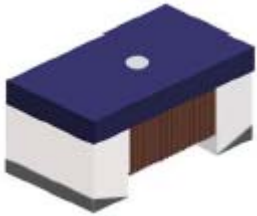


# Wire Wound Chip Inductor



## Features:

- Wire wound ceramic construction provide high SRF.
- Ultra-compact inductors provide exceptional Q values.
- Low profile, high current are available.
- Miniature SMD chip inductor for fully automated assembly.
- Outstanding endurance from pull-up force, mechanical shock and pressure.
- Tighter tolerance down to  $\pm 2\%$ .
- Smaller size of 0402 (1005).

## Applications:

### RF products:

Cellular phone (CDMA/GSM/PHS).

Cordless phone (DECT/CT1CT2).

Remote control, security system.

Wireless PDA.

WLL, wireless LAN/mouse/keyboard/earphone.

VCO, RF module and other wireless products.

Base station, repeater.

GPS receiver.

### Broad Band Applications:

CATV filter, tuner.

Cable modem/XDSL tuner.

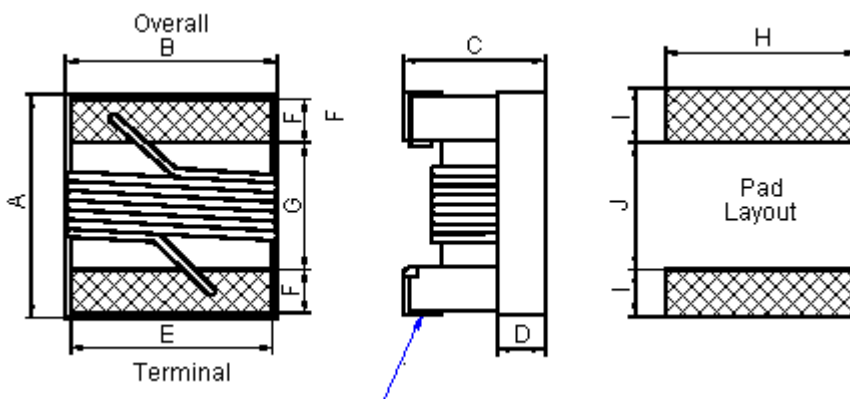
Set top box.

### IT Applications:

USB 2.0.

IEEE 1394.

## Dimensions



Terminal wraparound : approximately 0.007 inches/0.18mm both ends

Dimensions : Millimetres

# Wire Wound Chip Inductor



## Standard

| Series | A<br>(Maximum) | B<br>(Maximum) | C<br>(Maximum) | D<br>(Reference) | E    | F    | G    | H    | I    | J    |
|--------|----------------|----------------|----------------|------------------|------|------|------|------|------|------|
| WL02   | 1.27           | 0.76           | 0.61           | 0.15             | 0.51 | 0.23 | 0.56 | 0.66 | 0.50 | 0.46 |
| WL03   | 1.80           | 1.12           | 1.02           | 0.38             | 0.76 | 0.33 | 0.86 | 1.02 | 0.64 | 0.64 |
| WL05   | 2.29           | 1.73           | 1.52           | 0.51             | 1.27 | 0.44 | 1.02 | 1.78 | 1.02 | 0.76 |
| WL06   | 3.56           | 2.16           |                | 0.50             | 1.60 | 0.50 | 2.20 | 1.93 |      | 1.78 |

Dimensions : Millimetres

## Low Profile

| Series | A<br>(Maximum) | B<br>(Maximum) | C<br>(Maximum) | D<br>(Reference) | E    | F    | G    | H    | I    | J    |
|--------|----------------|----------------|----------------|------------------|------|------|------|------|------|------|
| WL05   | 2.29           | 1.73           | 1.03           | 0.51             | 1.27 | 0.44 | 1.02 | 1.78 | 1.02 | 0.76 |

Dimensions : Millimetres

## High Current/High Q

| Series | A<br>(Maximum) | B<br>(Maximum) | C<br>(Maximum) | D<br>(Reference) | E    | F    | G    | H    | I    | J    |
|--------|----------------|----------------|----------------|------------------|------|------|------|------|------|------|
| WL03   | 1.80           | 1.12           | 1.02           | 0.38             | 0.76 | 0.33 | 0.86 | 1.02 | 0.64 | 0.64 |
| WL05   | 2.29           | 1.73           | 1.52           | 0.51             | 1.27 | 0.44 | 1.02 | 1.78 | 1.02 | 0.76 |

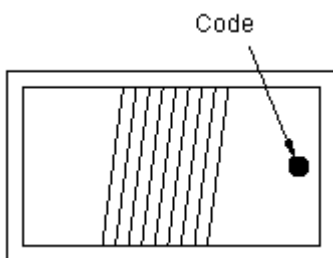
Dimensions : Millimetres

## Colour Coding

**0603/0805/1206 series (0402 series is no colour coding)**

Because of small sizes, these parts are marked with a single colour dot.

