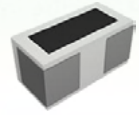


# Multilayer High Q Chip Ceramic Inductor - HQ-Q Series



Operating Temp. : -55°C ~+125°C

## FEATURES

- Monolithic structure for high reliability
- High self-resonant frequency
- Excellent solderability and high heat resistance
- High Q value correspond to wire wound inductor

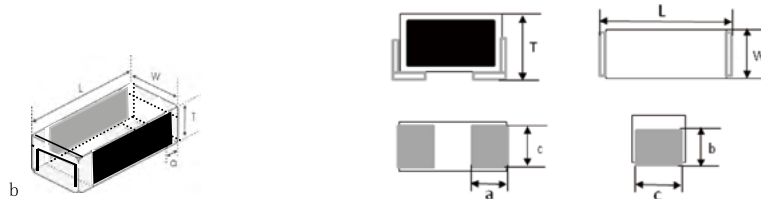
## APPLICATIONS

- RF circuit in telecommunication and other Equipments
- Mobile phones and other electronic devices
- Bluetooth, W-LAN

## PRODUCT IDENTIFICATION

| <u>HQ</u>   | <u>0402</u>          | <u>Q</u> | <u>3N9</u> | <u>B</u>             | <u>T</u>  | <u>01</u> |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
|---|----------------------|----------|------------|----------------------|---|-----------|--------------------------------|--------|--------------|------------|-------------|---------|---|---------|--|--|----------------------|---------------|-----|-------|--|------|---------|--|--|------------|-------------|--------------|----|-----------------|---|--|
| ①   | ②                    | ③        | ④          | ⑤                    | ⑥   | ⑦         |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| ①   | ②                    |          | ③          |                      | ④   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| <table border="1"> <tr><th colspan="2">Type</th></tr> <tr><td>HQ</td><td>High Q Chip Inductor</td></tr> </table>  | Type                 |          | HQ         | High Q Chip Inductor | <table border="1"> <tr><th colspan="2">External Dimensions (L×W) (mm)</th></tr> <tr><td>0201[008004]</td><td>0.25×0.125</td></tr> <tr><td>0402[01005]</td><td>0.4×0.2</td></tr> <tr><td>0603[0201]</td><td>0.6×0.3</td></tr> </table> |           | External Dimensions (L×W) (mm) |        | 0201[008004] | 0.25×0.125 | 0402[01005] | 0.4×0.2 | 0603[0201]  | 0.6×0.3 | <table border="1"> <tr><th colspan="2">Characteristics Code</th></tr> <tr><td colspan="2">Q</td></tr> </table> |  | Characteristics Code |               | Q   |       | <table border="1"> <tr><th colspan="2">Packing</th></tr> <tr><td>T</td><td>Paper Tape</td></tr> <tr><td>P</td><td>Plastic Tape</td></tr> <tr><td></td><td>Carrier Package</td></tr> </table> |      | Packing |  | T  | Paper Tape | P           | Plastic Tape |    | Carrier Package | ⑦ |  |
| Type  |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| HQ  | High Q Chip Inductor |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| External Dimensions (L×W) (mm)  |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| 0201[008004]  | 0.25×0.125           |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| 0402[01005]   | 0.4×0.2              |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| 0603[0201]  | 0.6×0.3              |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| Characteristics Code  |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| Q   |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| Packing   |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| T   | Paper Tape           |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| P   | Plastic Tape         |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
|   | Carrier Package      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| ⑤   | ④                    |          | ⑥          |                      | ⑦   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| <table border="1"> <tr><th colspan="2">Inductance Tolerance</th></tr> <tr><td>B</td><td>±0.1nH</td></tr> <tr><td>C</td><td>±0.2nH</td></tr> <tr><td>S</td><td>±0.3nH</td></tr> <tr><td>H</td><td>±3%</td></tr> <tr><td>J</td><td>±5%</td></tr> </table> | Inductance Tolerance |          | B          | ±0.1nH               | C   | ±0.2nH    | S                              | ±0.3nH | H            | ±3%        | J           | ±5%     | <table border="1"> <tr><th colspan="2">Nominal Inductance</th></tr> <tr><th>Example</th><th>Nominal Value</th></tr> <tr><td>3N9</td><td>3.9nH</td></tr> <tr><td>10N</td><td>10nH</td></tr> <tr><td colspan="2">※N=nH</td></tr> </table> |         | Nominal Inductance   |  | Example              | Nominal Value | 3N9 | 3.9nH | 10N  | 10nH | ※N=nH   |  | <table border="1"> <tr><th colspan="2">Serial Code</th></tr> <tr><td colspan="2">01</td></tr> </table> |            | Serial Code |              | 01 |                 |   |  |
| Inductance Tolerance  |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| B   | ±0.1nH               |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| C   | ±0.2nH               |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| S   | ±0.3nH               |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| H   | ±3%                  |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| J   | ±5%                  |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| Nominal Inductance  |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| Example   | Nominal Value        |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| 3N9   | 3.9nH                |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| 10N   | 10nH                 |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| ※N=nH   |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| Serial Code   |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |
| 01  |                      |          |            |                      |   |           |                                |        |              |            |             |         |   |         |  |  |                      |               |     |       |  |      |         |  |  |            |             |              |    |                 |   |  |

## SHAPE AND DIMENSIONS



Unit: mm [inch]

| Type             | L                          | W                           | T                         | a                           | b                           | c                           |
|------------------|----------------------------|-----------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|
| 0201<br>[008004] | 0.25±0.013<br>[.010±.0005] | 0.125±0.008<br>[.005±.0003] | 0.2±0.013<br>[.008±.0005] | 0.075±0.025<br>[.003±.0010] | 0.115±0.025<br>[.004±.0010] | 0.085±0.025<br>[.003±.0010] |
| 0402<br>[01005]  | 0.4±0.02<br>[.016±.0008]   | 0.2±0.02<br>[.008±.0008]    | 0.3±0.02<br>[.118±.0008]  | 0.14±0.03<br>[.005±.0010]   | 0.14±0.03<br>[.005±.0010]   | 0.17±0.03<br>[.006±.0010]   |
| 0603<br>[0201]   | 0.6±0.03<br>[.024±.0012]   | 0.3±0.03<br>[.012±.0012]    | 0.4±0.02<br>[.016±.0008]  | 0.15±0.03<br>[.006±.0012]   | 0.2±0.03<br>[.008±.0012]    | 0.25±0.03<br>[.01±.0012]    |

