br>LQP03T<br>LQP15M/15T<br>LQP18M<br>LQH2MC<br>LQW15A<br>LQW18A<br>LQW2BH<br>LQW31H<br>LQH31M/31C/31H |    | Part Number                | a                                                                                   | b       | c       |         |
|                                                                                                                                                              |                                                                                     | LQG15H                     |                                                                                     | 0.5-0.6 | 1.4-1.5 | 0.4     |
|                                                                                                                                                              |                                                                                     | LQG18H                     |                                                                                     | 0.6-0.8 | 1.8-2.2 | 0.6-0.8 |
|                                                                                                                                                              |                                                                                     | LQM18N                     | Flow                                                                                | 0.7     | 2.2-2.6 | 0.7     |
|                                                                                                                                                              |                                                                                     |                            | Reflow                                                                              |         | 1.8-2.0 |         |
|                                                                                                                                                              |                                                                                     | LQM21N/21D/21F             |                                                                                     | 1.0     | 3.0-4.0 | 1.2     |
|                                                                                                                                                              |                                                                                     | LQM31F                     |                                                                                     | 1.2     | 4.2-5.2 | 2.0     |
|                                                                                                                                                              |                                                                                     | LQP03T                     |                                                                                     | 0.2-0.3 | 0.8-0.9 | 0.2-0.3 |
|                                                                                                                                                              |                                                                                     | LQP15M/15T                 |                                                                                     | 0.5-0.6 | 1.4-1.5 | 0.4     |
|                                                                                                                                                              |                                                                                     | LQP18M                     |                                                                                     | 0.7-0.9 | 1.8-2.2 | 0.6-0.8 |
|                                                                                                                                                              |                                                                                     | LQH2MC                     |                                                                                     | 1.0     | 2.6     | 0.8     |
|                                                                                                                                                              |                                                                                     | LQH31M/31C/31H<br>LQW31H   |                                                                                     | 1.5     | 4.5     | 1.0     |
|                                                                                                                                                              |                                                                                     | LQW2BH                     |                                                                                     | 1.2     | 3.0     | 0.8     |
|                                                                                                                                                              |                                                                                     | LQW18A                     |                                                                                     | 0.7-1.0 | 1.8-2.0 | 0.6-0.8 |
|                                                                                                                                                              |                                                                                     | LQW15A                     |                                                                                     | 0.65    | 1.2     | 0.50    |
|                                                                                                                                                              |                                                                                     | LQH32M<br>LQH32C<br>LQH3KS |  |         |         |         |
|                                                                                                                                                              |                                                                                     |                            |                                                                                     |         |         |         |
|                                                                                                                                                              |                                                                                     |                            |                                                                                     |         |         |         |
| LQH43M<br>LQH43N<br>LQH43C                                                                                                                                   |  |                            |                                                                                     |         |         |         |
|                                                                                                                                                              |                                                                                     |                            |                                                                                     |         |         |         |
|                                                                                                                                                              |                                                                                     |                            |                                                                                     |         |         |         |
| LQH55D<br>LQH66S                                                                                                                                             |  |                            |                                                                                     |         |         |         |
|                                                                                                                                                              |                                                                                     |                            |                                                                                     |         |         |         |

Attention should be paid to potential magnetic coupling effects when using the coil as a resonator.

Continued on the following page. ↗

## ⚠Caution/Notice

☐ Continued from the preceding page.

### 2. Standard Soldering Conditions

#### (1) Soldering method

Chip coils can be flow or reflow soldered.

Please contact Murata regarding other soldering methods.

As for LQG, LQP, LQW15A/18A, LQH2MC/3KS/55D/66S series, please use reflow soldering.

Solder: Use H60A, H63A (JIS Z 3282) or equivalent.

Use solder paste equivalent to H60A for LQP03T/15M/15T/18M and LQG15H/18H.

In case of Lead-free solder, use Sn-3.0Ag-0.5Cu solder.

Flux: Use rosin-based flux, but not strongly acidic flux (with chlorine content exceeding 0.2wt%).

Do not use water-soluble flux.

The flux used for LQW15/18 series should use the rosin-based flux that includes middle activator equivalent to 0.06wt% to 0.1wt% chlorine.

For additional mounting methods, please contact Murata.

#### (2) Soldering profile

- Flow Soldering profile  
(Eutectic solder, Sn-3.0Ag-0.5Cu solder)



| Series                                                             | Pre-heating |            | Standard Profile |            |               | Limit Profile |            |               |
|--------------------------------------------------------------------|-------------|------------|------------------|------------|---------------|---------------|------------|---------------|
|                                                                    |             |            | Heating          |            | Cycle of flow | Heating       |            | Cycle of flow |
|                                                                    | Temp. (T1)  | Time. (t1) | Temp. (T2)       | Time. (t2) |               | Temp. (T3)    | Time. (t2) |               |
| LQM18N<br>LQM21N/21D/21F<br>LQM31F<br>LQW2BH/31H<br>LQH31C/31H/31M | 150°C       | 60s min.   | 250°C            | 4 to 6s    | 2 times       | 265±3°C       | 5s max.    | 2 times       |
| LQH32C/32M<br>LQH43C/43M(N)                                        | 150°C       | 60s min.   | 250°C            | 4 to 6s    | 2 times       | 265±3°C       | 5s max.    | 1 times       |

Continued on the following page. ☐

⚠Caution/Notice

Continued from the preceding page.

●Reflow Soldering profile

①Soldering profile for Lead-free solder (Sn-3Ag-0.5Cu)



| Series                                                                                                                       | Standard Profile |            |                       |                 | Limit Profile |            |                       |                 |
|------------------------------------------------------------------------------------------------------------------------------|------------------|------------|-----------------------|-----------------|---------------|------------|-----------------------|-----------------|
|                                                                                                                              | Heating          |            | Peak temperature (T2) | Cycle of reflow | Heating       |            | Peak temperature (T4) | Cycle of reflow |
|                                                                                                                              | Temp. (T1)       | Time. (t1) |                       |                 | Temp. (T3)    | Time. (t2) |                       |                 |
| LQG15H/18H<br>LQW15A/18A<br>LQP03T/15M/15T/18M<br>LQW2BH/31H<br>LQM18N<br>LQM21N/21D/21F<br>LQM31F, LQH2MC<br>LQH31C/31H/31M | 220°C            | 30 to 60s  | 245±3°C               | 2 times         | 230°C         | 60s max.   | 260°C/10s             | 2 times         |
| LQH32C/32M<br>LQH43C/43M(N)<br>LQH55D, LQH66S<br>LQH3KS                                                                      | 220°C            | 30 to 60s  | 245±3°C               | 2 times         | 230°C         | 60s max.   | 260°C/10s             | 1 times         |

②Soldering profile for Eutectic solder (Limit profile: refer to ①)



| Series                                                                                                                                                                                                  | Pre-heating |            | Standard Profile |            |                       |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|------------------|------------|-----------------------|-----------------|
|                                                                                                                                                                                                         | Temp. (T1)  | Time. (t1) | Heating          |            | Peak temperature (T3) | Cycle of reflow |
|                                                                                                                                                                                                         |             |            | Temp. (T2)       | Time. (t2) |                       |                 |
| LQG15H/18H<br>LQW15A/18A<br>LQP03T/15T/15M/18M<br>LQW2BH/31H<br>LQH31H, LQM18N<br>LQM21N/21D/21F<br>LQM31F, LQH2MC<br>LQH31C, LQH32C<br>LQH31M, LQH32M<br>LQH43C, LQH43M(N)<br>LQH3KS, LQH55D<br>LQH66S | 150°C       | 60s min.   | 183°C            | 60s max.   | 230°C                 | 2 times         |

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## ⚠Caution/Notice

☐ Continued from the preceding page.

### (3) Reworking with Soldering Iron

Preheating at 150°C for 1 minute is required. Do not directly touch the ceramic element with the tip of the soldering iron. The reworking soldering conditions are as follows:

Soldering iron power output: 30W max.

Temperature of soldering iron tip: 280°C

Diameter of soldering iron end: 3.0mm max.

Soldering time: within 3 s

### 3. Mounting Instructions

#### (1) Land Pattern Dimensions

Large lands reduce Q of the mounted chip. Also, large protruding land areas (bordered by lines having dimensions 'c' and 'd' shown) cause floating and electrode leaching.



#### (2) Magnetic Coupling

Since some chip coils are constructed like an open magnetic circuit, narrow spacing between coils may cause magnetic coupling.

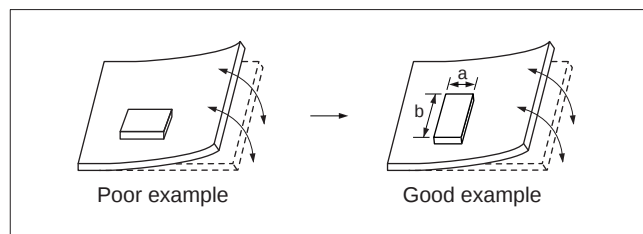
The LQG, LQM and LQH3KS/66S series have a magnetically shielded structure. The structure makes their coupling coefficient smaller than that of conventional chip coils.



#### (3) PCB Warping

PCB should be designed so that products are not subjected to the mechanical stress caused by warping the board.

Products should be located in the sideways direction (Length:  $a < b$ ) to the mechanical stress.



#### (4) Amount of Solder Paste

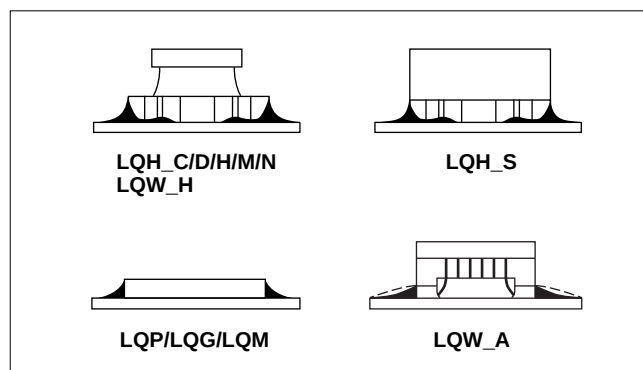
Excessive solder causes electrode corrosion, while insufficient solder causes low electrode bonding strength. Adjust the amount of solder paste as shown on the right so that solder is applied.

● Standard thickness of solder paste

LQP/LQG/LQM/LQW\_A: 100 to 150μm

LQH/LQW\_H: 200 to 300μm

(LQH2MC: 100 to 150μm)



Continued on the following page. ☐

## ⚠Caution/Notice

☐ Continued from the preceding page.

### (5) Amount of Adhesive

If too much adhesive is applied, then it may overflow into the land or termination areas and yield poor solderability. In contrast, if insufficient adhesive is applied, or if the adhesive is not sufficiently hardened, then the chip may become detached during flow soldering. Apply the adhesive in accordance with the following conditions:



**LQH\_C/H/M/N  
LQW\_H**



**LQP/LQG/LQM**

| Part Number                      | Typical Application Amount (in:mg) |           |
|----------------------------------|------------------------------------|-----------|
|                                  | MR-8153RA                          | NF-3000   |
| <b>LQM18N</b>                    | 0.05-0.06                          | 0.06-0.07 |
| <b>LQM21N/21D/21F</b>            | 0.15-0.20                          | 0.20-0.25 |
| <b>LQM31F</b>                    | 0.20-0.25                          | 0.25-0.30 |
| <b>LQW2BH</b>                    | 0.116-0.18                         | —         |
| <b>LQH31M/31C/31H<br/>LQW31H</b> | 0.18-0.20                          | 0.20-0.25 |
| <b>LQH32M/32C</b>                | 0.20-0.23                          | 0.27-0.35 |
| <b>LQH43M(N)<br/>LQH43C</b>      | 0.45-0.50                          | 0.60-0.80 |

### 4. Cleaning

The following conditions should be observed when cleaning chip coils:

- (1) Cleaning Temperature: 60°C max. (40°C max. for alcohol cleaning agents)
- (2) Ultrasonic  
Output: 20W/l max.  
Duration: 5 minutes max.  
Frequency: 28 to 40kHz  
Care should be taken not to cause resonance of the PCB and mounted products.
- (3) Cleaning agent  
The following cleaning agents have been tested on

individual components. Evaluation in complete assembly should be done prior to production.