The inductance value represented by the dot is shown on the data page for each series.



Colour Coding

# Wire Wound Chip Inductor



## Standard Electrical Specifications

### 0402 Wire Wound Chip Inductors/Standard

| Inductance (nH) | Tolerance (%) | Quality Factor/Minimum | Self Resonant Frequency/Minimum (GHz) | Resistance DC/Maximum ( $\Omega$ ) | Current DC/Maximum (mA) | 900MHz |       | 1.7GHz |       |       |
|-----------------|---------------|------------------------|---------------------------------------|------------------------------------|-------------------------|--------|-------|--------|-------|-------|
|                 |               |                        |                                       |                                    |                         | L      | Q     | L      | Q     |       |
| 1.0 at 250MHz   | 10            | 16                     | 12.70                                 | 0.045                              | 1360                    | 1.02   | 77    | 1.02   | 69    |       |
| 2.2 at 250MHz   | 10, 5         | 19                     | 10.80                                 | 0.070                              | 960                     | 2.19   | 59    | 2.23   | 100   |       |
| 3.3 at 250MHz   |               |                        | 7.00                                  | 0.066                              | 840                     | 3.10   | 65    | 3.12   | 87    |       |
| 4.7 at 250MHz   | 10, 5, 2      | 18                     | 4.70                                  | 0.130                              | 640                     | 4.55   | 48    | 4.68   | 68    |       |
| 6.8 at 250MHz   |               | 20                     | 4.80                                  | 0.083                              | 680                     | 6.56   | 63    | 6.93   | 78    |       |
| 10 at 250MHz    |               | 21                     | 3.90                                  | 0.195                              | 480                     | 9.80   | 50    | 10.10  | 67    |       |
| 12 at 250MHz    |               | 24                     | 24                                    | 3.60                               | 0.120                   | 640    | 11.90 | 53     | 12.70 | 71    |
| 15 at 250MHz    |               |                        |                                       | 3.28                               | 0.172                   | 560    | 14.60 | 55     | 15.50 | 77    |
| 18 at 250MHz    |               | 25                     | 25                                    | 3.10                               | 0.230                   | 420    | 18.30 | 57     | 20.30 | 62    |
| 22 at 250MHz    |               |                        |                                       | 2.80                               | 0.300                   | 400    | 23.20 | 53     | 26.80 | 53    |
| 27 at 250MHz    |               | 24                     | 24                                    | 2.48                               |                         |        | 28.70 | 49     | 33.50 | 63    |
| 33 at 250MHz    |               |                        |                                       | 2.35                               | 0.350                   | 34.90  | 31    | 41.70  | 32    |       |
| 39 at 250MHz    |               | 25                     | 25                                    | 2.10                               | 0.550                   | 200    | 41.70 | 47     | 50.20 | 45    |
| 47 at 250MHz    |               |                        |                                       |                                    | 0.830                   | 150    | 50.00 | 38     | 55.80 | 37    |
| 56 at 250MHz    |               |                        |                                       |                                    | 1.76                    | 0.970  | 100   | 57.40  | 49    | 72.40 |
| 68 at 250MHz    |               | 22                     | 1.62                                  | 1.120                              | 69.60                   | 45     |       | 83.40  | 38    |       |