## SPECIFICATIONS

### HQ0201Q Series

| Part Number      | Inductance | Min. Quality Factor | L, Q Test Freq. | Typical Q @ Freq. (GHz) |     |     |     |     | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|------------------|------------|---------------------|-----------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|
|                  |            |                     |                 | 0.5                     | 0.8 | 1.8 | 2.0 | 2.4 |                              |                    |                    |
| Units            | nH         | -                   | MHz             | -                       |     |     |     |     | MHz                          | Ω                  | mA                 |
| Symbol           | L          | Q                   | Freq.           | Q                       |     |     |     |     | S.R.F                        | DCR                | I <sub>r</sub>     |
| HQ0201Q0N3 □ P01 | 0.3        | 8                   | 500             | /                       | /   | /   | /   | /   | 14000                        | 0.02               | 650                |
| HQ0201Q0N4 □ P01 | 0.4        | 8                   | 500             | /                       | /   | /   | /   | /   | 14000                        | 0.04               | 560                |
| HQ0201Q0N5 □ P01 | 0.5        | 8                   | 500             | /                       | /   | /   | /   | /   | 14000                        | 0.06               | 560                |
| HQ0201Q0N6 □ P01 | 0.6        | 8                   | 500             | /                       | /   | /   | /   | /   | 14000                        | 0.10               | 560                |
| HQ0201Q0N7 □ P01 | 0.7        | 8                   | 500             | /                       | /   | /   | /   | /   | 13000                        | 0.15               | 360                |
| HQ0201Q0N8 □ P01 | 0.8        | 8                   | 500             | 12                      | 16  | 21  | 22  | 23  | 13000                        | 0.15               | 360                |
| HQ0201Q0N9 □ P01 | 0.9        | 8                   | 500             | 12                      | 16  | 20  | 21  | 23  | 13000                        | 0.15               | 360                |
| HQ0201Q1N0 □ P01 | 1.0        | 8                   | 500             | 12                      | 15  | 19  | 20  | 22  | 12000                        | 0.18               | 340                |
| HQ0201Q1N1 □ P01 | 1.1        | 8                   | 500             | 12                      | 15  | 20  | 21  | 23  | 12500                        | 0.18               | 340                |
| HQ0201Q1N2 □ P01 | 1.2        | 8                   | 500             | 12                      | 15  | 19  | 20  | 22  | 12500                        | 0.18               | 340                |
| HQ0201Q1N3 □ P01 | 1.3        | 8                   | 500             | 12                      | 15  | 20  | 21  | 22  | 12000                        | 0.29               | 330                |
| HQ0201Q1N4 □ P01 | 1.4        | 8                   | 500             | 12                      | 15  | 19  | 20  | 22  | 12000                        | 0.32               | 330                |
| HQ0201Q1N5 □ P01 | 1.5        | 8                   | 500             | 12                      | 15  | 19  | 20  | 22  | 12000                        | 0.32               | 330                |
| HQ0201Q1N6 □ P01 | 1.6        | 8                   | 500             | 12                      | 14  | 19  | 20  | 21  | 11000                        | 0.32               | 330                |
| HQ0201Q1N7 □ P01 | 1.7        | 8                   | 500             | 12                      | 14  | 19  | 20  | 21  | 11000                        | 0.32               | 330                |
| HQ0201Q1N8 □ P01 | 1.8        | 8                   | 500             | 12                      | 14  | 19  | 20  | 21  | 10000                        | 0.32               | 330                |
| HQ0201Q1N9 □ P01 | 1.9        | 8                   | 500             | 12                      | 15  | 19  | 20  | 22  | 10000                        | 0.32               | 330                |
| HQ0201Q2N0 □ P01 | 2.0        | 8                   | 500             | 12                      | 14  | 19  | 20  | 22  | 10000                        | 0.32               | 330                |
| HQ0201Q2N1 □ P01 | 2.1        | 8                   | 500             | 12                      | 15  | 19  | 20  | 22  | 9500                         | 0.42               | 260                |
| HQ0201Q2N2 □ P01 | 2.2        | 8                   | 500             | 12                      | 14  | 19  | 20  | 21  | 9000                         | 0.43               | 260                |
| HQ0201Q2N3 □ P01 | 2.3        | 8                   | 500             | 12                      | 14  | 19  | 20  | 22  | 9000                         | 0.45               | 260                |
| HQ0201Q2N4 □ P01 | 2.4        | 8                   | 500             | 12                      | 14  | 19  | 20  | 21  | 9000                         | 0.46               | 260                |
| HQ0201Q2N5 □ P01 | 2.5        | 8                   | 500             | 12                      | 14  | 19  | 20  | 21  | 9000                         | 0.46               | 260                |