- (a) Alcohol cleaning agents  
Isopropyl alcohol (IPA)
- (b) Aqueous cleaning agents  
Pine Alpha ST-100S  
LQH\_S series: Aqueous agents should not be used because they may cause quality deterioration.
- (4) Ensure that flux residue is completely removed.  
Component should be thoroughly dried after aqueous agents have been removed with deionized water.

For additional cleaning methods, please contact Murata.

## ⚠Caution/Notice

### ■ Notice (Handling)

This item is designed to have sufficient strength, but handle with care to avoid chipping or breaking its ceramic structure.

#### LQW\_A series

- To prevent breaking the wire, avoid touching sharp material, such as tweezers, to the winding portion.
- To prevent breaking the core, avoid applying excessive mechanical shock to products mounted on the board.
- In some mounting machines, when picking up components, support pin pushes up the components from the bottom of base tape. In this case, please remove the support pin. The support pin may damage the components and break wire.

#### LQH\_C/D/H/M/N, LQW\_H series

- To prevent breaking the wire, avoid touching sharp material, such as tweezers, to the winding portion.
- To prevent breaking the core, avoid applying excessive mechanical shock to products mounted on the board.

#### LQP series

- The pattern of the chip coil is covered with protective film. Take care to avoid damaging the chip coil when handling it with pick-up nozzles, sharp instruments, etc.

### ■ Notice (Measuring Method)

#### Measuring Method of Inductance/Q

1. Residual elements and stray elements of test fixture can be described by F-parameter shown in following.



2. The impedance of chip coil  $Z_x$  and measured value  $Z_m$  can be described by input/output current/voltage.

$$Z_m = \frac{V_1}{I_1}, \quad Z_x = \frac{V_2}{I_2}$$

#### LQM series

- There is the possibility that magnetism may change the inductance value. Do not use a magnet or tweezers with magnetism when handling chip coils. (The tip of the tweezers should be molded with resin or pottery.)

#### <Handling>

1. Avoid applying excessive stress to products to prevent damage.
2. Do not touch winding with sharp objects such as tweezers to prevent wire breakage.
3. Do not apply excessive force to products mounted on boards to prevent core breakage.

#### <Transportations>

Do not apply excessive vibration or mechanical shock to products.

#### <Resin Coating>

When coating products with resin, the relatively high resin curing stress may change inductance values.

For exterior coating, select resin carefully so that electrical and mechanical performance of the product is not affected.

3. Thus, the relation between  $Z_x$  and  $Z_m$  is following;

$$Z_x = \alpha \frac{Z_m - \beta}{1 - Z_m \Gamma}$$

where,  $\alpha = D / A = 1$   
 $\beta = B / D = Z_{sm} - (1 - Y_{om} Z_{sm}) Z_{ss}$   
 $\Gamma = C / A = Y_{om}$

( $Z_{sm}$ : measured impedance of short chip  
 $Z_{ss}$ : residual impedance of short chip\*  
 $Y_{om}$ : measured admittance when opening the fixture)

#### \*Residual impedance of short chip

| Residual Impedance | Series                    |
|--------------------|---------------------------|
| 0nH                | LQG15HS                   |
| 0.430nH            | LQP03T                    |
| 0.556nH            | LQG15HN, LQW15A, LQP15T/M |
| 0.771nH            | LQG18H, LQP18M, LQW18A    |

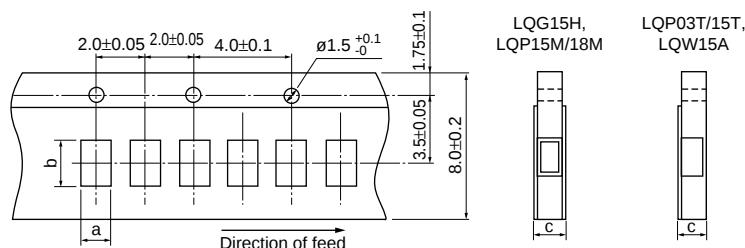
4.  $L_x$  and  $Q_x$  shall be calculated with the following equation.

$$L_x = \frac{\text{Im}(Z_x)}{2\pi f}, \quad Q_x = \frac{\text{Im}(Z_x)}{\text{Re}(Z_x)}$$

$L_x$ : Inductance of chip coil  
 $Q_x$ : Q of chip coil  
 $f$ : Measuring frequency

## Packaging

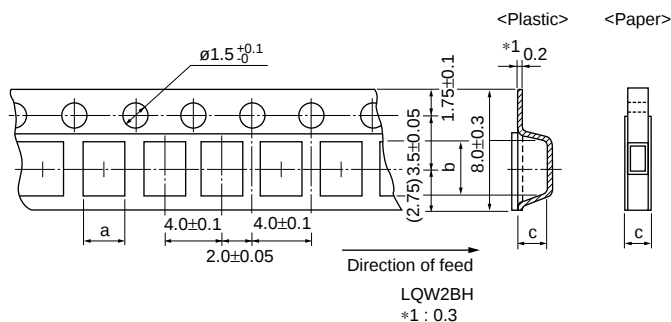
### ■ Minimum Quantity and 8mm Width Taping Dimension



#### Paper Tape

| Part Number | Dimensions (in mm) |      |           | Minimum Qty. (pcs.) |             |       |
|-------------|--------------------|------|-----------|---------------------|-------------|-------|
|             | a                  | b    | c         | ø180mm reel         | ø330mm reel | Bulk  |
| LQG15H      | 0.62               | 1.12 | 0.8 max.  | 10000               | 50000       | 1000  |
| LQP03T      | 0.38               | 0.68 | 0.55 max. |                     | 500         |       |
| LQP15T      | 0.62               | 1.12 | 0.8 max.  |                     |             | -     |
| LQP15M      | 0.70               | 1.20 |           |                     |             | 50000 |
| LQP18M      | 1.19               | 2.0  |           | 4000                |             | 10000 |
| LQW15A_00 * | 0.64/0.66<br>0.69  | 1.18 |           | 0.8 max.            | 10000       | -     |
| LQW15A_10   | 0.66               |      |           |                     |             |       |

\* 0.69 (1.5-2.7nH, 3.9-4.7nH, 5.8-6.8nH, 8.2-9.5nH, 11nH, 12nH, 15nH)  
0.66 (2.9nH, 5.1nH, 7.3nH, 7.5nH, 10nH, 13nH, 16-23nH, 100nH, 120nH)  
0.64 (24-91nH)



#### Paper Tape

| Part Number        | Dimensions (in mm) |      |          | Minimum Qty. (pcs.) |             |      |  |  |  |
|--------------------|--------------------|------|----------|---------------------|-------------|------|--|--|--|
|                    | a                  | b    | c        | ø180mm reel         | ø330mm reel | Bulk |  |  |  |
| LQM21N (0.1-2.2μH) | 1.45               | 2.25 | 1.1 max. | 4000                | 10000       | 1000 |  |  |  |
| LQM21D (1-10μH)    |                    |      |          |                     |             |      |  |  |  |
| LQM21F (1-2.2μH)   |                    |      |          |                     |             |      |  |  |  |
| LQG18H             | 1.05               | 1.85 |          |                     |             |      |  |  |  |
| LQM18N             |                    | 500  |          |                     |             |      |  |  |  |
| LQW18A_00          | 1.0                |      |          |                     |             | 1.8  |  |  |  |
| LQW18A_10          | 1.1                |      |          |                     |             | 1.9  |  |  |  |

#### Plastic Tape

| Part Number            | Dimensions (in mm) |      |      | Minimum Qty. (pcs.) |             |      |
|------------------------|--------------------|------|------|---------------------|-------------|------|
|                        | a                  | b    | c    | ø180mm reel         | ø330mm reel | Bulk |
| LQM21N (2.7-4.7μH)     | 1.45               | 2.25 | 1.3  | 3000                | 10000       | 1000 |
| LQM21D (22-47μH)       |                    |      |      |                     |             |      |
| LQM21F (4.7-47μH)      |                    |      |      |                     |             |      |
| LQM31F                 | 1.9                | 3.5  | 1.3  | 2000                | 7500        | -    |
| LQH31M/31C/31H, LQW31H | 1.9                | 3.6  | 2.0  |                     |             |      |
| LQW2BH                 | 1.75               | 2.3  |      |                     |             |      |
| LQH32M, LQH32C_33/_23  | 2.9                | 3.6  | 2.1  |                     |             |      |
| LQH32C_53              |                    |      | 1.7  |                     |             |      |
| LQH2MC                 | 1.9                | 2.3  | 1.05 | 3000                | -           | -    |

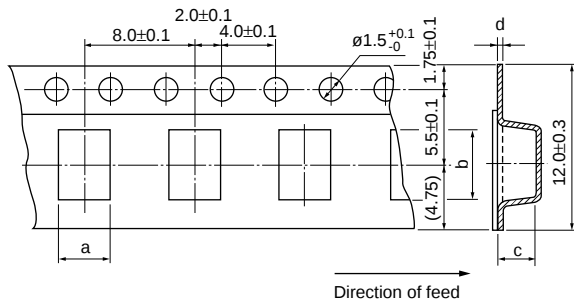
(in mm)

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Packaging

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Minimum Quantity and 12mm Width Plastic Taping Dimension



Plastic Tape

| Part Number | Dimensions (in mm) |     |     |     | Minimum Qty. (pcs.) |             |
|-------------|--------------------|-----|-----|-----|---------------------|-------------|
|             | a                  | b   | c   | d   | ø180mm reel         | ø330mm reel |
| LQH3KS      | 3.9                | 3.7 | 1.9 | 0.3 | 1000                | 4000        |
| LQH43M(N)   | 3.6                | 4.9 | 2.7 |     | 500                 | 2500        |
| LQH43C      |                    |     |     |     |                     | -           |
| LQH55D      | 5.4                | 6.1 | 5.0 | 0.4 | 350                 | 1500        |
| LQH66S      | 6.7                | 6.7 | 5.6 |     |                     | -           |

(in mm)