# Wire Wound Chip Inductor



## Standard Electrical Specifications

### 0603 Wire Wound Chip Inductors/Standard

| Inductance (nH) | Tolerance (%) | Quality Factor/Minimum | Self Resonant Frequency/ Minimum (GHz) | Resistance DC/Maximum (Ω) | Current DC/Maximum (mA) | 900MHz |       | 1.7GHz |       | Colour Code |
|-----------------|---------------|------------------------|--|---------------------------|-------------------------|--------|-------|--------|-------|-------------|
|                 |               |                        |  |                           |                         | L      | Q     | L      | Q     |             |
| 2.2 at 250MHz   | 10, 5         | 15                     | 6.00                                   | 0.100                     | 700                     | 2.18   | 41    | 2.20   | 64    | White       |
| 3.3 at 250MHz   |               | 22                     | >6.00                                  | 0.080                     |                         | 3.35   | 47    | 3.40   | 65    | Red         |
| 4.7 at 250MHz   |               | 25                     | 5.80                                   | 0.120                     |                         | 4.65   | 53    | 4.80   | 67    | Violet      |
| 6.8 at 250MHz   |               | 27                     |  |                           |                         | 6.75   | 60    | 7.10   | 81    | Red         |
| 10.0 at 250MHz  |               | 31                     | 4.80                                   | 0.130                     |                         | 10.0   | 66    | 10.6   | 83    | Orange      |
| 12.0 at 250MHz  |               | 35                     | 4.00                                   |                           |                         | 12.3   | 72    | 13.5   |       | Yellow      |
| 15.0 at 250MHz  |               |                        |  | 0.170                     |                         | 15.4   | 64    | 16.8   | 89    | Green       |
| 18.0 at 250MHz  |               |                        |  |                           |                         | 3.10   | 18.7  | 70     | 21.4  | 69          |
| 22.0 at 250MHz  |               | 38                     | 3.00                                   | 0.190                     |                         | 22.8   | 73    | 26.1   | 71    | Violet      |
| 27.0 at 250MHz  |               | 40                     | 2.80                                   | 0.220                     | 29.2                    | 74     | 34.6  | 65     | Gray  |             |
| 33.0 at 250MHz  |               |                        |  |                           | 2.30                    | 36.0   | 67    | 49.5   | 42    | White       |
| 39.0 at 250MHz  |               |                        |  |                           | 2.20                    | 42.7   | 60    | 60.2   | 40    | Black       |
| 47.0 at 200MHz  |               |                        | 38                                     | 2.00                      | 0.280                   | 52.2   | 62    | 77.2   | 35    | Brown       |
| 56.0 at 200MHz  |               |                        |  | 1.90                      | 0.310                   | 62.5   | 56    | 97.0   | 26    | Red         |
| 68.0 at 200MHz  |               |                        | 37                                     | 1.70                      | 0.340                   | 80.5   | 54    | 168    | 21    | Orange      |
| 82.0 at 150MHz  |               |                        | 34                                     |                           |                         | 0.540  |       | 96.2   |       | 177         |
| 100 at 150MHz   |               |                        |  | 1.40                      | 0.580                   | 400    | 124.0 | 49     | 319.5 | 13          |
| 120 at 150MHz   |               |                        | 32                                     | 1.30                      | 0.650                   |        | 300   | 166.0  | 39    | 529.3       |
| 150 at 100MHz   | 28            | 0.950                  | 280                                    |                           | 230.0                   | 25     | -     | -      | White |             |
| 180 at 100MHz   | 25            | 1.25                   | 1.400                                  | 250                       | 305.0                   | 22     | -     | -      | Black |             |
| 220 at 100MHz   |               | 1.20                   | 1.600                                  |                           | 377.0                   | 21     | -     | -      | Brown |             |
| 270 at 100MHz   |               | 2.100                  | 200                                    | 523.0                     | 19                      | -      | -     | Red    |       |             |
| 330 at 100MHz   |               | 0.90                   | 3.800                                  | 100                       | 680.4                   | 20     | -     | -      | Blue  |             |
| 390 at 100MHz   |               |                        |  |                           | 4.350                   | 734.5  | 29    | -      | -     | Yellow      |
| 470 at 100MHz   |               | 23                     | 0.60                                   | 3.600                     | 80                      | -      | -     | -      | White |             |