| HQ0201Q2N6 □ P01 | 2.6        | 8                   | 500             | 12                      | 15  | 19  | 20  | 22  | 8500                         | 0.46               | 260                |
| HQ0201Q2N7 □ P01 | 2.7        | 8                   | 500             | 12                      | 14  | 19  | 20  | 21  | 8500                         | 0.46               | 260                |
| HQ0201Q2N8 □ P01 | 2.8        | 8                   | 500             | 12                      | 14  | 19  | 20  | 22  | 8500                         | 0.46               | 260                |
| HQ0201Q2N9 □ P01 | 2.9        | 8                   | 500             | 12                      | 15  | 19  | 20  | 21  | 8000                         | 0.60               | 240                |
| HQ0201Q3N0 □ P01 | 3.0        | 8                   | 500             | 12                      | 15  | 19  | 20  | 21  | 8000                         | 0.60               | 240                |
| HQ0201Q3N1 □ P01 | 3.1        | 8                   | 500             | 12                      | 15  | 19  | 20  | 21  | 7500                         | 0.60               | 240                |
| HQ0201Q3N2 □ P01 | 3.2        | 8                   | 500             | 12                      | 14  | 18  | 19  | 21  | 7500                         | 0.60               | 240                |
| HQ0201Q3N3 □ P01 | 3.3        | 8                   | 500             | 12                      | 14  | 18  | 19  | 21  | 6700                         | 0.60               | 240                |
| HQ0201Q3N4 □ P01 | 3.4        | 8                   | 500             | 12                      | 14  | 18  | 19  | 20  | 6700                         | 0.70               | 220                |
| HQ0201Q3N5 □ P01 | 3.5        | 8                   | 500             | 11                      | 14  | 18  | 19  | 20  | 6700                         | 0.70               | 220                |
| HQ0201Q3N6 □ P01 | 3.6        | 8                   | 500             | 11                      | 14  | 18  | 19  | 20  | 6700                         | 0.85               | 200                |
| HQ0201Q3N7 □ P01 | 3.7        | 8                   | 500             | 11                      | 14  | 18  | 19  | 20  | 6000                         | 0.85               | 200                |
| HQ0201Q3N8 □ P01 | 3.8        | 8                   | 500             | 11                      | 14  | 18  | 19  | 20  | 5500                         | 0.88               | 200                |
| HQ0201Q3N9 □ P01 | 3.9        | 8                   | 500             | 11                      | 14  | 18  | 19  | 20  | 5500                         | 0.88               | 200                |
| HQ0201Q4N0 □ P01 | 4.0        | 8                   | 500             | 11                      | 14  | 18  | 20  | 20  | 5500                         | 0.88               | 200                |
| HQ0201Q4N1 □ P01 | 4.1        | 8                   | 500             | 11                      | 14  | 18  | 19  | 20  | 5200                         | 0.90               | 180                |
| HQ0201Q4N2 □ P01 | 4.2        | 8                   | 500             | 11                      | 14  | 18  | 19  | 20  | 5200                         | 0.90               | 180                |
| HQ0201Q4N3 □ P01 | 4.3        | 8                   | 500             | 11                      | 14  | 18  | 19  | 21  | 5200                         | 0.90               | 180                |
| HQ0201Q4N7 □ P01 | 4.7        | 8                   | 500             | 11                      | 14  | 18  | 19  | 21  | 4000                         | 1.20               | 170                |
| HQ0201Q5N1 □ P01 | 5.1        | 8                   | 500             | 11                      | 14  | 18  | 19  | 20  | 4000                         | 1.20               | 160                |
| HQ0201Q5N6 □ P01 | 5.6        | 8                   | 500             | 10                      | 13  | 14  | 18  | 19  | 4000                         | 1.20               | 160                |
| HQ0201Q6N2 □ P01 | 6.2        | 8                   | 500             | 10                      | 13  | 14  | 18  | 20  | 4000                         | 1.30               | 150                |
| HQ0201Q6N8 □ P01 | 6.8        | 8                   | 500             | 10                      | 13  | 14  | 19  | 20  | 3900                         | 1.50               | 140                |
| HQ0201Q7N5 □ P01 | 7.5        | 8                   | 500             | 10                      | 13  | 17  | 19  | 21  | 3900                         | 1.50               | 140                |
| HQ0201Q8N2 □ P01 | 8.2        | 8                   | 500             | 10                      | 13  | 17  | 19  | 20  | 3900                         | 1.50               | 140                |
| HQ0201Q9N1 □ P01 | 9.1        | 7                   | 500             | 10                      | 13  | 17  | 18  | 20  | 3700                         | 2.00               | 130                |
| HQ0201Q10N □ P01 | 10         | 7                   | 500             | 10                      | 13  | 17  | 18  | 19  | 3700                         | 2.00               | 130                |

