# **Chip Coils**



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

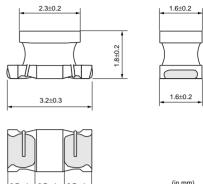
#### **LQH31M Series**

LQH31M series consists of winding 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







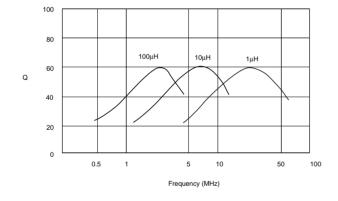
| Part Number   | Inductance<br>(μΗ) | Test Frequency<br>(MHz) | Rated<br>Current<br>(mA) | DC Resistance (ohm) | Q<br>(min.) | Test Frequency<br>(MHz) | Self Resonance<br>Frequency (min.)<br>(MHz) | EIA  |
|---------------|--------------------|-------------------------|--------------------------|---------------------|-------------|-------------------------|---|------|
| 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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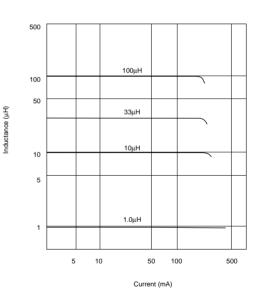
| Part Number   | Inductance<br>(μΗ) | Test Frequency<br>(MHz) | Rated<br>Current<br>(mA) | DC Resistance (ohm) | Q<br>(min.) | Test Frequency<br>(MHz) | Self Resonance<br>Frequency (min.)<br>(MHz) | EIA  |
|---------------|--------------------|-------------------------|--------------------------|---------------------|-------------|-------------------------|---|------|
| 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

### ■ Q-Frequency Characteristics



#### ■ Inductance-Current Characteristics



## ■ Coupling Coefficient