# Wire Wound Chip Inductor



## Standard Electrical Specifications

### 0805 Wire Wound Chip Inductors/Standard

| Inductance (nH) | Tolerance (%) | Quality Factor/Minimum | Self Resonant Frequency/Minimum (GHz) | Resistance DC/Maximum ( $\Omega$ ) | Current DC/Maximum (mA) | Colour Code |        |
|-----------------|---------------|------------------------|---------------------------------------|------------------------------------|-------------------------|-------------|--------|
| 10.0 at 250MHz  | 10, 5, 2      | 60 at 500MHz           | 4.200                                 | 0.10                               | 600                     | Blue        |        |
| 12.0 at 250MHz  |               | 50 at 500MHz           | 4.000                                 | 0.15                               |                         | Orange      |        |
| 15.0 at 250MHz  |               |                        | 3.400                                 | 0.17                               |                         | Yellow      |        |
| 18.0 at 250MHz  |               |                        | 3.300                                 | 0.20                               |                         | Green       |        |
| 22.0 at 250MHz  |               |                        | 2.600                                 | 0.22                               |                         | Blue        |        |
| 27.0 at 250MHz  |               |                        | 55 at 500MHz                          | 2.500                              | 0.25                    | Violet      |        |
| 33.0 at 250MHz  |               | 60 at 500MHz           | 2.050                                 | 0.27                               | 500                     | Gray        |        |
| 39.0 at 250MHz  |               |                        | 2.000                                 | 0.29                               |                         | White       |        |
| 47.0 at 200MHz  |               |                        | 1.650                                 | 0.31                               |                         | Black       |        |
| 56.0 at 200MHz  |               |                        | 1.550                                 | 0.34                               |                         | Brown       |        |
| 68.0 at 200MHz  |               |                        | 1.450                                 | 0.38                               |                         | Red         |        |
| 82.0 at 150MHz  |               | 65 at 500MHz           | 1.300                                 | 0.42                               | 400                     | Orange      |        |
| 100 at 150MHz   |               |                        | 1.200                                 | 0.46                               |                         | Yellow      |        |
| 120 at 150MHz   |               |                        | 50 at 250MHz                          | 1.100                              |                         | 0.51        | Green  |
| 150 at 100MHz   |               |                        |                                       | 0.920                              |                         | 0.56        | Blue   |
| 180 at 100MHz   |               |                        |                                       | 0.870                              |                         | 0.64        | Violet |
| 220 at 100MHz   |               | 48 at 250MHz           | 0.850                                 | 0.70                               | 350                     | Gray        |        |
| 270 at 100MHz   |               |                        | 0.650                                 | 1.00                               |                         | White       |        |
| 300 at 100MHz   |               |                        | 0.600                                 | 1.40                               |                         | 310         | Black  |
| 390 at 100MHz   |               | 33 at 100MHz           | 0.560                                 | 1.50                               | 290                     | Brown       |        |
| 470 at 50MHz    |               |                        | 0.375                                 | 1.70                               |                         | 250         | Red    |
| 560 at 25MHz    |               |                        | 23 at 50MHz                           | 0.340                              |                         | 1.90        | 230    |
| 680 at 25MHz    |               | 0.200                  |                                       | 2.20                               | 190                     | Green       |        |
| 820 at 25MHz    |               |                        |                                       | 2.35                               | 180                     | Violet      |        |
| 1000 at 25MHz   |               | 20 at 50MHz            | 0.100                                 | 2.50                               | 170                     | Gray        |        |
| 1,500 at 7.9MHz |               | 16 at 25MHz            |                                       |                                    |                         | Black       |        |
| 2,200 at 7.9MHz |               | 16 at 7.9MHz           | 0.060                                 | 2.70                               | 160                     | Red         |        |
| 3,300 at 7.9MHz |               | 15 at 7.9MHz           | 0.040                                 |                                    | 90                      | Blue        |        |
| 4,700 at 7.9MHz |               |                        |                                       |                                    |                         | Green       |        |