## SPECIFICATIONS

### HQ0402Q Series

| Part Number     | Inductance | Min. Quality Factor | L, Q Test Freq. | Typical Q @ Freq. (GHz) |     |     |     |     | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|-----------------|------------|---------------------|-----------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|
|                 |            |                     |                 | 0.5                     | 0.8 | 1.8 | 2.0 | 2.4 |                              |                    |                    |
| Units           | nH         | -                   | MHz             | -                       |     |     |     |     | MHz                          | $\Omega$           | mA                 |
| Symbol          | L          | Q                   | Freq.           | Q                       |     |     |     |     | S.R.F                        | DCR                | I <sub>r</sub>     |
| HQ0402Q0N2 □◎01 | 0.2        | -                   | 500             | -                       | -   | -   | -   | -   | 17000                        | 0.01               | 1000               |
| HQ0402Q0N3 □◎01 | 0.3        | -                   | 500             | -                       | -   | -   | -   | -   | 17000                        | 0.015              | 1000               |
| HQ0402Q0N4 □◎01 | 0.4        | -                   | 500             | -                       | -   | -   | -   | -   | 17000                        | 0.03               | 1000               |
| HQ0402Q0N5 □◎01 | 0.5        | -                   | 500             | -                       | -   | -   | -   | -   | 17000                        | 0.04               | 1000               |
| HQ0402Q0N6 □◎01 | 0.6        | 14                  | 500             | 28                      | 31  | 44  | 48  | 55  | 17000                        | 0.05               | 950                |
| HQ0402Q0N7 □◎01 | 0.7        | 14                  | 500             | 25                      | 29  | 41  | 44  | 51  | 15500                        | 0.05               | 900                |
| HQ0402Q0N8 □◎01 | 0.8        | 14                  | 500             | 23                      | 27  | 39  | 43  | 48  | 15500                        | 0.05               | 900                |
| HQ0402Q0N9 □◎01 | 0.9        | 14                  | 500             | 21                      | 25  | 37  | 40  | 45  | 14600                        | 0.05               | 900                |
| HQ0402Q1N0 □◎01 | 1.0        | 14                  | 500             | 20                      | 24  | 36  | 39  | 44  | 13200                        | 0.05               | 900                |
| HQ0402Q1N1 □◎01 | 1.1        | 14                  | 500             | 22                      | 26  | 40  | 42  | 48  | 13000                        | 0.07               | 850                |
| HQ0402Q1N2 □◎01 | 1.2        | 14                  | 500             | 20                      | 25  | 37  | 40  | 46  | 13000                        | 0.07               | 800                |
| HQ0402Q1N3 □◎01 | 1.3        | 14                  | 500             | 21                      | 26  | 39  | 42  | 48  | 12700                        | 0.08               | 700                |
| HQ0402Q1N4 □◎01 | 1.4        | 14                  | 500             | 21                      | 25  | 38  | 42  | 47  | 12700                        | 0.08               | 700                |
| HQ0402Q1N5 □◎01 | 1.5        | 14                  | 500             | 20                      | 25  | 37  | 40  | 46  | 12700                        | 0.08               | 700                |
| HQ0402Q1N6 □◎01 | 1.6        | 14                  | 500             | 19                      | 23  | 35  | 37  | 42  | 11000                        | 0.08               | 700                |
| HQ0402Q1N7 □◎01 | 1.7        | 14                  | 500             | 20                      | 24  | 37  | 39  | 44  | 11000                        | 0.08               | 700                |
| HQ0402Q1N8 □◎01 | 1.8        | 14                  | 500             | 22                      | 28  | 43  | 46  | 50  | 10200                        | 0.08               | 700                |
| HQ0402Q1N9 □◎01 | 1.9        | 14                  | 500             | 24                      | 30  | 46  | 50  | 55  | 10200                        | 0.08               | 700                |
| HQ0402Q2N0 □◎01 | 2.0        | 14                  | 500             | 22                      | 27  | 41  | 44  | 48  | 10100                        | 0.1                | 700                |
| HQ0402Q2N1 □◎01 | 2.1        | 14                  | 500             | 24                      | 29  | 45  | 48  | 54  | 10100                        | 0.1                | 650                |
| HQ0402Q2N2 □◎01 | 2.2        | 14                  | 500             | 22                      | 27  | 42  | 45  | 49  | 9800                         | 0.2                | 500                |
| HQ0402Q2N3 □◎01 | 2.3        | 14                  | 500             | 24                      | 30  | 46  | 50  | 55  | 9800                         | 0.2                | 450                |
| HQ0402Q2N4 □◎01 | 2.4        | 14                  | 500             | 20                      | 25  | 39  | 42  | 46  | 9500                         | 0.2                | 450                |
| HQ0402Q2N5 □◎01 | 2.5        | 14                  | 500             | 19                      | 24  | 39  | 42  | 46  | 9500                         | 0.2                | 450                |
| HQ0402Q2N6 □◎01 | 2.6        | 14                  | 500             | 19                      | 24  | 39  | 42  | 46  | 9500                         | 0.2                | 450                |
| HQ0402Q2N7 □◎01 | 2.7        | 14                  | 500             | 20                      | 25  | 39  | 41  | 45  | 8800                         | 0.2                | 450                |
| HQ0402Q2N8 □◎01 | 2.8        | 14                  | 500             | 19                      | 25  | 40  | 44  | 47  | 8800                         | 0.2                | 450                |
| HQ0402Q2N9 □◎01 | 2.9        | 14                  | 500             | 19                      | 25  | 40  | 44  | 47  | 8800                         | 0.2                | 450                |
| HQ0402Q3N0 □◎01 | 3.0        | 14                  | 500             | 20                      | 26  | 40  | 43  | 46  | 8500                         | 0.2                | 450                |
| HQ0402Q3N1 □◎01 | 3.1        | 14                  | 500             | 20                      | 25  | 41  | 43  | 45  | 8500                         | 0.25               | 400                |
| HQ0402Q3N2 □◎01 | 3.2        | 14                  | 500             | 20                      | 26  | 41  | 44  | 47  | 8500                         | 0.25               | 400                |
| HQ0402Q3N3 □◎01 | 3.3        | 14                  | 500             | 20                      | 26  | 42  | 44  | 48  | 8200                         | 0.25               | 400                |
| HQ0402Q3N4 □◎01 | 3.4        | 14                  | 500             | 20                      | 26  | 42  | 44  | 48  | 8200                         | 0.3                | 400                |
| HQ0402Q3N5 □◎01 | 3.5        | 14                  | 500             | 20                      | 26  | 42  | 44  | 48  | 8200                         | 0.3                | 350                |
| HQ0402Q3N6 □◎01 | 3.6        | 14                  | 500             | 20                      | 27  | 42  | 44  | 48  | 8200                         | 0.3                | 350                |
| HQ0402Q3N7 □◎01 | 3.7        | 14                  | 500             | 19                      | 25  | 41  | 43  | 49  | 8200                         | 0.35               | 350                |
| HQ0402Q3N8 □◎01 | 3.8        | 14                  | 500             | 18                      | 23  | 37  | 39  | 43  | 8200                         | 0.35               | 350                |
| HQ0402Q3N9 □◎01 | 3.9        | 14                  | 500             | 19                      | 24  | 37  | 39  | 42  | 7700                         | 0.35               | 350                |
| HQ0402Q4N0 □◎01 | 4.0        | 14                  | 500             | 18                      | 24  | 38  | 41  | 44  | 6900                         | 0.35               | 350                |