## Design Kits



### ●EKLMQG15A (High-frequency Monolithic Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQG15HN1N0S02 | 20                 | 1.0nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 2   | LQG15HN1N1S02 | 20                 | 1.1nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 3   | LQG15HN1N2S02 | 20                 | 1.2nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 4   | LQG15HN1N3S02 | 20                 | 1.3nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 5   | LQG15HN1N5S02 | 20                 | 1.5nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 6   | LQG15HN1N6S02 | 20                 | 1.6nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 7   | LQG15HN1N8S02 | 20                 | 1.8nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 8   | LQG15HN2N0S02 | 20                 | 2.0nH      | ±0.3nH    | 8         | 0.12                      | 300                   |
| 9   | LQG15HN2N2S02 | 20                 | 2.2nH      | ±0.3nH    | 8         | 0.15                      | 300                   |
| 10  | LQG15HN2N4S02 | 20                 | 2.4nH      | ±0.3nH    | 8         | 0.16                      | 300                   |
| 11  | LQG15HN2N7S02 | 20                 | 2.7nH      | ±0.3nH    | 8         | 0.17                      | 300                   |
| 12  | LQG15HN3N0S02 | 20                 | 3.0nH      | ±0.3nH    | 8         | 0.18                      | 300                   |
| 13  | LQG15HN3N3S02 | 20                 | 3.3nH      | ±0.3nH    | 8         | 0.19                      | 300                   |
| 14  | LQG15HN3N6S02 | 20                 | 3.6nH      | ±0.3nH    | 8         | 0.19                      | 300                   |
| 15  | LQG15HN3N9S02 | 20                 | 3.9nH      | ±0.3nH    | 8         | 0.19                      | 300                   |
| 16  | LQG15HN4N3S02 | 20                 | 4.3nH      | ±0.3nH    | 8         | 0.21                      | 300                   |
| 17  | LQG15HN4N7S02 | 20                 | 4.7nH      | ±0.3nH    | 8         | 0.23                      | 300                   |
| 18  | LQG15HN5N1S02 | 20                 | 5.1nH      | ±0.3nH    | 8         | 0.24                      | 300                   |
| 19  | LQG15HN5N6S02 | 20                 | 5.6nH      | ±0.3nH    | 8         | 0.26                      | 300                   |
| 20  | LQG15HN6N2S02 | 20                 | 6.2nH      | ±0.3nH    | 8         | 0.27                      | 300                   |
| 21  | LQG15HN6N8J02 | 20                 | 6.8nH      | ±5%       | 8         | 0.29                      | 300                   |
| 22  | LQG15HN7N5J02 | 20                 | 7.5nH      | ±5%       | 8         | 0.31                      | 300                   |
| 23  | LQG15HN8N2J02 | 20                 | 8.2nH      | ±5%       | 8         | 0.33                      | 300                   |
| 24  | LQG15HN9N1J02 | 20                 | 9.1nH      | ±5%       | 8         | 0.34                      | 300                   |
| 25  | LQG15HN10NJ02 | 20                 | 10nH       | ±5%       | 8         | 0.35                      | 300                   |
| 26  | LQG15HN12NJ02 | 20                 | 12nH       | ±5%       | 8         | 0.41                      | 300                   |
| 27  | LQG15HN15NJ02 | 20                 | 15nH       | ±5%       | 8         | 0.46                      | 300                   |
| 28  | LQG15HN18NJ02 | 20                 | 18nH       | ±5%       | 8         | 0.51                      | 300                   |
| 29  | LQG15HN22NJ02 | 20                 | 22nH       | ±5%       | 8         | 0.58                      | 300                   |
| 30  | LQG15HN27NJ02 | 20                 | 27nH       | ±5%       | 8         | 0.67                      | 300                   |
| 31  | LQG15HN33NJ02 | 20                 | 33nH       | ±5%       | 8         | 0.67                      | 200                   |
| 32  | LQG15HN39NJ02 | 20                 | 39nH       | ±5%       | 8         | 1.06                      | 200                   |
| 33  | LQG15HN47NJ02 | 20                 | 47nH       | ±5%       | 8         | 1.15                      | 200                   |
| 34  | LQG15HN56NJ02 | 20                 | 56nH       | ±5%       | 8         | 1.20                      | 200                   |
| 35  | LQG15HN68NJ02 | 20                 | 68nH       | ±5%       | 8         | 1.25                      | 180                   |
| 36  | LQG15HN82NJ02 | 20                 | 82nH       | ±5%       | 8         | 1.60                      | 150                   |
| 37  | LQG15HNR10J02 | 20                 | 100nH      | ±5%       | 8         | 1.60                      | 150                   |
| 38  | LQG15HNR12J02 | 20                 | 120nH      | ±5%       | 8         | 1.60                      | 150                   |

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## Design Kits

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### ●EKLQM15SB (High-frequency Monolithic Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQG15HS1N0S02 | 20                 | 1.0nH      | ±0.3nH    | 8         | 0.07                      | 300                   |
| 2   | LQG15HS1N1S02 | 20                 | 1.1nH      | ±0.3nH    | 8         | 0.09                      | 300                   |
| 3   | LQG15HS1N2S02 | 20                 | 1.2nH      | ±0.3nH    | 8         | 0.09                      | 300                   |
| 4   | LQG15HS1N3S02 | 20                 | 1.3nH      | ±0.3nH    | 8         | 0.09                      | 300                   |
| 5   | LQG15HS1N5S02 | 20                 | 1.5nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 6   | LQG15HS1N6S02 | 20                 | 1.6nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 7   | LQG15HS1N8S02 | 20                 | 1.8nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 8   | LQG15HS2N0S02 | 20                 | 2.0nH      | ±0.3nH    | 8         | 0.10                      | 300                   |
| 9   | LQG15HS2N2S02 | 20                 | 2.2nH      | ±0.3nH    | 8         | 0.12                      | 300                   |
| 10  | LQG15HS2N4S02 | 20                 | 2.4nH      | ±0.3nH    | 8         | 0.15                      | 300                   |
| 11  | LQG15HS2N7S02 | 20                 | 2.7nH      | ±0.3nH    | 8         | 0.15                      | 300                   |
| 12  | LQG15HS3N0S02 | 20                 | 3.0nH      | ±0.3nH    | 8         | 0.17                      | 300                   |
| 13  | LQG15HS3N3S02 | 20                 | 3.3nH      | ±0.3nH    | 8         | 0.17                      | 300                   |
| 14  | LQG15HS3N6S02 | 20                 | 3.6nH      | ±0.3nH    | 8         | 0.18                      | 300                   |
| 15  | LQG15HS3N9S02 | 20                 | 3.9nH      | ±0.3nH    | 8         | 0.18                      | 300                   |
| 16  | LQG15HS4N3S02 | 20                 | 4.3nH      | ±0.3nH    | 8         | 0.18                      | 300                   |
| 17  | LQG15HS4N7S02 | 20                 | 4.7nH      | ±0.3nH    | 8         | 0.18                      | 300                   |
| 18  | LQG15HS5N1S02 | 20                 | 5.1nH      | ±0.3nH    | 8         | 0.20                      | 300                   |
| 19  | LQG15HS5N6S02 | 20                 | 5.6nH      | ±0.3nH    | 8         | 0.20                      | 300                   |
| 20  | LQG15HS6N2S02 | 20                 | 6.2nH      | ±0.3nH    | 8         | 0.22                      | 300                   |
| 21  | LQG15HS6N8J02 | 20                 | 6.8nH      | ±5%       | 8         | 0.24                      | 300                   |
| 22  | LQG15HS7N5J02 | 20                 | 7.5nH      | ±5%       | 8         | 0.24                      | 300                   |
| 23  | LQG15HS8N2J02 | 20                 | 8.2nH      | ±5%       | 8         | 0.24                      | 300                   |
| 24  | LQG15HS9N1J02 | 20                 | 9.1nH      | ±5%       | 8         | 0.26                      | 300                   |
| 25  | LQG15HS10NJ02 | 20                 | 10nH       | ±5%       | 8         | 0.26                      | 300                   |
| 26  | LQG15HS12NJ02 | 20                 | 12nH       | ±5%       | 8         | 0.28                      | 300                   |
| 27  | LQG15HS15NJ02 | 20                 | 15nH       | ±5%       | 8         | 0.32                      | 300                   |
| 28  | LQG15HS18NJ02 | 20                 | 18nH       | ±5%       | 8         | 0.36                      | 300                   |
| 29  | LQG15HS22NJ02 | 20                 | 22nH       | ±5%       | 8         | 0.42                      | 300                   |
| 30  | LQG15HS27NJ02 | 20                 | 27nH       | ±5%       | 8         | 0.46                      | 300                   |
| 31  | LQG15HS33NJ02 | 20                 | 33nH       | ±5%       | 8         | 0.58                      | 200                   |
| 32  | LQG15HS39NJ02 | 20                 | 39nH       | ±5%       | 8         | 0.65                      | 200                   |
| 33  | LQG15HS47NJ02 | 20                 | 47nH       | ±5%       | 8         | 0.72                      | 200                   |
| 34  | LQG15HS56NJ02 | 20                 | 56nH       | ±5%       | 8         | 0.82                      | 200                   |
| 35  | LQG15HS68NJ02 | 20                 | 68nH       | ±5%       | 8         | 0.92                      | 180                   |
| 36  | LQG15HS82NJ02 | 20                 | 82nH       | ±5%       | 8         | 1.20                      | 150                   |
| 37  | LQG15HSR10J02 | 20                 | 100nH      | ±5%       | 8         | 1.25                      | 150                   |
| 38  | LQG15HSR12J02 | 20                 | 120nH      | ±5%       | 8         | 1.30                      | 150                   |
| 39  | LQG15HSR15J02 | 20                 | 150nH      | ±5%       | 8         | 2.99                      | 140                   |
| 40  | LQG15HSR18J02 | 20                 | 180nH      | ±5%       | 8         | 3.38                      | 130                   |
| 41  | LQG15HSR22J02 | 20                 | 220nH      | ±5%       | 8         | 3.77                      | 120                   |
| 42  | LQG15HSR27J02 | 20                 | 270nH      | ±5%       | 8         | 4.94                      | 110                   |

### ●EKLMQG18A (High-frequency Monolithic Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQG18HN1N2S00 | 20                 | 1.2nH      | ±0.3nH    | 12        | 0.10                      | 300                   |
| 2   | LQG18HN1N5S00 | 20                 | 1.5nH      | ±0.3nH    | 12        | 0.10                      | 300                   |
| 3   | LQG18HN1N8S00 | 20                 | 1.8nH      | ±0.3nH    | 12        | 0.10                      | 300                   |
| 4   | LQG18HN2N2S00 | 20                 | 2.2nH      | ±0.3nH    | 12        | 0.10                      | 300                   |

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| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 5   | LQG18HN2N7S00 | 20                 | 2.7nH      | ±0.3nH    | 12        | 0.15                      | 300                   |
| 6   | LQG18HN3N3S00 | 20                 | 3.3nH      | ±0.3nH    | 12        | 0.15                      | 300                   |
| 7   | LQG18HN3N9S00 | 20                 | 3.9nH      | ±0.3nH    | 12        | 0.15                      | 300                   |
| 8   | LQG18HN4N7S00 | 20                 | 4.7nH      | ±0.3nH    | 12        | 0.20                      | 300                   |
| 9   | LQG18HN5N6S00 | 20                 | 5.6nH      | ±0.3nH    | 12        | 0.20                      | 300                   |
| 10  | LQG18HN6N8J00 | 20                 | 6.8nH      | ±5%       | 12        | 0.25                      | 300                   |
| 11  | LQG18HN8N2J00 | 20                 | 8.2nH      | ±5%       | 12        | 0.25                      | 300                   |
| 12  | LQG18HN10NJ00 | 20                 | 10nH       | ±5%       | 12        | 0.30                      | 300                   |
| 13  | LQG18HN12NJ00 | 20                 | 12nH       | ±5%       | 12        | 0.35                      | 300                   |
| 14  | LQG18HN15NJ00 | 20                 | 15nH       | ±5%       | 12        | 0.40                      | 300                   |
| 15  | LQG18HN18NJ00 | 20                 | 18nH       | ±5%       | 12        | 0.45                      | 300                   |
| 16  | LQG18HN22NJ00 | 20                 | 22nH       | ±5%       | 12        | 0.50                      | 300                   |
| 17  | LQG18HN27NJ00 | 20                 | 27nH       | ±5%       | 12        | 0.55                      | 300                   |
| 18  | LQG18HN33NJ00 | 20                 | 33nH       | ±5%       | 12        | 0.60                      | 300                   |
| 19  | LQG18HN39NJ00 | 20                 | 39nH       | ±5%       | 12        | 0.65                      | 300                   |
| 20  | LQG18HN47NJ00 | 20                 | 47nH       | ±5%       | 12        | 0.70                      | 300                   |
| 21  | LQG18HN56NJ00 | 20                 | 56nH       | ±5%       | 12        | 0.75                      | 300                   |
| 22  | LQG18HN68NJ00 | 20                 | 68nH       | ±5%       | 12        | 0.80                      | 300                   |
| 23  | LQG18HN82NJ00 | 20                 | 82nH       | ±5%       | 12        | 0.85                      | 300                   |
| 24  | LQG18HNR10J00 | 20                 | 100nH      | ±5%       | 12        | 0.90                      | 300                   |