# Wire Wound Chip Inductor



## Standard Electrical Specifications

### 1206 Wire Wound Chip Inductors/Standard

| Inductance (nH) | Tolerance (%) | Quality Factor/Minimum | Self Resonant Frequency/Minimum (GHz) | Resistance DC/Maximum ( $\Omega$ ) | Current DC/Maximum (mA) | Colour Code |        |
|-----------------|---------------|------------------------|---------------------------------------|------------------------------------|-------------------------|-------------|--------|
| 10.0 at 100MHz  | 10, 5         | 40 at 300MHz           | 4.00                                  | 0.08                               | 1000                    | Red         |        |
| 15.0 at 100MHz  |               |                        | 3.20                                  | 0.10                               |                         | Yellow      |        |
| 22.0 at 100MHz  |               |                        | 2.20                                  |                                    |                         | Blue        |        |
| 33.0 at 100MHz  | 10, 5, 2      | 50 at 300MHz           | 1.80                                  | 0.11                               | 950                     | Gray        |        |
| 47.0 at 100MHz  |               |                        | 1.50                                  | 0.13                               |                         | Black       |        |
| 68.0 at 100MHz  |               | 55 at 300MHz           | 1.20                                  | 0.26                               | 750                     | Red         |        |
| 150 at 100MHz   |               |                        | 60 at 300MHz                          | 0.95                               | 0.31                    | 750         | Blue   |
| 220 at 50MHz    |               | 45 at 150MHz           | 55 at 300MHz                          | 0.76                               | 0.50                    | 670         | Gray   |
| 330 at 50MHz    |               |                        | 45 at 150MHz                          | 0.65                               | 0.62                    | 590         | Black  |
| 470 at 50MHz    |               |                        |                                       | 0.55                               | 1.30                    | 490         | Red    |
| 680 at 35MHz    |               |                        |                                       | 0.45                               | 1.58                    | 430         | Yellow |
| 1000 at 35MHz   | 0.40          |                        |                                       | 2.80                               | 320                     | Blue        |        |

## Standard Electrical Specifications

### 0805 Wire Wound Chip Inductors/Low Profile

| Inductance (nH) | Tolerance (%) | Quality Factor/Minimum | Self Resonant Frequency/Minimum (GHz) | Resistance DC/Maximum ( $\Omega$ ) | Current DC/Maximum (mA) | Colour Code |        |
|-----------------|---------------|------------------------|---------------------------------------|------------------------------------|-------------------------|-------------|--------|
| 10.0 at 250MHz  | 10, 5, 2      | 55 at 750MHz           | 3.30                                  | 0.08                               | 800                     | Green       |        |
| 12.0 at 250MHz  |               |                        | 3.80                                  | 0.10                               |                         | Blue        |        |
| 15.0 at 250MHz  |               |                        | 2.95                                  |                                    |                         | Violet      |        |
| 18.0 at 250MHz  |               | 50 at 500MHz           | 3.10                                  | 0.13                               | 600                     | Gray        |        |
| 22.0 at 250MHz  |               |                        | 2.90                                  | 0.15                               |                         | White       |        |
| 27.0 at 250MHz  |               |                        | 2.45                                  | 0.23                               | 600                     | Black       |        |
| 33.0 at 250MHz  |               |                        | 2.35                                  | 0.28                               | 600                     | Brown       |        |
| 39.0 at 250MHz  |               |                        | 2.20                                  | 0.33                               |                         | Red         |        |
| 47.0 at 200MHz  |               |                        | 45 at 150MHz                          | 2.00                               | 0.39                    | 500         | Orange |
| 56.0 at 200MHz  |               |                        |                                       | 1.85                               |                         |             | Yellow |
| 68.0 at 200MHz  |               |                        |                                       | 1.50                               | 0.40                    | 500         | Green  |
| 82.0 at 150MHz  |               | 0.44                   |                                       |                                    | Blue                    |             |        |
| 100.0 at 150MHz |               | 40 at 250MHz           | 1.20                                  | 0.64                               | 400                     | Violet      |        |
| 120.0 at 150MHz |               |                        | 1.15                                  | 0.68                               | 300                     | Gray        |        |
| 150.0 at 150MHz |               |                        | 1.05                                  | 0.80                               |                         | White       |        |
| 1000.0 at 25MHz | 16 at 50MHz   | 0.08                   | 0.08                                  | 3.50                               | 170                     | Black       |        |

# Wire Wound Chip Inductor



## Standard Electrical Specifications

### 0603 Wire Wound Chip Inductors/High Current

| Inductance (nH) | Tolerance (%) | Quality Factor/Minimum | Self Resonant Frequency/Minimum (GHz) | Resistance DC/Maximum ( $\Omega$ ) | Current DC/Maximum (mA) | Colour Code |
|-----------------|---------------|------------------------|---------------------------------------|------------------------------------|-------------------------|-------------|
| 6.8 at 250MHz   | 10, 5         | 35                     | 5.80                                  | 0.054                              | 2100                    | Orange      |
| 10.0 at 250MHz  | 10, 5, 2      | 38                     | 3.70                                  | 0.071                              | 2000                    | Green       |
| 12.0 at 250MHz  |               |                        | 3.00                                  | 0.075                              |                         | Blue        |
| 15.0 at 250MHz  |               |                        | 2.80                                  | 0.080                              | 1900                    | Violet      |
| 18.0 at 250MHz  |               | 40                     |                                       |                                    |                         | 0.099       |
| 22.0 at 250MHz  |               | 42                     |                                       | 2.40                               | 1800                    |             |