# SPECIFICATIONS

## HQ0402Q Series

| Part Number      | Inductance | Min. Quality Factor | L, Q Test Freq. | Typical Q @ Freq. (GHz) |     |     |     |     | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|------------------|------------|---------------------|-----------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|
|                  |            |                     |                 | 0.5                     | 0.8 | 1.8 | 2.0 | 2.4 |                              |                    |                    |
| Units            | nH         | -                   | MHz             | -                       |     |     |     |     | MHz                          | $\Omega$           | mA                 |
| Symbol           | L          | Q                   | Freq.           | Q                       |     |     |     |     | S.R.F                        | DCR                | I <sub>r</sub>     |
| HQ0402Q4N1 □◎ 01 | 4.1        | 14                  | 500             | 19                      | 24  | 38  | 41  | 44  | 6900                         | 0.35               | 350                |
| HQ0402Q4N2 □◎ 01 | 4.2        | 14                  | 500             | 18                      | 23  | 37  | 39  | 45  | 6900                         | 0.35               | 350                |
| HQ0402Q4N3 □◎ 01 | 4.3        | 14                  | 500             | 19                      | 24  | 37  | 39  | 42  | 6900                         | 0.35               | 350                |
| HQ0402Q4N7 □◎ 01 | 4.7        | 14                  | 500             | 18                      | 23  | 36  | 38  | 41  | 6700                         | 0.35               | 350                |
| HQ0402Q5N1 □◎ 01 | 5.1        | 14                  | 500             | 18                      | 24  | 36  | 38  | 41  | 6600                         | 0.35               | 350                |
| HQ0402Q5N6 □◎ 01 | 5.6        | 14                  | 500             | 18                      | 24  | 35  | 37  | 40  | 6100                         | 0.4                | 300                |
| HQ0402Q6N2 □◎ 01 | 6.2        | 14                  | 500             | 17                      | 22  | 32  | 34  | 37  | 6000                         | 0.4                | 300                |
| HQ0402Q6N8 □◎ 01 | 6.8        | 14                  | 500             | 17                      | 22  | 33  | 35  | 37  | 5700                         | 0.4                | 300                |
| HQ0402Q7N5 □◎ 01 | 7.5        | 14                  | 500             | 17                      | 23  | 34  | 36  | 38  | 5600                         | 0.5                | 300                |
| HQ0402Q8N2 □◎ 01 | 8.2        | 14                  | 500             | 17                      | 21  | 30  | 31  | 33  | 5100                         | 0.5                | 300                |
| HQ0402Q9N1 □◎ 01 | 9.1        | 14                  | 500             | 17                      | 22  | 31  | 32  | 33  | 4900                         | 0.5                | 300                |
| HQ0402Q10N □◎ 01 | 10         | 14                  | 500             | 17                      | 22  | 32  | 33  | 34  | 4900                         | 0.6                | 250                |
| HQ0402Q11N □◎ 01 | 11         | 14                  | 500             | 15                      | 20  | 30  | 31  | 33  | 4000                         | 0.8                | 250                |
| HQ0402Q12N □◎ 01 | 12         | 14                  | 500             | 17                      | 21  | 30  | 31  | 32  | 4000                         | 0.82               | 230                |
| HQ0402Q13N □◎ 01 | 13         | 14                  | 500             | 15                      | 20  | 30  | 31  | 32  | 4000                         | 0.99               | 210                |
| HQ0402Q15N □◎ 01 | 15         | 12                  | 500             | 17                      | 21  | 29  | 30  | 30  | 4000                         | 1.53               | 170                |
| HQ0402Q16N □◎ 01 | 16         | 12                  | 500             | 16                      | 20  | 29  | 30  | 29  | 4000                         | 1.53               | 170                |
| HQ0402Q18N □◎ 01 | 18         | 12                  | 500             | 17                      | 21  | 29  | 29  | 29  | 3700                         | 1.63               | 160                |
| HQ0402Q20N □◎ 01 | 20         | 12                  | 500             | 16                      | 19  | 25  | 24  | 23  | 3000                         | 2.26               | 140                |
| HQ0402Q22N □◎ 01 | 22         | 12                  | 500             | 16                      | 19  | 25  | 24  | 22  | 3000                         | 2.26               | 140                |
| HQ0402Q24N □◎ 01 | 24         | 12                  | 500             | 15                      | 18  | 23  | 21  | 20  | 2900                         | 2.6                | 120                |
| HQ0402Q27N □◎ 01 | 27         | 12                  | 500             | 15                      | 18  | 22  | 20  | 17  | 2900                         | 2.6                | 120                |
| HQ0402Q30N □◎ 01 | 30         | 10                  | 500             | 13                      | 16  | 18  | 19  | 20  | 2600                         | 3.2                | 120                |
| HQ0402Q33N □◎ 01 | 33         | 10                  | 300             | 13                      | 16  | 20  | 19  | 20  | 2600                         | 3.2                | 120                |
| HQ0402Q36N □◎ 01 | 36         | 10                  | 300             | 13                      | 15  | 16  | 15  | 12  | 2400                         | 3.6                | 110                |
| HQ0402Q39N □◎ 01 | 39         | 10                  | 300             | 13                      | 15  | 16  | 15  | 10  | 2400                         | 3.6                | 120                |
| HQ0402Q43N □◎ 01 | 43         | 8                   | 300             | 12                      | 14  | 13  | 12  | 7   | 2100                         | 4.0                | 100                |
| HQ0402Q47N □◎ 01 | 47         | 8                   | 300             | 12                      | 14  | 13  | 11  | 6   | 2100                         | 4.0                | 100                |
| HQ0402Q51N □◎ 01 | 51         | 8                   | 300             | 12                      | 14  | 11  | 9   | 4   | 1900                         | 4.2                | 100                |
| HQ0402Q56N □◎ 01 | 56         | 8                   | 300             | 12                      | 14  | 10  | 8   | -   | 1900                         | 4.2                | 100                |

※ □ : Please specify the inductance tolerance. For L≤4.2nH, choose B=±0.1nH, C=±0.2nH or S=±0.3nH; For 4.2nH<L<5.6nH, choose, H=±3%, J=±5% or S=±0.3nH; For L≥5.6nH, choose, H=±3%, J=±5%.

※ ◎ : For the product of 0402, please specify the Packing: T means Paper tape, P means Plastic Tape Carrier Package.

※: Please refer to "Measurement Notice for RF Inductors".

## HQ0603Q Series

| Part Number      | Inductance | Min. Quality Factor | L, Q Test Freq. | Typical Q @ Freq. (GHz) |     |     |     |     | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|------------------|------------|---------------------|-----------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|
|                  |            |                     |                 | 0.5                     | 0.8 | 1.8 | 2.0 | 2.4 |                              |                    |                    |
| Units            | nH         | -                   | MHz             | -                       |     |     |     |     | MHz                          | $\Omega$           | mA                 |
| Symbol           | L          | Q                   | Freq.           | Q                       |     |     |     |     | S.R.F                        | DCR                | I <sub>r</sub>     |
| HQ0603Q0N6 □ T01 | 0.6        | 20                  | 500             | -                       | -   | -   | -   | -   | 20000                        | 0.04               | 1100               |
| HQ0603Q0N7 □ T01 | 0.7        | 20                  | 500             | -                       | -   | -   | -   | -   | 20000                        | 0.04               | 1100               |
| HQ0603Q0N8 □ T01 | 0.8        | 20                  | 500             | -                       | -   | -   | -   | -   | 18000                        | 0.04               | 1100               |
| HQ0603Q0N9 □ T01 | 0.9        | 20                  | 500             | -                       | -   | -   | -   | -   | 18000                        | 0.04               | 1100               |
| HQ0603Q1N0 □ T01 | 1.0        | 20                  | 500             | 47                      | 60  | 92  | 99  | 110 | 16000                        | 0.04               | 1100               |
| HQ0603Q1N1 □ T01 | 1.1        | 20                  | 500             | 46                      | 58  | 90  | 95  | 104 | 14000                        | 0.04               | 1100               |
| HQ0603Q1N2 □ T01 | 1.2        | 20                  | 500             | 45                      | 56  | 88  | 92  | 100 | 13000                        | 0.04               | 1100               |
| HQ0603Q1N3 □ T01 | 1.3        | 20                  | 500             | 45                      | 56  | 88  | 93  | 102 | 13000                        | 0.04               | 1100               |