### ●EKLMP03D (High-frequency Film Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQP03TN0N6B00 | 20                 | 0.6nH      | ±0.1nH    | 11        | 0.08                      | 420                   |
| 2   | LQP03TN0N7B00 | 20                 | 0.7nH      | ±0.1nH    | 11        | 0.09                      | 410                   |
| 3   | LQP03TN0N8B00 | 20                 | 0.8nH      | ±0.1nH    | 11        | 0.09                      | 410                   |
| 4   | LQP03TN0N9B00 | 20                 | 0.9nH      | ±0.1nH    | 11        | 0.09                      | 410                   |
| 5   | LQP03TN1N0B00 | 20                 | 1.0nH      | ±0.1nH    | 11        | 0.10                      | 400                   |
| 6   | LQP03TN1N1B00 | 20                 | 1.1nH      | ±0.1nH    | 11        | 0.13                      | 280                   |
| 7   | LQP03TN1N2B00 | 20                 | 1.2nH      | ±0.1nH    | 11        | 0.13                      | 280                   |
| 8   | LQP03TN1N3B00 | 20                 | 1.3nH      | ±0.1nH    | 11        | 0.16                      | 280                   |
| 9   | LQP03TN1N5B00 | 20                 | 1.5nH      | ±0.1nH    | 11        | 0.16                      | 280                   |
| 10  | LQP03TN1N6B00 | 20                 | 1.6nH      | ±0.1nH    | 11        | 0.16                      | 280                   |
| 11  | LQP03TN1N8B00 | 20                 | 1.8nH      | ±0.1nH    | 11        | 0.16                      | 280                   |
| 12  | LQP03TN2N0B00 | 20                 | 2.0nH      | ±0.1nH    | 11        | 0.18                      | 220                   |
| 13  | LQP03TN2N2B00 | 20                 | 2.2nH      | ±0.1nH    | 11        | 0.18                      | 220                   |
| 14  | LQP03TN2N4B00 | 20                 | 2.4nH      | ±0.1nH    | 11        | 0.21                      | 220                   |
| 15  | LQP03TN2N7B00 | 20                 | 2.7nH      | ±0.1nH    | 11        | 0.21                      | 220                   |
| 16  | LQP03TN3N0B00 | 20                 | 3.0nH      | ±0.1nH    | 11        | 0.30                      | 190                   |
| 17  | LQP03TN3N3B00 | 20                 | 3.3nH      | ±0.1nH    | 11        | 0.30                      | 190                   |
| 18  | LQP03TN3N6B00 | 20                 | 3.6nH      | ±0.1nH    | 11        | 0.45                      | 170                   |
| 19  | LQP03TN3N9B00 | 20                 | 3.9nH      | ±0.1nH    | 11        | 0.45                      | 170                   |
| 20  | LQP03TN4N3H00 | 20                 | 4.3nH      | ±3%       | 11        | 0.55                      | 160                   |
| 21  | LQP03TN4N7H00 | 20                 | 4.7nH      | ±3%       | 11        | 0.55                      | 160                   |
| 22  | LQP03TN5N1H00 | 20                 | 5.1nH      | ±3%       | 11        | 0.68                      | 140                   |
| 23  | LQP03TN5N6H00 | 20                 | 5.6nH      | ±3%       | 11        | 0.68                      | 140                   |
| 24  | LQP03TN6N2H00 | 20                 | 6.2nH      | ±3%       | 11        | 0.75                      | 130                   |
| 25  | LQP03TN6N8H00 | 20                 | 6.8nH      | ±3%       | 11        | 0.75                      | 130                   |
| 26  | LQP03TN7N5H00 | 20                 | 7.5nH      | ±3%       | 11        | 0.86                      | 110                   |
| 27  | LQP03TN8N2H00 | 20                 | 8.2nH      | ±3%       | 11        | 0.86                      | 110                   |
| 28  | LQP03TN9N1H00 | 20                 | 9.1nH      | ±3%       | 11        | 1.10                      | 100                   |

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## Design Kits

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| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>( $\Omega$ ) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|------------------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                                    |                       |
| 29  | LQP03TN10NH00 | 20                 | 10nH       | $\pm 3\%$ | 11        | 1.10                               | 100                   |
| 30  | LQP03TN12NH00 | 20                 | 12nH       | $\pm 3\%$ | 11        | 1.25                               | 90                    |
| 31  | LQP03TN15NH00 | 20                 | 15nH       | $\pm 3\%$ | 11        | 1.50                               | 90                    |
| 32  | LQP03TN18NH00 | 20                 | 18nH       | $\pm 3\%$ | 11        | 2.00                               | 80                    |
| 33  | LQP03TN22NH00 | 20                 | 22nH       | $\pm 3\%$ | 11        | 2.60                               | 70                    |
| 34  | LQP03TN27NH00 | 20                 | 27nH       | $\pm 3\%$ | 11        | 3.10                               | 70                    |

### ●EKLMP15A (High-frequency Film Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |              | Q<br>min. | DC Resistance<br>( $\Omega$ ) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|--------------|-----------|------------------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance    |           |                                    |                       |
| 1   | LQP15MN1N0B02 | 20                 | 1.0nH      | 0.1nH        | 13        | 0.1                                | 400                   |
| 2   | LQP15MN1N1B02 | 20                 | 1.1nH      | 0.1nH        | 13        | 0.1                                | 390                   |
| 3   | LQP15MN1N2B02 | 20                 | 1.2nH      | 0.1nH        | 13        | 0.1                                | 390                   |
| 4   | LQP15MN1N3B02 | 20                 | 1.3nH      | 0.1nH        | 13        | 0.2                                | 280                   |
| 5   | LQP15MN1N5B02 | 20                 | 1.5nH      | 0.1nH        | 13        | 0.2                                | 280                   |
| 6   | LQP15MN1N6B02 | 20                 | 1.6nH      | 0.1nH        | 13        | 0.3                                | 220                   |
| 7   | LQP15MN1N8B02 | 20                 | 1.8nH      | 0.1nH        | 13        | 0.2                                | 280                   |
| 8   | LQP15MN2N0B02 | 20                 | 2.0nH      | 0.1nH        | 13        | 0.3                                | 220                   |
| 9   | LQP15MN2N2B02 | 20                 | 2.2nH      | 0.1nH        | 13        | 0.3                                | 220                   |
| 10  | LQP15MN2N4B02 | 20                 | 2.4nH      | 0.1nH        | 13        | 0.3                                | 220                   |
| 11  | LQP15MN2N7B02 | 20                 | 2.7nH      | 0.1nH        | 13        | 0.3                                | 220                   |
| 12  | LQP15MN3N0B02 | 20                 | 3.0nH      | 0.1nH        | 13        | 0.4                                | 190                   |
| 13  | LQP15MN3N3B02 | 20                 | 3.3nH      | 0.1nH        | 13        | 0.4                                | 190                   |
| 14  | LQP15MN3N6B02 | 20                 | 3.6nH      | 0.1nH        | 13        | 0.5                                | 170                   |
| 15  | LQP15MN3N9B02 | 20                 | 3.9nH      | 0.1nH        | 13        | 0.5                                | 170                   |
| 16  | LQP15MN4N3B02 | 20                 | 4.3nH      | 0.1nH        | 13        | 0.6                                | 160                   |
| 17  | LQP15MN4N7B02 | 20                 | 4.7nH      | 0.1nH        | 13        | 0.6                                | 160                   |
| 18  | LQP15MN5N1B02 | 20                 | 5.1nH      | $\pm 0.1$ nH | 13        | 0.7                                | 140                   |
| 19  | LQP15MN5N6B02 | 20                 | 5.6nH      | $\pm 0.1$ nH | 13        | 0.7                                | 140                   |
| 20  | LQP15MN6N2B02 | 20                 | 6.2nH      | $\pm 0.1$ nH | 13        | 0.9                                | 130                   |
| 21  | LQP15MN6N8B02 | 20                 | 6.8nH      | $\pm 0.1$ nH | 13        | 0.9                                | 130                   |
| 22  | LQP15MN7N5B02 | 20                 | 7.5nH      | $\pm 0.1$ nH | 13        | 1.1                                | 110                   |
| 23  | LQP15MN8N2B02 | 20                 | 8.2nH      | $\pm 0.1$ nH | 13        | 1.1                                | 110                   |
| 24  | LQP15MN9N1B02 | 20                 | 9.1nH      | $\pm 0.1$ nH | 13        | 1.3                                | 100                   |
| 25  | LQP15MN10NG02 | 20                 | 10nH       | $\pm 2\%$    | 13        | 1.3                                | 100                   |
| 26  | LQP15MN12NG02 | 20                 | 12nH       | $\pm 2\%$    | 13        | 1.6                                | 90                    |
| 27  | LQP15MN15NG02 | 20                 | 15nH       | $\pm 2\%$    | 13        | 1.8                                | 90                    |
| 28  | LQP15MN18NG02 | 20                 | 18nH       | $\pm 2\%$    | 13        | 2.0                                | 80                    |
| 29  | LQP15MN22NG02 | 20                 | 22nH       | $\pm 2\%$    | 13        | 2.6                                | 70                    |
| 30  | LQP15MN27NG02 | 20                 | 27nH       | $\pm 2\%$    | 13        | 3.1                                | 70                    |
| 31  | LQP15MN33NG02 | 20                 | 33nH       | $\pm 2\%$    | 13        | 3.8                                | 60                    |

### ●EKLMP15F (High-frequency Winding Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |              | Q<br>min. | DC Resistance<br>( $\Omega$ ) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|--------------|-----------|------------------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance    |           |                                    |                       |
| 1   | LQW15AN1N5B00 | 20                 | 1.5nH      | $\pm 0.1$ nH | 10        | 0.03                               | 1000                  |
| 2   | LQW15AN2N7B00 | 20                 | 2.7nH      | $\pm 0.1$ nH | 20        | 0.05                               | 850                   |
| 3   | LQW15AN3N9B00 | 20                 | 3.9nH      | $\pm 0.1$ nH | 25        | 0.07                               | 750                   |
| 4   | LQW15AN4N3B00 | 20                 | 4.3nH      | $\pm 0.1$ nH | 25        | 0.07                               | 750                   |
| 5   | LQW15AN4N7B00 | 20                 | 4.7nH      | $\pm 0.1$ nH | 25        | 0.07                               | 750                   |

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## Design Kits

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| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 6   | LQW15AN5N1B00 | 20                 | 5.1nH      | ±0.1nH    | 25        | 0.12                      | 600                   |
| 7   | LQW15AN6N2B00 | 20                 | 6.2nH      | ±0.1nH    | 25        | 0.09                      | 700                   |
| 8   | LQW15AN6N8G00 | 20                 | 6.8nH      | ±2%       | 25        | 0.09                      | 700                   |
| 9   | LQW15AN7N5G00 | 20                 | 7.5nH      | ±2%       | 25        | 0.13                      | 570                   |
| 10  | LQW15AN8N2G00 | 20                 | 8.2nH      | ±2%       | 25        | 0.14                      | 540                   |
| 11  | LQW15AN8N7G00 | 20                 | 8.7nH      | ±2%       | 25        | 0.14                      | 540                   |
| 12  | LQW15AN9N1G00 | 20                 | 9.1nH      | ±2%       | 25        | 0.14                      | 540                   |
| 13  | LQW15AN10NG00 | 20                 | 10nH       | ±2%       | 25        | 0.17                      | 500                   |
| 14  | LQW15AN11NG00 | 20                 | 11nH       | ±2%       | 30        | 0.14                      | 500                   |
| 15  | LQW15AN12NG00 | 20                 | 12nH       | ±2%       | 30        | 0.14                      | 500                   |
| 16  | LQW15AN13NG00 | 20                 | 13nH       | ±2%       | 25        | 0.21                      | 430                   |
| 17  | LQW15AN15NG00 | 20                 | 15nH       | ±2%       | 30        | 0.16                      | 460                   |
| 18  | LQW15AN16NG00 | 20                 | 16nH       | ±2%       | 25        | 0.24                      | 370                   |
| 19  | LQW15AN18NG00 | 20                 | 18nH       | ±2%       | 25        | 0.27                      | 370                   |
| 20  | LQW15AN19NG00 | 20                 | 19nH       | ±2%       | 25        | 0.27                      | 370                   |
| 21  | LQW15AN22NG00 | 20                 | 22nH       | ±2%       | 25        | 0.30                      | 310                   |
| 22  | LQW15AN24NG00 | 20                 | 24nH       | ±2%       | 25        | 0.52                      | 280                   |
| 23  | LQW15AN27NG00 | 20                 | 27nH       | ±2%       | 25        | 0.52                      | 280                   |
| 24  | LQW15AN30NG00 | 20                 | 30nH       | ±2%       | 25        | 0.58                      | 270                   |
| 25  | LQW15AN33NG00 | 20                 | 33nH       | ±2%       | 25        | 0.63                      | 260                   |
| 26  | LQW15AN36NG00 | 20                 | 36nH       | ±2%       | 25        | 0.63                      | 260                   |
| 27  | LQW15AN39NG00 | 20                 | 39nH       | ±2%       | 25        | 0.70                      | 250                   |
| 28  | LQW15AN47NG00 | 20                 | 47nH       | ±2%       | 25        | 1.08                      | 210                   |
| 29  | LQW15AN56NG00 | 20                 | 56nH       | ±2%       | 25        | 1.17                      | 200                   |
| 30  | LQW15AN68NG00 | 20                 | 68nH       | ±2%       | 20        | 1.96                      | 140                   |
| 31  | LQW15AN82NG00 | 20                 | 82nH       | ±2%       | 20        | 2.24                      | 130                   |
| 32  | LQW15ANR10J00 | 20                 | 100nH      | ±5%       | 20        | 2.52                      | 120                   |
| 33  | LQW15ANR12J00 | 20                 | 120nH      | ±5%       | 20        | 2.66                      | 110                   |
| 34  | LQW15AN1N3C10 | 20                 | 1.3nH      | ±0.2nH    | 20        | 0.017                     | 1200                  |
| 35  | LQW15AN2N2C10 | 20                 | 2.2nH      | ±0.2nH    | 25        | 0.027                     | 1000                  |
| 36  | LQW15AN2N4D10 | 20                 | 2.4nH      | ±0.5nH    | 25        | 0.027                     | 1000                  |
| 37  | LQW15AN3N3D10 | 20                 | 3.3nH      | ±0.5nH    | 30        | 0.040                     | 900                   |
| 38  | LQW15AN3N6C10 | 20                 | 3.6nH      | ±0.2nH    | 30        | 0.040                     | 900                   |
| 39  | LQW15AN3N9D10 | 20                 | 3.9nH      | ±0.5nH    | 30        | 0.040                     | 900                   |
| 40  | LQW15AN4N7D10 | 20                 | 4.7nH      | ±0.5nH    | 30        | 0.051                     | 800                   |
| 41  | LQW15AN5N1C10 | 20                 | 5.1nH      | ±0.2nH    | 30        | 0.051                     | 800                   |
| 42  | LQW15AN5N6C10 | 20                 | 5.6nH      | ±0.2nH    | 30        | 0.051                     | 800                   |