## Standard Electrical Specifications

### 0805 Wire Wound Chip Inductors/High Q

| Inductance (nH) | Tolerance (%) | Quality Factor/Minimum | Self Resonant Frequency/Minimum (GHz) | Resistance DC/Maximum ( $\Omega$ ) | Current DC/Maximum (mA) | Colour Code  |
|-----------------|---------------|------------------------|---------------------------------------|------------------------------------|-------------------------|--------------|
| 10 at 250MHz    | 10, 5         | 80 at 1000MHz          | 3.00                                  | 0.060                              | 1600                    | Black        |
| 12 at 250MHz    |               |                        |                                       | 0.045                              |                         | Orange       |
| 15 at 250MHz    | 10, 5, 2      |                        | 75 at 500MHz                          | 2.80                               | 0.100                   | 1200         |
| 18 at 250MHz    |               | 2.55                   |                                       | 0.060                              | 1400                    | Green        |
| 22 at 250MHz    |               | 80 at 500MHz           | 2.00                                  | 0.100                              | 1200                    | Black        |
| 27 at 250MHz    |               |                        |                                       |                                    |                         | 75 at 500MHz |
| 39 at 250MHz    |               |                        | 65 at 500MHz                          | 1.60                               | 0.110                   | 1100         |

# Wire Wound Chip Inductor



## Environmental Characteristics

### Mechanical Performance

| Item                           | Specification   | Test Method  |
|--------------------------------|---|--|
| Vibration test                 | Appearance : no damage<br>L change : within $\pm 5\%$<br>Q change : within $\pm 10\%$ | Test device shall be soldered on the substrate<br>Oscillation frequency : 10 to 55 to 10Hz for 1 minute<br>Amplitude : 1.5mm<br>Time : 2 hours for each axis (X, Y & Z), total 6 hours   |
| Resistance to soldering-heat   |   | Solder temperature : $270 \pm 5^\circ\text{C}$<br>Immersion time : $10 \pm 2$ seconds  |
| Component adhesion (push test) | 1 lbs. for 0402<br>2 lbs. for 0603<br>3 lbs. for the rest                             | The device should be soldered ( $260 \pm 5^\circ\text{C}$ for 10 seconds) to a tinned copper subs rate. A dynamiter force gauge should be applied to the side of the component. The device must with stand a minimum force of 2 or 4 pounds without a failure of adhesion on termination |
| Drop Test                      | No damage   | Dropping chip by each side and each corner. Drop 10 times in total<br>Drop height : 100cm<br>Drop weight : 125g  |
| Solderability test             | 90% covered with solder   | Inductor shall be dipped in a melted solder bath at $245 \pm 5^\circ\text{C}$ for 3 seconds.   |
| Resistance to solvent test     | No damage on appearance and marking   | MIL-STD202F, Method 215D   |

### Electrical Performance Test

| Item                       | Specification  | Test Method  |
|----------------------------|--|--|
| Inductance                 | Refer to standard electrical characteristic specification            | HP4291B  |
| Q                          |  |  |
| SRF                        |  | HP8753D  |
| DC resistance RDC          |  | Micro-Ohm meter (Gom-801G)   |
| Rated current IDC          |  | Applied the current to coils, the inductance change should be less than 10% to initial value |
| Over load test             | Inductors shall have no evidence of electrical and mechanical damage | Applied 2 times of rated allowed DC current to inductor for a period of 5 minute             |
| Withstanding voltage test  | Inductors shall be no evidence of electrical and mechanical damage   | AC voltage of 500V ac applied between inductors terminal and case for 1 minute.              |
| Insulation resistance test | 1000M $\Omega$ minute  | 100V dc applied between inductor terminal and case   |