# SPECIFICATIONS

## HQ0603Q Series

| Part Number      | Inductance | Min. Quality Factor | L, Q Test Freq. | Typical Q @ Freq. (GHz) |     |     |     |     | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|------------------|------------|---------------------|-----------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|
|                  |            |                     |                 | 0.5                     | 0.8 | 1.8 | 2.0 | 2.4 |                              |                    |                    |
| Units            | nH         | -                   | MHz             | -                       |     |     |     |     | MHz                          | Ω                  | mA                 |
| Symbol           | L          | Q                   | Freq.           | Q                       |     |     |     |     | S.R.F                        | DCR                | Ir                 |
| HQ0603Q1N4 □ T01 | 1.4        | 20                  | 500             | 42                      | 55  | 89  | 95  | 103 | 12000                        | 0.04               | 1100               |
| HQ0603Q1N5 □ T01 | 1.5        | 20                  | 500             | 42                      | 54  | 86  | 90  | 100 | 12000                        | 0.05               | 1000               |
| HQ0603Q1N6 □ T01 | 1.6        | 20                  | 500             | 41                      | 52  | 80  | 83  | 92  | 10000                        | 0.05               | 1000               |
| HQ0603Q1N7 □ T01 | 1.7        | 20                  | 500             | 39                      | 49  | 75  | 79  | 86  | 10000                        | 0.07               | 800                |
| HQ0603Q1N8 □ T01 | 1.8        | 20                  | 500             | 38                      | 45  | 72  | 75  | 81  | 10000                        | 0.08               | 800                |
| HQ0603Q1N9 □ T01 | 1.9        | 20                  | 500             | 36                      | 46  | 71  | 74  | 81  | 10000                        | 0.12               | 600                |
| HQ0603Q2N0 □ T01 | 2.0        | 20                  | 500             | 36                      | 45  | 68  | 70  | 77  | 9000                         | 0.12               | 600                |
| HQ0603Q2N1 □ T01 | 2.1        | 20                  | 500             | 36                      | 45  | 67  | 71  | 76  | 9000                         | 0.12               | 600                |
| HQ0603Q2N2 □ T01 | 2.2        | 20                  | 500             | 36                      | 45  | 67  | 69  | 76  | 9000                         | 0.12               | 600                |
| HQ0603Q2N3 □ T01 | 2.3        | 20                  | 500             | 37                      | 46  | 68  | 71  | 76  | 9000                         | 0.12               | 600                |
| HQ0603Q2N4 □ T01 | 2.4        | 20                  | 500             | 39                      | 48  | 72  | 75  | 82  | 9000                         | 0.12               | 600                |
| HQ0603Q2N5 □ T01 | 2.5        | 20                  | 500             | 38                      | 47  | 70  | 73  | 80  | 9000                         | 0.12               | 600                |
| HQ0603Q2N6 □ T01 | 2.6        | 20                  | 500             | 35                      | 43  | 64  | 66  | 72  | 9000                         | 0.12               | 600                |
| HQ0603Q2N7 □ T01 | 2.7        | 20                  | 500             | 36                      | 44  | 65  | 68  | 73  | 9000                         | 0.12               | 600                |
| HQ0603Q2N8 □ T01 | 2.8        | 20                  | 500             | 34                      | 43  | 63  | 65  | 70  | 8000                         | 0.12               | 600                |
| HQ0603Q2N9 □ T01 | 2.9        | 20                  | 500             | 36                      | 45  | 65  | 66  | 72  | 8000                         | 0.12               | 600                |
| HQ0603Q3N0 □ T01 | 3.0        | 20                  | 500             | 36                      | 44  | 65  | 66  | 72  | 8000                         | 0.12               | 600                |
| HQ0603Q3N1 □ T01 | 3.1        | 20                  | 500             | 34                      | 42  | 62  | 64  | 69  | 7500                         | 0.17               | 500                |
| HQ0603Q3N2 □ T01 | 3.2        | 20                  | 500             | 33                      | 42  | 63  | 66  | 72  | 7000                         | 0.17               | 500                |
| HQ0603Q3N3 □ T01 | 3.3        | 20                  | 500             | 34                      | 45  | 73  | 77  | 89  | 7000                         | 0.17               | 500                |
| HQ0603Q3N4 □ T01 | 3.4        | 20                  | 500             | 33                      | 41  | 59  | 61  | 66  | 7000                         | 0.17               | 500                |
| HQ0603Q3N5 □ T01 | 3.5        | 20                  | 500             | 33                      | 41  | 59  | 61  | 65  | 7000                         | 0.17               | 500                |
| HQ0603Q3N6 □ T01 | 3.6        | 20                  | 500             | 32                      | 42  | 59  | 61  | 65  | 7000                         | 0.17               | 500                |
| HQ0603Q3N7 □ T01 | 3.7        | 20                  | 500             | 32                      | 40  | 59  | 60  | 65  | 7000                         | 0.17               | 500                |
| HQ0603Q3N8 □ T01 | 3.8        | 20                  | 500             | 31                      | 38  | 60  | 62  | 70  | 7000                         | 0.17               | 500                |
| HQ0603Q3N9 □ T01 | 3.9        | 20                  | 500             | 30                      | 39  | 61  | 64  | 72  | 7000                         | 0.17               | 500                |
| HQ0603Q4N0 □ T01 | 4.0        | 20                  | 500             | 33                      | 41  | 59  | 61  | 66  | 7000                         | 0.17               | 500                |
| HQ0603Q4N1 □ T01 | 4.1        | 20                  | 500             | 30                      | 38  | 56  | 58  | 62  | 7000                         | 0.17               | 500                |
| HQ0603Q4N2 □ T01 | 4.2        | 20                  | 500             | 31                      | 39  | 57  | 59  | 63  | 7000                         | 0.17               | 500                |
| HQ0603Q4N3 □ T01 | 4.3        | 20                  | 500             | 32                      | 40  | 58  | 59  | 64  | 7000                         | 0.17               | 500                |
| HQ0603Q4N7 □ T01 | 4.7        | 20                  | 500             | 31                      | 39  | 58  | 58  | 63  | 7000                         | 0.25               | 400                |
| HQ0603Q5N1 □ T01 | 5.1        | 20                  | 500             | 32                      | 39  | 55  | 56  | 59  | 5500                         | 0.25               | 400                |
| HQ0603Q5N6 □ T01 | 5.6        | 20                  | 500             | 32                      | 40  | 56  | 57  | 57  | 5500                         | 0.25               | 400                |
| HQ0603Q6N2 □ T01 | 6.2        | 20                  | 500             | 29                      | 36  | 51  | 52  | 55  | 5500                         | 0.25               | 400                |
| HQ0603Q6N8 □ T01 | 6.8        | 20                  | 500             | 29                      | 36  | 50  | 51  | 53  | 5500                         | 0.30               | 400                |
| HQ0603Q7N5 □ T01 | 7.5        | 20                  | 500             | 28                      | 36  | 50  | 52  | 53  | 4500                         | 0.30               | 400                |
| HQ0603Q8N2 □ T01 | 8.2        | 20                  | 500             | 29                      | 37  | 51  | 51  | 52  | 4500                         | 0.40               | 300                |
| HQ0603Q9N1 □ T01 | 9.1        | 20                  | 500             | 27                      | 35  | 48  | 50  | 51  | 4500                         | 0.40               | 300                |
| HQ0603Q10N □ T01 | 10         | 20                  | 500             | 28                      | 36  | 48  | 49  | 47  | 4500                         | 0.40               | 300                |
| HQ0603Q11N □ T01 | 11         | 20                  | 500             | 28                      | 36  | 48  | 49  | 47  | 4000                         | 0.50               | 300                |
| HQ0603Q12N □ T01 | 12         | 20                  | 500             | 29                      | 36  | 48  | 49  | 48  | 4000                         | 0.50               | 300                |
| HQ0603Q13N □ T01 | 13         | 20                  | 500             | 28                      | 35  | 45  | 46  | 43  | 4000                         | 0.50               | 300                |
| HQ0603Q15N □ T01 | 15         | 20                  | 500             | 27                      | 34  | 41  | 40  | 37  | 3500                         | 0.7                | 300                |
| HQ0603Q16N □ T01 | 16         | 20                  | 500             | 27                      | 34  | 41  | 40  | 36  | 3500                         | 0.8                | 250                |
| HQ0603Q18N □ T01 | 18         | 20                  | 500             | 28                      | 35  | 41  | 39  | 35  | 3500                         | 0.8                | 250                |
| HQ0603Q20N □ T01 | 20         | 20                  | 500             | 26                      | 33  | 38  | 37  | 30  | 3000                         | 0.8                | 250                |
| HQ0603Q22N □ T01 | 22         | 20                  | 500             | 25                      | 31  | 35  | 33  | 29  | 3000                         | 0.82               | 250                |
| HQ0603Q24N □ T01 | 24         | 15                  | 500             | 27                      | 32  | 32  | 29  | 22  | 2000                         | 1.6                | 170                |
| HQ0603Q27N □ T01 | 27         | 15                  | 500             | 25                      | 30  | 29  | 25  | 17  | 2000                         | 1.6                | 170                |