### ●EKLMQ18GA (High-frequency Winding Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQW18AN3N6C00 | 20                 | 3.6nH      | ±0.2nH    | 25        | 0.059                     | 850                   |
| 2   | LQW18AN3N9C00 | 20                 | 3.9nH      | ±0.2nH    | 35        | 0.059                     | 850                   |
| 3   | LQW18AN4N3C00 | 20                 | 4.3nH      | ±0.2nH    | 35        | 0.059                     | 850                   |
| 4   | LQW18AN5N6C00 | 20                 | 5.6nH      | ±0.2nH    | 35        | 0.082                     | 750                   |
| 5   | LQW18AN6N2C00 | 20                 | 6.2nH      | ±0.2nH    | 35        | 0.082                     | 750                   |
| 6   | LQW18AN6N8C00 | 20                 | 6.8nH      | ±0.2nH    | 35        | 0.082                     | 750                   |
| 7   | LQW18AN10NG00 | 20                 | 10nH       | ±2%       | 35        | 0.11                      | 650                   |
| 8   | LQW18AN11NG00 | 20                 | 11nH       | ±2%       | 35        | 0.11                      | 650                   |
| 9   | LQW18AN12NG00 | 20                 | 12nH       | ±2%       | 35        | 0.13                      | 600                   |
| 10  | LQW18AN13NG00 | 20                 | 13nH       | ±2%       | 35        | 0.13                      | 600                   |
| 11  | LQW18AN15NG00 | 20                 | 15nH       | ±2%       | 40        | 0.13                      | 600                   |

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## Design Kits

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| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 12  | LQW18AN16NG00 | 20                 | 16nH       | ±2%       | 40        | 0.16                      | 550                   |
| 13  | LQW18AN18NG00 | 20                 | 18nH       | ±2%       | 40        | 0.16                      | 550                   |
| 14  | LQW18AN20NG00 | 20                 | 20nH       | ±2%       | 40        | 0.16                      | 550                   |
| 15  | LQW18AN22NG00 | 20                 | 22nH       | ±2%       | 40        | 0.17                      | 500                   |
| 16  | LQW18AN24NG00 | 20                 | 24nH       | ±2%       | 40        | 0.21                      | 500                   |
| 17  | LQW18AN27NG00 | 20                 | 27nH       | ±2%       | 40        | 0.21                      | 440                   |
| 18  | LQW18AN30NG00 | 20                 | 30nH       | ±2%       | 40        | 0.23                      | 420                   |
| 19  | LQW18AN33NG00 | 20                 | 33nH       | ±2%       | 40        | 0.23                      | 420                   |
| 20  | LQW18AN36NG00 | 20                 | 36nH       | ±2%       | 40        | 0.26                      | 400                   |
| 21  | LQW18AN39NG00 | 20                 | 39nH       | ±2%       | 40        | 0.26                      | 400                   |
| 22  | LQW18AN43NG00 | 20                 | 43nH       | ±2%       | 40        | 0.29                      | 380                   |
| 23  | LQW18AN47NG00 | 20                 | 47nH       | ±2%       | 38        | 0.29                      | 380                   |
| 24  | LQW18AN51NG00 | 20                 | 51nH       | ±2%       | 38        | 0.33                      | 370                   |
| 25  | LQW18AN56NG00 | 20                 | 56nH       | ±2%       | 38        | 0.35                      | 360                   |
| 26  | LQW18AN62NG00 | 20                 | 62nH       | ±2%       | 38        | 0.51                      | 280                   |
| 27  | LQW18AN68NG00 | 20                 | 68nH       | ±2%       | 38        | 0.38                      | 340                   |
| 28  | LQW18AN72NG00 | 20                 | 72nH       | ±2%       | 34        | 0.56                      | 270                   |
| 29  | LQW18AN75NG00 | 20                 | 75nH       | ±2%       | 34        | 0.56                      | 270                   |
| 30  | LQW18AN82NG00 | 20                 | 82nH       | ±2%       | 34        | 0.60                      | 250                   |
| 31  | LQW18AN91NG00 | 20                 | 91nH       | ±2%       | 34        | 0.64                      | 230                   |
| 32  | LQW18ANR10G00 | 20                 | 100nH      | ±2%       | 34        | 0.68                      | 220                   |
| 33  | LQW18ANR11G00 | 20                 | 110nH      | ±2%       | 32        | 1.2                       | 200                   |
| 34  | LQW18ANR12G00 | 20                 | 120nH      | ±2%       | 32        | 1.3                       | 180                   |
| 35  | LQW18ANR13G00 | 20                 | 130nH      | ±2%       | 32        | 1.4                       | 170                   |
| 36  | LQW18ANR15G00 | 20                 | 150nH      | ±2%       | 32        | 1.5                       | 160                   |
| 37  | LQW18ANR16G00 | 20                 | 160nH      | ±2%       | 32        | 2.1                       | 150                   |
| 38  | LQW18ANR18G00 | 20                 | 180nH      | ±2%       | 25        | 2.2                       | 140                   |
| 39  | LQW18ANR20G00 | 20                 | 200nH      | ±2%       | 25        | 2.4                       | 120                   |
| 40  | LQW18ANR22G00 | 20                 | 220nH      | ±2%       | 25        | 2.5                       | 120                   |
| 41  | LQW18ANR27G00 | 20                 | 270nH      | ±2%       | 30        | 3.4                       | 110                   |
| 42  | LQW18ANR33G00 | 20                 | 330nH      | ±2%       | 30        | 5.5                       | 85                    |
| 43  | LQW18ANR39G00 | 20                 | 390nH      | ±2%       | 30        | 6.2                       | 80                    |
| 44  | LQW18ANR47G00 | 20                 | 470nH      | ±2%       | 30        | 7.0                       | 75                    |
| 45  | LQW18AN3N9C10 | 20                 | 3.9nH      | ±0.2nH    | 38        | 0.032                     | 1000                  |
| 46  | LQW18AN6N8C10 | 20                 | 6.8nH      | ±0.2nH    | 38        | 0.045                     | 900                   |
| 47  | LQW18AN10NG10 | 20                 | 10nH       | ±2%       | 38        | 0.058                     | 800                   |
| 48  | LQW18AN12NG10 | 20                 | 12nH       | ±2%       | 38        | 0.071                     | 750                   |
| 49  | LQW18AN18NG10 | 20                 | 18nH       | ±2%       | 42        | 0.085                     | 700                   |
| 50  | LQW18AN22NG10 | 20                 | 22nH       | ±2%       | 42        | 0.099                     | 640                   |
| 51  | LQW18AN27NG10 | 20                 | 27nH       | ±2%       | 42        | 0.116                     | 590                   |

### ●EKLMQ18JA (High-frequency Winding Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQW18AN2N2D10 | 20                 | 2.2nH      | ±0.5nH    | 25        | 0.018                     | 1400                  |
| 2   | LQW18AN3N6D00 | 20                 | 3.6nH      | ±0.5nH    | 25        | 0.059                     | 850                   |
| 3   | LQW18AN3N9D10 | 20                 | 3.9nH      | ±0.5nH    | 38        | 0.032                     | 1000                  |
| 4   | LQW18AN4N3D00 | 20                 | 4.3nH      | ±0.5nH    | 35        | 0.059                     | 850                   |
| 5   | LQW18AN4N7D00 | 20                 | 4.7nH      | ±0.5nH    | 35        | 0.059                     | 850                   |
| 6   | LQW18AN5N6D10 | 20                 | 5.6nH      | ±0.5nH    | 38        | 0.045                     | 900                   |
| 7   | LQW18AN6N2D00 | 20                 | 6.2nH      | ±0.5nH    | 35        | 0.082                     | 750                   |
| 8   | LQW18AN6N8D10 | 20                 | 6.8nH      | ±0.5nH    | 38        | 0.045                     | 900                   |