# Wire Wound Chip Inductor



## Climatic Test

| Item                            | Specification  | Test Method   |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
|---------------------------------|--|---|------|----------------------------------|---------------|---|-------------|----|---|------------|----|---|-------------|----|---|------------|----|
| Temperature Characteristic      | Appearance : no damage<br>L change : within $\pm 10\%$<br>Q change : within $\pm 20\%$ | -40°C to +125°C   |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| Humidity Test                   |  | Temperature : 40 $\pm 2^\circ\text{C}$<br>Relative humidity : 90 to 95%<br>Time : 96 hours $\pm 2$ hours<br>Measured after exposure in the room condition for 2 hours   |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| Low Temperature Storage Test    |  | Temperature : -40 $\pm 2^\circ\text{C}$<br>Time : 96 $\pm 2$ hours<br>Inductors are tested after 1 hour at room temperature   |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| Thermal Shock Test              |  | One cycle:<br><table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (<math>^\circ\text{C}</math>)</th> <th>Time (minute)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25 <math>\pm 3</math></td> <td>30</td> </tr> <tr> <td>2</td> <td>25 <math>\pm 2</math></td> <td>15</td> </tr> <tr> <td>3</td> <td>125 <math>\pm 3</math></td> <td>30</td> </tr> <tr> <td>4</td> <td>25 <math>\pm 2</math></td> <td>15</td> </tr> </tbody> </table> <p>Total: 5 cycles</p> | Step | Temperature ( $^\circ\text{C}$ ) | Time (minute) | 1 | -25 $\pm 3$ | 30 | 2 | 25 $\pm 2$ | 15 | 3 | 125 $\pm 3$ | 30 | 4 | 25 $\pm 2$ | 15 |
| Step                            | Temperature ( $^\circ\text{C}$ )   | Time (minute)   |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| 1                               | -25 $\pm 3$  | 30  |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| 2                               | 25 $\pm 2$   | 15  |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| 3                               | 125 $\pm 3$  | 30  |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| 4                               | 25 $\pm 2$   | 15  |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| High Temperature Storage Test   |  | Temperature : 125 $\pm 2^\circ\text{C}$<br>Time : 96 $\pm 2$ hours<br>Measured after exposure in the room condition for 1 hour  |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| High Temperature Load Life Test | There should be no evidence of short of open circuit.                                  | Temperature : 85 $\pm 2^\circ\text{C}$<br>Time : 1000 $\pm 12$ hours<br>Load : allowed DC current   |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |
| Humidity Load Life              |  | Temperature : 40 $\pm 2^\circ\text{C}$<br>Relative Humidity : 90 to 95%<br>Time : 1000 $\pm 12$ hours<br>Load : allowed DC current  |      |                                  |               |   |             |    |   |            |    |   |             |    |   |            |    |

Storage Temperature : 25  $\pm 3^\circ\text{C}$ ; Humidity: <80%RH

# Wire Wound Chip Inductor



## Part Number Table

| Description           | Part Number |
|-----------------------|-------------|
| Inductor, 0402, 1nH   | MCFT000063  |
| Inductor, 0402, 2.2nH | MCFT000064  |
| Inductor, 0402, 3.3nH | MCFT000065  |
| Inductor, 0402, 4.7nH | MCFT000066  |
| Inductor, 0402, 6.8nH | MCFT000067  |
| Inductor, 0402, 10nH  | MCFT000068  |
| Inductor, 0402, 12nH  | MCFT000069  |
| Inductor, 0402, 15nH  | MCFT000070  |
| Inductor, 0402, 18nH  | MCFT000071  |
| Inductor, 0402, 22nH  | MCFT000072  |
| Inductor, 0402, 27nH  | MCFT000073  |
| Inductor, 0402, 33nH  | MCFT000074  |
| Inductor, 0402, 39nH  | MCFT000075  |
| Inductor, 0402, 47nH  | MCFT000076  |
| Inductor, 0402, 56nH  | MCFT000077  |
| Inductor, 0402, 68nH  | MCFT000078  |
| Inductor, 0603, 2.2nH | MCFT000079  |
| Inductor, 0603, 3.3nH | MCFT000080  |
| Inductor, 0603, 4.7nH | MCFT000081  |
| Inductor, 0603, 6.8nH | MCFT000082  |
| Inductor, 0603, 10nH  | MCFT000083  |
| Inductor, 0603, 12nH  | MCFT000084  |
| Inductor, 0603, 15nH  | MCFT000085  |
| Inductor, 0603, 18nH  | MCFT000086  |
| Inductor, 0603, 22nH  | MCFT000087  |
| Inductor, 0603, 27nH  | MCFT000088  |
| Inductor, 0603, 33nH  | MCFT000089  |
| Inductor, 0603, 39nH  | MCFT000090  |
| Inductor, 0603, 47nH  | MCFT000091  |
| Inductor, 0603, 56nH  | MCFT000092  |
| Inductor, 0603, 68nH  | MCFT000093  |
| Inductor, 0603, 82nH  | MCFT000094  |
| Inductor, 0603, 100nH | MCFT000095  |
| Inductor, 0603, 120nH | MCFT000096  |