# SPECIFICATIONS

## HQ0603Q Series

| Part Number      | Inductance | Min. Quality Factor | L, Q Test Freq. | Typical Q @ Freq. (GHz) |     |     |     |     | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|------------------|------------|---------------------|-----------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|
|                  |            |                     |                 | 0.5                     | 0.8 | 1.8 | 2.0 | 2.4 |                              |                    |                    |
| Units            | nH         | -                   | MHz             | -                       |     |     |     |     | MHz                          | $\Omega$           | mA                 |
| Symbol           | L          | Q                   | Freq.           | Q                       |     |     |     |     | S.R.F                        | DCR                | I <sub>r</sub>     |
| HQ0603Q30N □ T01 | 30         | 12                  | 500             | 27                      | 31  | 26  | 21  | 11  | 1700                         | 2.0                | 150                |
| HQ0603Q33N □ T01 | 33         | 12                  | 300             | 26                      | 31  | 23  | 19  | 8   | 1700                         | 2.0                | 150                |
| HQ0603Q36N □ T01 | 36         | 12                  | 300             | 24                      | 28  | 20  | 13  | -   | 1500                         | 2.0                | 150                |
| HQ0603Q39N □ T01 | 39         | 12                  | 300             | 25                      | 29  | 17  | 11  | -   | 1500                         | 2.0                | 150                |
| HQ0603Q43N □ T01 | 43         | 12                  | 300             | 25                      | 28  | 15  | 10  | -   | 1300                         | 2.5                | 130                |
| HQ0603Q47N □ T01 | 47         | 12                  | 300             | 25                      | 28  | 14  | 7   | -   | 1300                         | 2.5                | 130                |
| HQ0603Q51N □ T01 | 51         | 12                  | 300             | 25                      | 29  | 12  | 6   | -   | 1200                         | 2.5                | 130                |
| HQ0603Q56N □ T01 | 56         | 12                  | 300             | 24                      | 27  | 10  | 2   | -   | 1200                         | 2.5                | 130                |
| HQ0603Q62N □ T01 | 62         | 12                  | 300             | 22                      | 25  | 7   | 1   | -   | 1100                         | 5                  | 100                |
| HQ0603Q68N □ T01 | 68         | 12                  | 300             | 21                      | 24  | 2   | -   | -   | 1100                         | 5                  | 100                |
| HQ0603Q75N □ T01 | 75         | 10                  | 300             | 22                      | 24  | 1   | -   | -   | 1100                         | 5                  | 100                |
| HQ0603Q82N □ T01 | 82         | 10                  | 300             | 20                      | 20  | -   | -   | -   | 1000                         | 5                  | 100                |
| HQ0603Q91N □ T01 | 91         | 10                  | 300             | 19                      | 19  | -   | -   | -   | 1000                         | 7                  | 80                 |
| HQ0603QR10 □ T01 | 100        | 10                  | 300             | 18                      | 17  | -   | -   | -   | 900                          | 7                  | 80                 |
| HQ0603QR11 □ T01 | 110        | 10                  | 300             | 19                      | 18  | -   | -   | -   | 900                          | 8                  | 80                 |
| HQ0603QR12 □ T01 | 120        | 10                  | 300             | 18                      | 17  | -   | -   | -   | 800                          | 8                  | 80                 |
| HQ0603QR13 □ T01 | 130        | 7                   | 100             | 16                      | 14  | -   | -   | -   | 700                          | 8                  | 80                 |
| HQ0603QR15 □ T01 | 150        | 7                   | 100             | 17                      | 13  | -   | -   | -   | 700                          | 8                  | 80                 |