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| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 9   | LQW18AN7N5D00 | 20                 | 7.5nH      | ±0.5nH    | 35        | 0.082                     | 750                   |
| 10  | LQW18AN8N2D10 | 20                 | 8.2nH      | ±0.5nH    | 38        | 0.058                     | 800                   |
| 11  | LQW18AN8N7D00 | 20                 | 8.7nH      | ±0.5nH    | 35        | 0.11                      | 650                   |
| 12  | LQW18AN9N1D00 | 20                 | 9.1nH      | ±0.5nH    | 35        | 0.11                      | 650                   |
| 13  | LQW18AN9N5D00 | 20                 | 9.5nH      | ±0.5nH    | 35        | 0.11                      | 650                   |
| 14  | LQW18AN10NJ10 | 20                 | 10nH       | ±5%       | 38        | 0.058                     | 800                   |
| 15  | LQW18AN11NJ00 | 20                 | 11nH       | ±5%       | 35        | 0.11                      | 650                   |
| 16  | LQW18AN12NJ10 | 20                 | 12nH       | ±5%       | 38        | 0.071                     | 750                   |
| 17  | LQW18AN13NJ00 | 20                 | 13nH       | ±5%       | 35        | 0.13                      | 600                   |
| 18  | LQW18AN15NJ10 | 20                 | 15nH       | ±5%       | 42        | 0.085                     | 700                   |
| 19  | LQW18AN16NJ00 | 20                 | 16nH       | ±5%       | 40        | 0.16                      | 550                   |
| 20  | LQW18AN18NJ10 | 20                 | 18nH       | ±5%       | 42        | 0.085                     | 700                   |
| 21  | LQW18AN20NJ00 | 20                 | 20nH       | ±5%       | 40        | 0.16                      | 550                   |
| 22  | LQW18AN22NJ10 | 20                 | 22nH       | ±5%       | 42        | 0.099                     | 640                   |
| 23  | LQW18AN24NJ00 | 20                 | 24nH       | ±5%       | 40        | 0.21                      | 500                   |
| 24  | LQW18AN27NJ10 | 20                 | 27nH       | ±5%       | 42        | 0.116                     | 590                   |
| 25  | LQW18AN30NJ00 | 20                 | 30nH       | ±5%       | 40        | 0.23                      | 420                   |
| 26  | LQW18AN33NJ10 | 20                 | 33nH       | ±5%       | 42        | 0.132                     | 550                   |
| 27  | LQW18AN36NJ00 | 20                 | 36nH       | ±5%       | 40        | 0.26                      | 400                   |
| 28  | LQW18AN39NJ00 | 20                 | 39nH       | ±5%       | 40        | 0.26                      | 400                   |
| 29  | LQW18AN43NJ00 | 20                 | 43nH       | ±5%       | 40        | 0.29                      | 380                   |
| 30  | LQW18AN47NJ00 | 20                 | 47nH       | ±5%       | 38        | 0.29                      | 380                   |
| 31  | LQW18AN51NJ00 | 20                 | 51nH       | ±5%       | 38        | 0.33                      | 370                   |
| 32  | LQW18AN56NJ00 | 20                 | 56nH       | ±5%       | 38        | 0.35                      | 360                   |
| 33  | LQW18AN62NJ00 | 20                 | 62nH       | ±5%       | 38        | 0.51                      | 280                   |
| 34  | LQW18AN68NJ00 | 20                 | 68nH       | ±5%       | 38        | 0.38                      | 340                   |
| 35  | LQW18AN72NJ00 | 20                 | 72nH       | ±5%       | 34        | 0.56                      | 270                   |
| 36  | LQW18AN75NJ00 | 20                 | 75nH       | ±5%       | 34        | 0.56                      | 270                   |
| 37  | LQW18AN82NJ00 | 20                 | 82nH       | ±5%       | 34        | 0.60                      | 250                   |
| 38  | LQW18AN91NJ00 | 20                 | 91nH       | ±5%       | 34        | 0.64                      | 230                   |
| 39  | LQW18ANR10J00 | 20                 | 100nH      | ±5%       | 34        | 0.68                      | 220                   |
| 40  | LQW18ANR11J00 | 20                 | 110nH      | ±5%       | 32        | 1.2                       | 200                   |
| 41  | LQW18ANR12J00 | 20                 | 120nH      | ±5%       | 32        | 1.3                       | 180                   |
| 42  | LQW18ANR13J00 | 20                 | 130nH      | ±5%       | 32        | 1.4                       | 170                   |
| 43  | LQW18ANR15J00 | 20                 | 150nH      | ±5%       | 32        | 1.5                       | 160                   |
| 44  | LQW18ANR16J00 | 20                 | 160nH      | ±5%       | 32        | 2.1                       | 150                   |
| 45  | LQW18ANR18J00 | 20                 | 180nH      | ±5%       | 25        | 2.2                       | 140                   |
| 46  | LQW18ANR20J00 | 20                 | 200nH      | ±5%       | 25        | 2.4                       | 120                   |
| 47  | LQW18ANR22J00 | 20                 | 220nH      | ±5%       | 25        | 2.5                       | 120                   |
| 48  | LQW18ANR27J00 | 20                 | 270nH      | ±5%       | 30        | 3.4                       | 110                   |
| 49  | LQW18ANR33J00 | 20                 | 330nH      | ±5%       | 30        | 5.5                       | 85                    |
| 50  | LQW18ANR39J00 | 20                 | 390nH      | ±5%       | 30        | 6.2                       | 80                    |
| 51  | LQW18ANR47J00 | 20                 | 470nH      | ±5%       | 30        | 7.0                       | 75                    |

### ●EKLMQW2BB (High-frequency Winding Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQW2BHN2N7D13 | 20                 | 2.7nH      | ±0.5nH    | 20        | 0.02                      | 1900                  |
| 2   | LQW2BHN3N1D13 | 20                 | 3.1nH      | ±0.5nH    | 20        | 0.02                      | 1800                  |
| 3   | LQW2BHN3N3D13 | 20                 | 3.3nH      | ±0.5nH    | 20        | 0.02                      | 1700                  |
| 4   | LQW2BHN5N6D13 | 20                 | 5.6nH      | ±0.5nH    | 35        | 0.02                      | 1500                  |
| 5   | LQW2BHN6N8D13 | 20                 | 6.8nH      | ±0.5nH    | 35        | 0.02                      | 1400                  |

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| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 6   | LQW2BHN8N6D13 | 20                 | 8.6nH      | ±0.5nH    | 35        | 0.03                      | 1300                  |
| 7   | LQW2BHN10NJ13 | 20                 | 10nH       | ±5%       | 35        | 0.03                      | 1320                  |
| 8   | LQW2BHN12NK13 | 20                 | 12nH       | ±10%      | 40        | 0.04                      | 1100                  |
| 9   | LQW2BHN15NK13 | 20                 | 15nH       | ±10%      | 40        | 0.04                      | 1000                  |
| 10  | LQW2BHN18NK13 | 20                 | 18.8nH     | ±10%      | 40        | 0.05                      | 1000                  |
| 11  | LQW2BHN21NK13 | 20                 | 21nH       | ±10%      | 40        | 0.05                      | 950                   |
| 12  | LQW2BHN27NK13 | 20                 | 27nH       | ±10%      | 40        | 0.06                      | 900                   |
| 13  | LQW2BHN33NJ03 | 20                 | 33nH       | ±5%       | 40        | 0.15                      | 570                   |
| 14  | LQW2BHN39NJ03 | 20                 | 39nH       | ±5%       | 40        | 0.09                      | 730                   |
| 15  | LQW2BHN47NJ03 | 20                 | 47nH       | ±5%       | 40        | 0.23                      | 450                   |
| 16  | LQW2BHN56NJ03 | 20                 | 56nH       | ±5%       | 40        | 0.26                      | 430                   |
| 17  | LQW2BHN68NJ03 | 20                 | 68nH       | ±5%       | 40        | 0.23                      | 460                   |
| 18  | LQW2BHN82NJ03 | 20                 | 82nH       | ±5%       | 40        | 0.42                      | 320                   |
| 19  | LQW2BHNR10J03 | 20                 | 100nH      | ±5%       | 40        | 0.38                      | 350                   |
| 20  | LQW2BHNR12J03 | 20                 | 120nH      | ±5%       | 40        | 0.40                      | 320                   |
| 21  | LQW2BHNR15J03 | 20                 | 150nH      | ±5%       | 30        | 0.47                      | 390                   |
| 22  | LQW2BHNR18J03 | 20                 | 180nH      | ±5%       | 35        | 0.71                      | 250                   |
| 23  | LQW2BHNR22J03 | 20                 | 220nH      | ±5%       | 35        | 0.70                      | 240                   |
| 24  | LQW2BHNR27K03 | 20                 | 270nH      | ±10%      | 15        | 2.00                      | 190                   |
| 25  | LQW2BHNR33K03 | 20                 | 330nH      | ±10%      | 15        | 2.20                      | 180                   |
| 26  | LQW2BHNR39K03 | 20                 | 390nH      | ±10%      | 15        | 2.50                      | 170                   |
| 27  | LQW2BHNR47K03 | 20                 | 470nH      | ±10%      | 15        | 2.80                      | 160                   |

### ●EKLQM18A (for General Use Monolithic Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQM18NN47NM00 | 20                 | 47nH       | ±20%      | 10        | 0.30                      | 50                    |
| 2   | LQM18NN68NM00 | 20                 | 68nH       | ±20%      | 10        | 0.30                      | 50                    |
| 3   | LQM18NN82NM00 | 20                 | 82nH       | ±20%      | 10        | 0.30                      | 50                    |
| 4   | LQM18NNR10K00 | 20                 | 100nH      | ±10%      | 15        | 0.50                      | 50                    |
| 5   | LQM18NNR12K00 | 20                 | 120nH      | ±10%      | 15        | 0.50                      | 50                    |
| 6   | LQM18NNR15K00 | 20                 | 150nH      | ±10%      | 15        | 0.60                      | 50                    |
| 7   | LQM18NNR18K00 | 20                 | 180nH      | ±10%      | 15        | 0.60                      | 50                    |
| 8   | LQM18NNR22K00 | 20                 | 220nH      | ±10%      | 15        | 0.80                      | 50                    |
| 9   | LQM18NNR27K00 | 20                 | 270nH      | ±10%      | 15        | 0.80                      | 50                    |
| 10  | LQM18NNR33K00 | 20                 | 330nH      | ±10%      | 15        | 0.85                      | 35                    |
| 11  | LQM18NNR39K00 | 20                 | 390nH      | ±10%      | 15        | 1.00                      | 35                    |
| 12  | LQM18NNR47K00 | 20                 | 470nH      | ±10%      | 15        | 1.35                      | 35                    |
| 13  | LQM18NNR56K00 | 20                 | 560nH      | ±10%      | 15        | 1.55                      | 35                    |
| 14  | LQM18NNR68K00 | 20                 | 680nH      | ±10%      | 15        | 1.70                      | 35                    |
| 15  | LQM18NNR82K00 | 20                 | 820nH      | ±10%      | 15        | 2.10                      | 35                    |
| 16  | LQM18NN1R0K00 | 20                 | 1000nH     | ±10%      | 35        | 0.60                      | 25                    |
| 17  | LQM18NN1R2K00 | 20                 | 1200nH     | ±10%      | 35        | 0.80                      | 25                    |
| 18  | LQM18NN1R5K00 | 20                 | 1500nH     | ±10%      | 35        | 0.80                      | 25                    |
| 19  | LQM18NN1R8K00 | 20                 | 1800nH     | ±10%      | 35        | 0.95                      | 25                    |
| 20  | LQM18NN2R2K00 | 20                 | 2200nH     | ±10%      | 35        | 1.15                      | 15                    |

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### ●EKLMM21NA (for General Use Monolithic Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | Q<br>min. | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |           |                           |                       |
| 1   | LQM21NNR10K10 | 20                 | 0.1μH      | ±10%      | 20        | 0.26                      | 250                   |
| 2   | LQM21NNR12K10 | 20                 | 0.12μH     | ±10%      | 20        | 0.29                      | 250                   |
| 3   | LQM21NNR15K10 | 20                 | 0.15μH     | ±10%      | 20        | 0.32                      | 250                   |
| 4   | LQM21NNR18K10 | 20                 | 0.18μH     | ±10%      | 20        | 0.35                      | 250                   |
| 5   | LQM21NNR22K10 | 20                 | 0.22μH     | ±10%      | 20        | 0.38                      | 250                   |
| 6   | LQM21NNR27K10 | 20                 | 0.27μH     | ±10%      | 20        | 0.42                      | 250                   |
| 7   | LQM21NNR33K10 | 20                 | 0.33μH     | ±10%      | 20        | 0.48                      | 250                   |
| 8   | LQM21NNR39K10 | 20                 | 0.39μH     | ±10%      | 25        | 0.53                      | 200                   |
| 9   | LQM21NNR47K10 | 20                 | 0.47μH     | ±10%      | 25        | 0.57                      | 200                   |
| 10  | LQM21NNR56K10 | 20                 | 0.56μH     | ±10%      | 25        | 0.63                      | 150                   |
| 11  | LQM21NNR68K10 | 20                 | 0.68μH     | ±10%      | 25        | 0.72                      | 150                   |
| 12  | LQM21NNR82K10 | 20                 | 0.82μH     | ±10%      | 25        | 0.81                      | 150                   |
| 13  | LQM21NN1R0K10 | 20                 | 1.0μH      | ±10%      | 45        | 0.40                      | 50                    |
| 14  | LQM21NN1R2K10 | 20                 | 1.2μH      | ±10%      | 45        | 0.47                      | 50                    |
| 15  | LQM21NN1R5K10 | 20                 | 1.5μH      | ±10%      | 45        | 0.50                      | 50                    |
| 16  | LQM21NN1R8K10 | 20                 | 1.8μH      | ±10%      | 45        | 0.57                      | 50                    |
| 17  | LQM21NN2R2K10 | 20                 | 2.2μH      | ±10%      | 45        | 0.63                      | 30                    |
| 18  | LQM21NN2R7K10 | 20                 | 2.7μH      | ±10%      | 45        | 0.69                      | 30                    |
| 19  | LQM21NN3R3K10 | 20                 | 3.3μH      | ±10%      | 45        | 0.80                      | 30                    |
| 20  | LQM21NN3R9K10 | 20                 | 3.9μH      | ±10%      | 45        | 0.89                      | 30                    |
| 21  | LQM21NN4R7K10 | 20                 | 4.7μH      | ±10%      | 45        | 1.00                      | 30                    |

### ●EKLMM21FA (for Choke Monolithic Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | DC Resistance<br>(Ω) | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|----------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |                      |                       |
| 1   | LQM21FN1R0N00 | 20                 | 1.0μH      | ±30%      | 0.20±30%             | 220                   |
| 2   | LQM21FN2R2N00 | 20                 | 2.2μH      | ±30%      | 0.28±30%             | 150                   |
| 3   | LQM21FN4R7N00 | 20                 | 4.7μH      | ±30%      | 0.30±30%             | 80                    |
| 4   | LQM21FN100N00 | 20                 | 10μH       | ±30%      | 0.50±30%             | 60                    |
| 5   | LQM21FN220N00 | 20                 | 22μH       | ±30%      | 0.35±30%             | 13                    |
| 6   | LQM21FN470N00 | 20                 | 47μH       | ±30%      | 0.60±30%             | 7                     |
| 7   | LQM31FN100M00 | 20                 | 10μH       | ±20%      | 0.5 max.             | 70                    |

### ●EKLMMH32MB (for General Use Winding Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |                           |                       |
| 1   | LQH32MN1R0M23 | 20                 | 1.0μH      | ±20%      | 0.50                      | 445                   |
| 2   | LQH32MN1R2M23 | 20                 | 1.2μH      | ±20%      | 0.60                      | 425                   |
| 3   | LQH32MN1R5K23 | 20                 | 1.5μH      | ±10%      | 0.60                      | 400                   |
| 4   | LQH32MN1R8K23 | 20                 | 1.8μH      | ±10%      | 0.70                      | 390                   |
| 5   | LQH32MN2R2K23 | 20                 | 2.2μH      | ±10%      | 0.80                      | 370                   |
| 6   | LQH32MN2R7K23 | 20                 | 2.7μH      | ±10%      | 0.90                      | 320                   |
| 7   | LQH32MN3R3K23 | 20                 | 3.3μH      | ±10%      | 1.00                      | 300                   |
| 8   | LQH32MN3R9K23 | 20                 | 3.9μH      | ±10%      | 1.10                      | 290                   |
| 9   | LQH32MN4R7K23 | 20                 | 4.7μH      | ±10%      | 1.20                      | 270                   |
| 10  | LQH32MN5R6K23 | 20                 | 5.6μH      | ±10%      | 1.30                      | 250                   |
| 11  | LQH32MN6R8K23 | 20                 | 6.8μH      | ±10%      | 1.50                      | 240                   |
| 12  | LQH32MN8R2K23 | 20                 | 8.2μH      | ±10%      | 1.60                      | 225                   |

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## Design Kits

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| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |                           |                       |
| 13  | LQH32MN100K23 | 20                 | 10μH       | ±10%      | 1.8                       | 190                   |
| 14  | LQH32MN120K23 | 20                 | 12μH       | ±10%      | 2.0                       | 180                   |
| 15  | LQH32MN150K23 | 20                 | 15μH       | ±10%      | 2.2                       | 170                   |
| 16  | LQH32MN180K23 | 20                 | 18μH       | ±10%      | 2.5                       | 165                   |
| 17  | LQH32MN220K23 | 20                 | 22μH       | ±10%      | 2.8                       | 150                   |
| 18  | LQH32MN270K23 | 20                 | 27μH       | ±10%      | 3.1                       | 125                   |
| 19  | LQH32MN330K23 | 20                 | 33μH       | ±10%      | 3.5                       | 115                   |
| 20  | LQH32MN390K23 | 20                 | 39μH       | ±10%      | 3.9                       | 110                   |
| 21  | LQH32MN470K23 | 20                 | 47μH       | ±10%      | 4.3                       | 100                   |
| 22  | LQH32MN560K23 | 20                 | 56μH       | ±10%      | 4.9                       | 85                    |
| 23  | LQH32MN680K23 | 20                 | 68μH       | ±10%      | 5.5                       | 80                    |
| 24  | LQH32MN820K23 | 20                 | 82μH       | ±10%      | 6.2                       | 70                    |
| 25  | LQH32MN101K23 | 20                 | 100μH      | ±10%      | 7.0                       | 80                    |
| 26  | LQH32MN121K23 | 20                 | 120μH      | ±10%      | 8.0                       | 75                    |
| 27  | LQH32MN151K23 | 20                 | 150μH      | ±10%      | 9.3                       | 70                    |
| 28  | LQH32MN181K23 | 20                 | 180μH      | ±10%      | 10.2                      | 65                    |
| 29  | LQH32MN221K23 | 20                 | 220μH      | ±10%      | 11.8                      | 65                    |
| 30  | LQH32MN271K23 | 20                 | 270μH      | ±10%      | 12.5                      | 65                    |
| 31  | LQH32MN331K23 | 20                 | 330μH      | ±10%      | 13.0                      | 65                    |
| 32  | LQH32MN391K23 | 20                 | 390μH      | ±10%      | 22.0                      | 50                    |
| 33  | LQH32MN471K23 | 20                 | 470μH      | ±10%      | 25.0                      | 45                    |
| 34  | LQH32MN561K23 | 20                 | 560μH      | ±10%      | 28.0                      | 40                    |

### ●EKL43MB (for General Use Winding Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |                           |                       |
| 1   | LQH43MN1R0M03 | 10                 | 1.0μH      | ±20%      | 0.20                      | 500                   |
| 2   | LQH43MN1R2M03 | 10                 | 1.2μH      | ±20%      | 0.20                      | 500                   |
| 3   | LQH43MN1R5M03 | 10                 | 1.5μH      | ±20%      | 0.30                      | 500                   |
| 4   | LQH43MN1R8M03 | 10                 | 1.8μH      | ±20%      | 0.30                      | 500                   |
| 5   | LQH43MN2R2M03 | 10                 | 2.2μH      | ±20%      | 0.30                      | 500                   |
| 6   | LQH43MN2R7M03 | 10                 | 2.7μH      | ±20%      | 0.32                      | 500                   |
| 7   | LQH43MN3R3M03 | 10                 | 3.3μH      | ±20%      | 0.35                      | 500                   |
| 8   | LQH43MN3R9M03 | 10                 | 3.9μH      | ±20%      | 0.38                      | 500                   |
| 9   | LQH43MN4R7K03 | 10                 | 4.7μH      | ±10%      | 0.40                      | 500                   |
| 10  | LQH43MN5R6K03 | 10                 | 5.6μH      | ±10%      | 0.47                      | 500                   |
| 11  | LQH43MN6R8K03 | 10                 | 6.8μH      | ±10%      | 0.50                      | 450                   |
| 12  | LQH43MN8R2K03 | 10                 | 8.2μH      | ±10%      | 0.56                      | 450                   |
| 13  | LQH43MN100K03 | 10                 | 10μH       | ±10%      | 0.56                      | 400                   |
| 14  | LQH43MN120K03 | 10                 | 12μH       | ±10%      | 0.62                      | 380                   |
| 15  | LQH43MN150K03 | 10                 | 15μH       | ±10%      | 0.73                      | 360                   |
| 16  | LQH43MN180K03 | 10                 | 18μH       | ±10%      | 0.82                      | 340                   |
| 17  | LQH43MN220K03 | 10                 | 22μH       | ±10%      | 0.94                      | 320                   |
| 18  | LQH43MN270K03 | 10                 | 27μH       | ±10%      | 1.10                      | 300                   |
| 19  | LQH43MN330K03 | 10                 | 33μH       | ±10%      | 1.20                      | 270                   |
| 20  | LQH43MN390K03 | 10                 | 39μH       | ±10%      | 1.40                      | 240                   |
| 21  | LQH43MN470K03 | 10                 | 47μH       | ±10%      | 1.50                      | 220                   |
| 22  | LQH43MN560K03 | 10                 | 56μH       | ±10%      | 1.7                       | 200                   |
| 23  | LQH43MN680K03 | 10                 | 68μH       | ±10%      | 1.9                       | 180                   |
| 24  | LQH43MN820K03 | 10                 | 82μH       | ±10%      | 2.2                       | 170                   |
| 25  | LQH43MN101K03 | 10                 | 100μH      | ±10%      | 2.5                       | 160                   |
| 26  | LQH43MN121K03 | 10                 | 120μH      | ±10%      | 3.0                       | 150                   |

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## Design Kits

Continued from the preceding page.

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | DC Resistance<br>(Ω) max. | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|---------------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |                           |                       |
| 27  | LQH43MN151K03 | 10                 | 150μH      | ±10%      | 3.7                       | 130                   |
| 28  | LQH43MN181K03 | 10                 | 180μH      | ±10%      | 4.5                       | 120                   |
| 29  | LQH43MN221K03 | 10                 | 220μH      | ±10%      | 5.4                       | 110                   |
| 30  | LQH43MN271K03 | 10                 | 270μH      | ±10%      | 6.8                       | 100                   |
| 31  | LQH43MN331K03 | 10                 | 330μH      | ±10%      | 8.2                       | 95                    |
| 32  | LQH43MN391K03 | 10                 | 390μH      | ±10%      | 9.7                       | 90                    |
| 33  | LQH43MN471K03 | 10                 | 470μH      | ±10%      | 11.8                      | 80                    |
| 34  | LQH43MN561K03 | 10                 | 560μH      | ±10%      | 14.5                      | 70                    |
| 35  | LQH43MN681K03 | 10                 | 680μH      | ±10%      | 17.0                      | 65                    |
| 36  | LQH43MN821K03 | 10                 | 820μH      | ±10%      | 20.5                      | 60                    |
| 37  | LQH43MN102K03 | 10                 | 1000μH     | ±10%      | 25.0                      | 50                    |
| 38  | LQH43MN122K03 | 10                 | 1200μH     | ±10%      | 30.0                      | 45                    |
| 39  | LQH43MN152K03 | 10                 | 1500μH     | ±10%      | 37.0                      | 40                    |
| 40  | LQH43NN182K03 | 10                 | 1800μH     | ±10%      | 45.0                      | 35                    |
| 41  | LQH43NN222K03 | 10                 | 2200μH     | ±10%      | 50.0                      | 30                    |

### ●EKL32CB (for Choke Winding Type)

| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | DC Resistance<br>(Ω) | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|----------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |                      |                       |
| 1   | LQH32CNR15M33 | 20                 | 0.15μH     | ±20%      | 0.028±30%            | 1450                  |
| 2   | LQH32CNR27M33 | 20                 | 0.27μH     | ±20%      | 0.034±30%            | 1250                  |
| 3   | LQH32CNR47M33 | 20                 | 0.47μH     | ±20%      | 0.042±30%            | 1100                  |
| 4   | LQH32CN1R0M33 | 20                 | 1.0μH      | ±20%      | 0.06±30%             | 1000                  |
| 5   | LQH32CN2R2M33 | 20                 | 2.2μH      | ±20%      | 0.097±30%            | 790                   |
| 6   | LQH32CN4R7M33 | 20                 | 4.7μH      | ±20%      | 0.15±30%             | 650                   |
| 7   | LQH32CN100K33 | 20                 | 10μH       | ±10%      | 0.3±30%              | 450                   |
| 8   | LQH32CN1R0M23 | 20                 | 1.0μH      | ±20%      | 0.09±30%             | 800                   |
| 9   | LQH32CN2R2M23 | 20                 | 2.2μH      | ±20%      | 0.13±30%             | 600                   |
| 10  | LQH32CN4R7M23 | 20                 | 4.7μH      | ±20%      | 0.2±30%              | 450                   |
| 11  | LQH32CN100K23 | 20                 | 10μH       | ±10%      | 0.44±30%             | 300                   |
| 12  | LQH32CN220K23 | 20                 | 22μH       | ±10%      | 0.71±30%             | 250                   |
| 13  | LQH32CN470K23 | 20                 | 47μH       | ±10%      | 1.3±30%              | 170                   |
| 14  | LQH32CN101K23 | 20                 | 100μH      | ±10%      | 3.5±30%              | 100                   |
| 15  | LQH32CN221K23 | 20                 | 220μH      | ±10%      | 8.4±30%              | 70                    |
| 16  | LQH32CN331K23 | 20                 | 330μH      | ±10%      | 10±30%               | 60                    |
| 17  | LQH32CN391K23 | 20                 | 390μH      | ±10%      | 17±30%               | 60                    |
| 18  | LQH32CN471K23 | 20                 | 470μH      | ±10%      | 19±30%               | 60                    |
| 19  | LQH32CN561K23 | 20                 | 560μH      | ±10%      | 22±30%               | 60                    |
| 20  | LQH32CN1R0M53 | 20                 | 1.0μH      | ±20%      | 0.06±30%             | 1000                  |
| 21  | LQH32CN2R2M53 | 20                 | 2.2μH      | ±20%      | 0.097±30%            | 790                   |
| 22  | LQH32CN4R7M53 | 20                 | 4.7μH      | ±20%      | 0.15±30%             | 650                   |
| 23  | LQH32CN100K53 | 20                 | 10μH       | ±10%      | 0.3±30%              | 450                   |
| 24  | LQH32CN150K53 | 20                 | 15μH       | ±10%      | 0.58±30%             | 300                   |
| 25  | LQH32CN220K53 | 20                 | 22μH       | ±10%      | 0.71±30%             | 250                   |
| 26  | LQH32CN330K53 | 20                 | 33μH       | ±10%      | 1.1±30%              | 200                   |
| 27  | LQH32CN470K53 | 20                 | 47μH       | ±10%      | 1.3±30%              | 170                   |
| 28  | LQH32CN680K53 | 20                 | 68μH       | ±10%      | 2.2±30%              | 130                   |
| 29  | LQH32CN101K53 | 20                 | 100μH      | ±10%      | 3.5±30%              | 100                   |

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## Design Kits

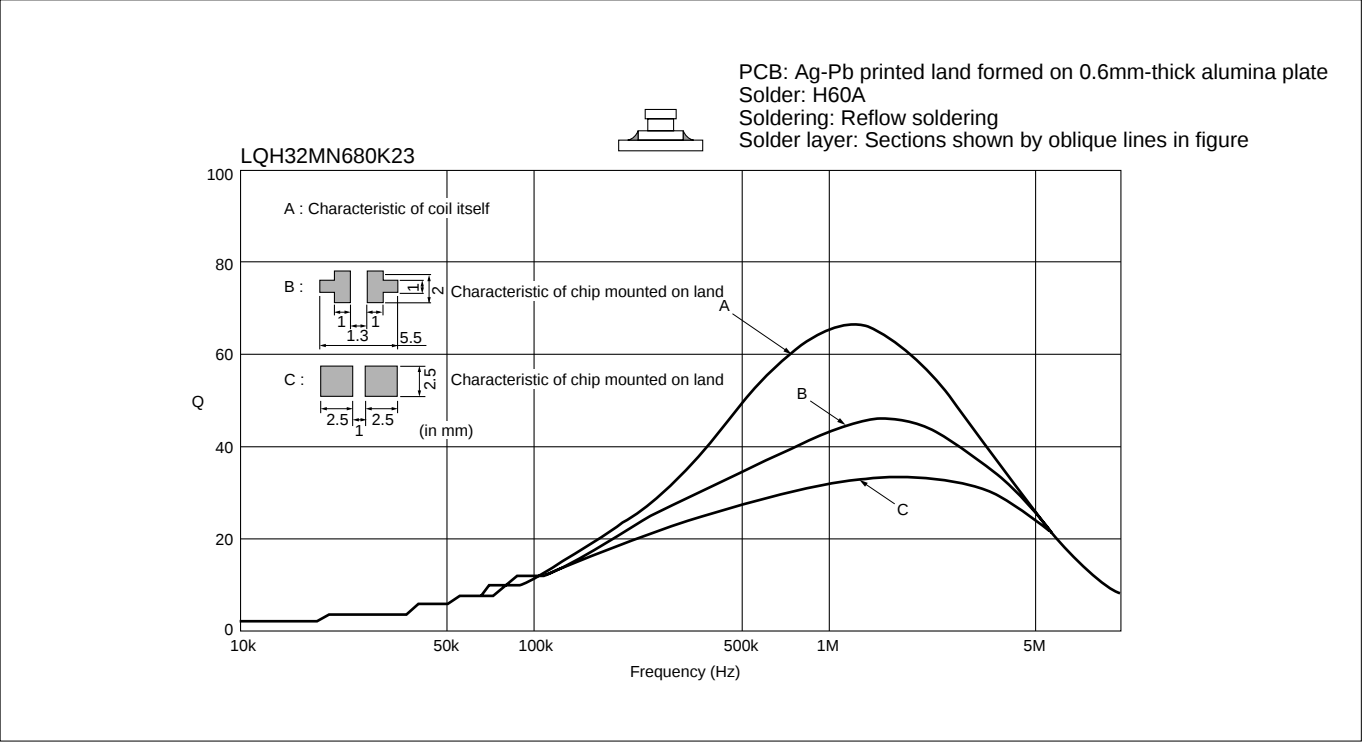
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### ●EKLMH43CB (for Choke Winding Type)

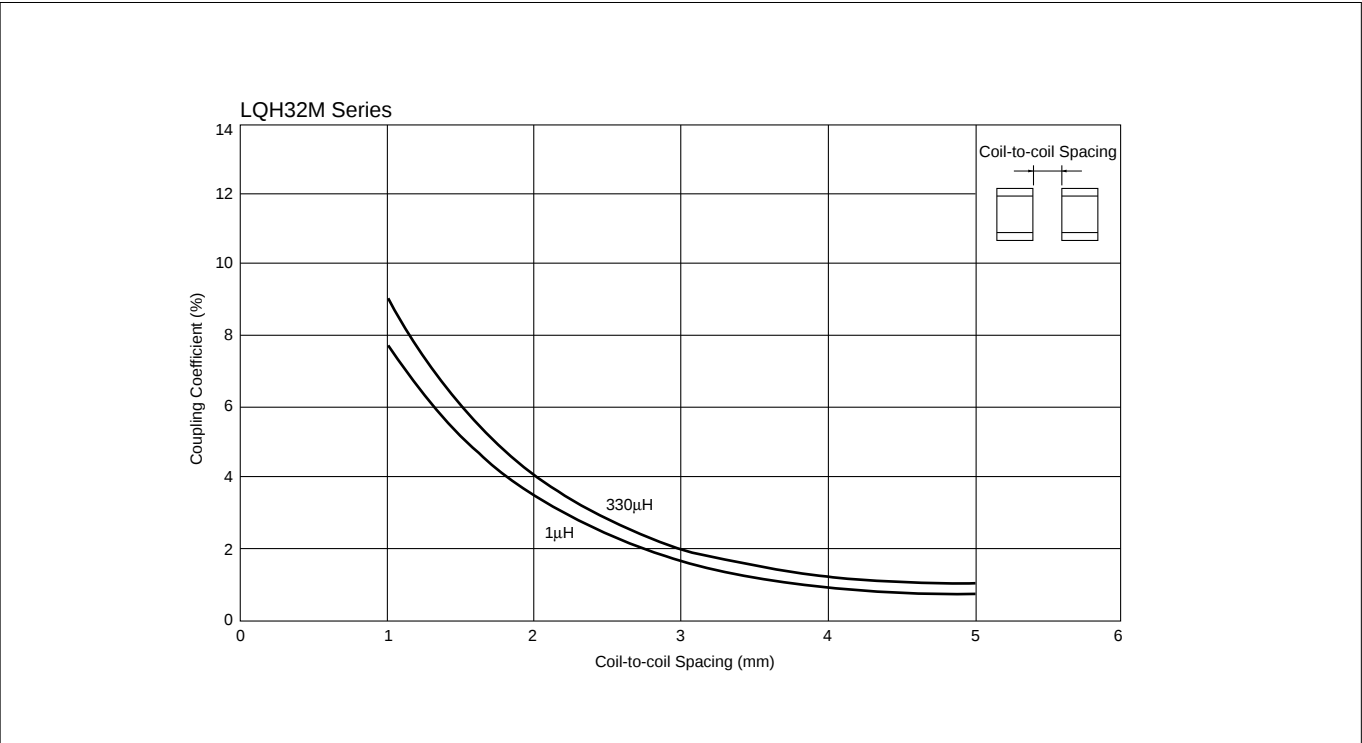
| No. | Part Number   | Quantity<br>(pcs.) | Inductance |           | DC Resistance<br>(Ω) | Rated Current<br>(mA) |
|-----|---------------|--------------------|------------|-----------|----------------------|-----------------------|
|     |               |                    | Nominal    | Tolerance |                      |                       |
| 1   | LQH43CN1R0M03 | 10                 | 1.0μH      | ±20%      | 0.08 max             | 1080                  |
| 2   | LQH43CN1R5M03 | 10                 | 1.5μH      | ±20%      | 0.09 max             | 1000                  |
| 3   | LQH43CN2R2M03 | 10                 | 2.2μH      | ±20%      | 0.11 max             | 900                   |
| 4   | LQH43CN3R3M03 | 10                 | 3.3μH      | ±20%      | 0.13 max             | 800                   |
| 5   | LQH43CN4R7M03 | 10                 | 4.7μH      | ±20%      | 0.15 max             | 750                   |
| 6   | LQH43CN6R8M03 | 10                 | 6.8μH      | ±20%      | 0.20 max             | 720                   |
| 7   | LQH43CN100K03 | 10                 | 10μH       | ±10%      | 0.24 max             | 650                   |
| 8   | LQH43CN150K03 | 10                 | 15μH       | ±10%      | 0.32 max             | 570                   |
| 9   | LQH43CN220K03 | 10                 | 22μH       | ±10%      | 0.60 max             | 420                   |
| 10  | LQH43CN330K03 | 10                 | 33μH       | ±10%      | 1.00 max             | 310                   |
| 11  | LQH43CN470K03 | 10                 | 47μH       | ±10%      | 1.10 max             | 280                   |
| 12  | LQH43CN680K03 | 10                 | 68μH       | ±10%      | 1.70 max             | 220                   |
| 13  | LQH43CN101K03 | 10                 | 100μH      | ±10%      | 2.20 max             | 190                   |
| 14  | LQH43CN151K03 | 10                 | 150μH      | ±10%      | 3.50 max             | 130                   |
| 15  | LQH43CN221K03 | 10                 | 220μH      | ±10%      | 4.00 max             | 110                   |
| 16  | LQH43CN331K03 | 10                 | 330μH      | ±10%      | 6.80 max             | 100                   |
| 17  | LQH43CN471K03 | 10                 | 470μH      | ±10%      | 8.50 max             | 90                    |
| 18  | LQH3KSN561N23 | 10                 | 560μH      | ±30%      | 7.8±30%              | 50                    |
| 19  | LQH3KSN681N23 | 10                 | 680μH      | ±30%      | 9.1±30%              | 40                    |
| 20  | LQH3KSN102N23 | 10                 | 1000μH     | ±30%      | 11±30%               | 30                    |
| 21  | LQH3KSN152N23 | 10                 | 1500μH     | ±30%      | 23±30%               | 25                    |
| 22  | LQH3KSN222N23 | 10                 | 2200μH     | ±30%      | 28±30%               | 20                    |

Information

1. Land Area and Q-F Characteristics



2. Coupling coefficient versus Coil-to-coil Spacing





# Murata Chip S-Parameter & Impedance Library

## Download Service

The program enables you to calculate, view and print graphs of impedance and S parameter of chip capacitors or chip inductors.

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Main Window



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- S parameter is saved in your personal computer and utilized for circuit simulation.

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