# Wire Wound Chip Inductor



## Part Number Table

| Description            | Part Number |
|------------------------|-------------|
| Inductor, 0603, 150nH  | MCFT000097  |
| Inductor, 0603, 180nH  | MCFT000098  |
| Inductor, 0603, 220nH  | MCFT000099  |
| Inductor, 0603, 270nH  | MCFT000100  |
| Inductor, 0603, 330nH  | MCFT000101  |
| Inductor, 0603, 390nH  | MCFT000102  |
| Inductor, 0603, 470nH  | MCFT000103  |
| Inductor, 0805, 10nH   | MCFT000104  |
| Inductor, 0805, 12nH   | MCFT000105  |
| Inductor, 0805, 15nH   | MCFT000106  |
| Inductor, 0805, 18nH   | MCFT000107  |
| Inductor, 0805, 22nH   | MCFT000108  |
| Inductor, 0805, 27nH   | MCFT000109  |
| Inductor, 0805, 33nH   | MCFT000110  |
| Inductor, 0805, 39nH   | MCFT000111  |
| Inductor, 0805, 47nH   | MCFT000112  |
| Inductor, 0805, 56nH   | MCFT000113  |
| Inductor, 0805, 68nH   | MCFT000114  |
| Inductor, 0805, 82nH   | MCFT000115  |
| Inductor, 0805, 100nH  | MCFT000116  |
| Inductor, 0805, 120nH  | MCFT000117  |
| Inductor, 0805, 150nH  | MCFT000118  |
| Inductor, 0805, 180nH  | MCFT000119  |
| Inductor, 0805, 220nH  | MCFT000120  |
| Inductor, 0805, 270nH  | MCFT000121  |
| Inductor, 0805, 330nH  | MCFT000122  |
| Inductor, 0805, 390nH  | MCFT000123  |
| Inductor, 0805, 470nH  | MCFT000124  |
| Inductor, 0805, 560nH  | MCFT000125  |
| Inductor, 0805, 680nH  | MCFT000126  |
| Inductor, 0805, 820nH  | MCFT000127  |
| Inductor, 0805, 1000nH | MCFT000128  |
| Inductor, 0805, 1500nH | MCFT000129  |
| Inductor, 0805, 2200nH | MCFT000130  |

# Wire Wound Chip Inductor



## Part Number Table

| Description            | Part Number |
|------------------------|-------------|
| Inductor, 0805, 3300nH | MCFT000131  |
| Inductor, 0805, 4700nH | MCFT000132  |
| Inductor, 0805, 10nH   | MCFT000133  |
| Inductor, 0805, 15nH   | MCFT000134  |
| Inductor, 0805, 22nH   | MCFT000135  |
| Inductor, 0805, 33nH   | MCFT000136  |
| Inductor, 0805, 47nH   | MCFT000137  |
| Inductor, 0805, 68nH   | MCFT000138  |
| Inductor, 0805, 100nH  | MCFT000139  |
| Inductor, 1206, 10nH   | MCFT000140  |
| Inductor, 1206, 15nH   | MCFT000141  |
| Inductor, 1206, 22nH   | MCFT000142  |
| Inductor, 1206, 33nH   | MCFT000143  |
| Inductor, 1206, 47nH   | MCFT000144  |
| Inductor, 1206, 68nH   | MCFT000145  |
| Inductor, 1206, 150nH  | MCFT000146  |
| Inductor, 1206, 220nH  | MCFT000147  |
| Inductor, 1206, 330nH  | MCFT000148  |
| Inductor, 1206, 470nH  | MCFT000149  |
| Inductor, 1206, 680nH  | MCFT000150  |
| Inductor, 1206, 1000nH | MCFT000151  |

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