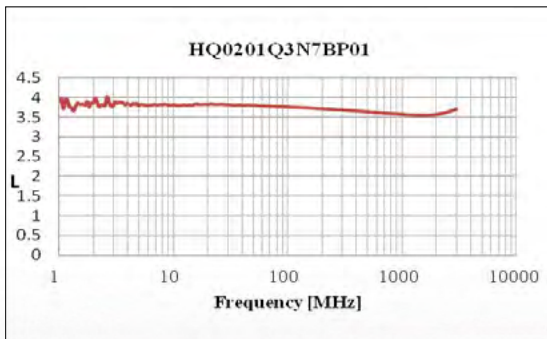
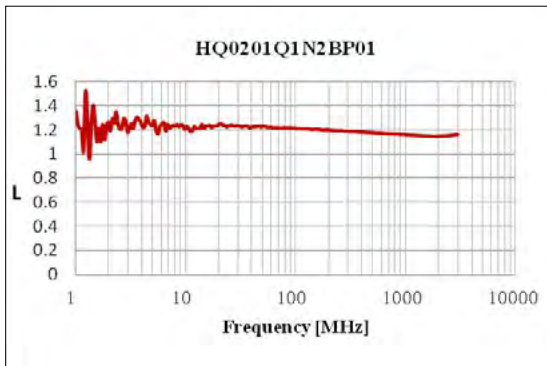
※ □ : Please specify the inductance tolerance. For L≤4.2nH, choose B=±0.1nH, C=±0.2nH or S=±0.3nH; For L>4.2nH choose, H=±3%, J=±5%.

※: Please refer to "Measurement Notice for RF Inductors".

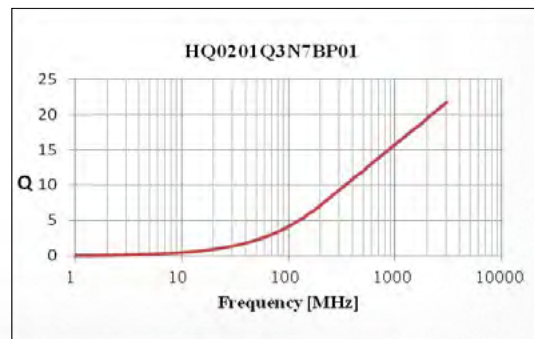
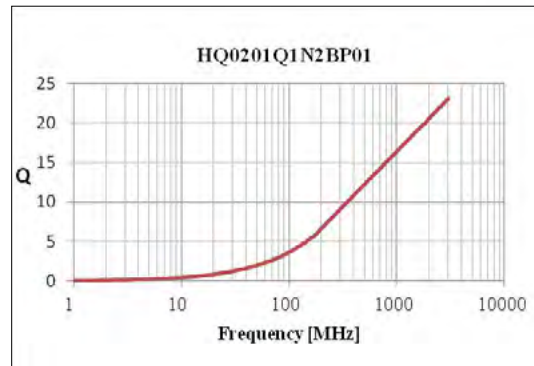
## TYPICAL ELECTRICAL CHARACTERISTICS

### HQ0201Q Series

#### Inductance-Frequency Characteristics(Typ.)



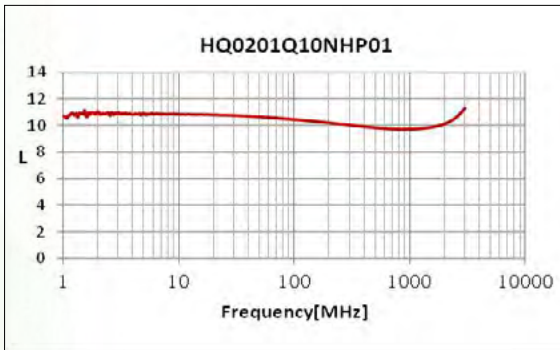
#### Q-Frequency Characteristics(Typ.)



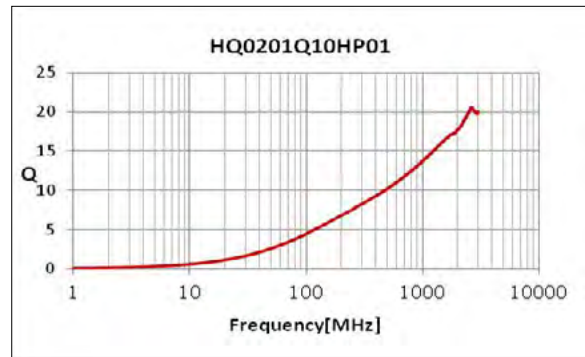
## TYPICAL ELECTRICAL CHARACTERISTICS

### HQ0201Q Series

Inductance-Frequency Characteristics(Typ.)

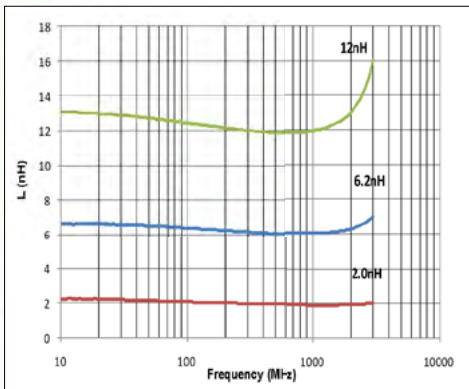


Q-Frequency Characteristics(Typ.)

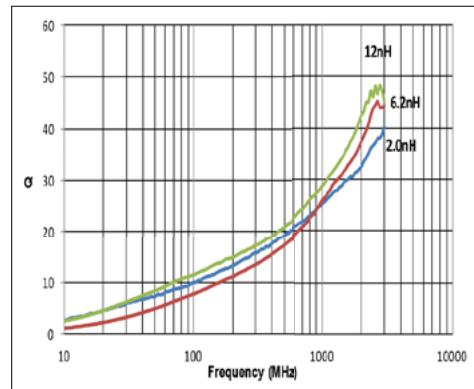


### HQ0402Q Series

Inductance vs. Frequency Characteristics

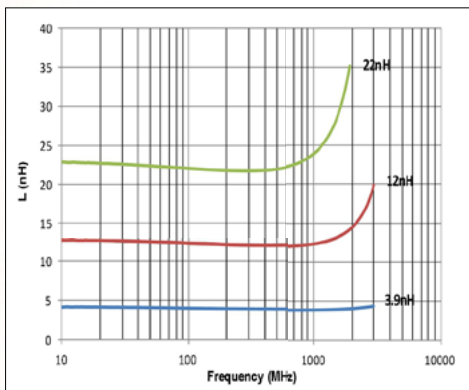


Q vs. Frequency Characteristics



### HQ0603Q Series

Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics

