



AMERICAN  
TECHNICAL  
CERAMICS

# INDUCTOR PRODUCTS

*Manufactured for ATC*



 THE  
ENGINEERS'  
CHOICE®

# CORPORATE PROFILE

## Corporate Profile

American Technical Ceramics Corp. (ATC) provides component and custom integrated packaging solutions for the RF, microwave and telecommunications industries. For over forty years we have been "The Engineer's Choice".

ATC designs, develops, manufactures and markets Multilayer Capacitors, Single Layer Capacitors, Resistive Products, Inductors and Custom Thin Film Products for RF, microwave and millimeter-wave applications. Our products are primarily focused on the wireless communications infrastructure, fiber optic, medical electronics, semiconductor manufacturing equipment, defense, aerospace, and satellite communications markets.

Customer interface is administered by our own personnel and independent sales representatives. American Technical Ceramics is headquartered in Huntington Station, New York and has an Advanced Technology Center in Jacksonville, Florida. This is the center of excellence for our traditional product lines and the development and manufacturing facilities for Thin Film and Resistive products.

As part of our globalization initiative ATC has a wholly-owned subsidiary for European Direct Sales, Applications Support and Distribution, located in Kungens Kurva, Sweden. The Company's wholly-owned subsidiary offering Technical Support for Asia is located in Shenzhen, P.R. China. ATC also has local offices in Holzkirchen, Germany and Guildford, England.

### RLC Product Offerings

- Multilayer Ceramic Capacitors
- Single Layer Ceramic Capacitors
- Resistive Products
- Inductors

### Process and Packaging Offerings

- Thin Film Custom Products

### Markets Served

- Wireless Communications Infrastructure
- Fiber Optics
- Wireless Handsets
- Automotive Electronics
- LMDS/MMDS
- Semiconductor Manufacturing Equipment
- Medical Diagnostic Equipment
- Telecommunications
- Military and Aerospace



▲ ATC's New York Facility occupies approximately 90,000 sq. ft.

### Facilities

- **Huntington Station, New York** – Sales, Applications Support, Manufacturing and Distribution Center
- **Kungens Kurva, Sweden** – European Operations and Distribution Center
- **Jacksonville, Florida** – Advanced Technology Center, Manufacturing Facility.



▲ ATC's Jacksonville Facility occupies approximately 100,000 sq. ft.

A M E R I C A N T E C H N I C A L C E R A M I C S

ATC North America  
+1-631-622-4700 • sales@atceramics.com

ATC Europe  
+46 8 6800410 • sales@atceramics-europe.com

ATC Asia  
+86-755-2396-8759 • sales@atceramics-asia.com

w w w . a t c e r a m i c s . c o m

# GENERAL SPECIFICATIONS

## Introducing ATC's New WL Series, High Frequency Wire Wound Chip Inductors

ATC introduces its new family of RF surface mount inductor components, intended to complement its high frequency ultra low ESR capacitor products. The WL Series Wire Wound Chip Inductor Products have been designed to provide excellent performance at competitive prices.

This Series includes the most widely used traditional EIA case sizes – 0402, 0603, 0805, 1008, and 1206. The WL Inductor Product line is intended for RF and microwave applications and features high self-resonant frequencies (SRF), high Q, and low DC resistance. These products are manufactured on a rugged core made of high quality ceramic material that exhibits high Q at high operating frequencies.

The WL Series is especially attractive for all 800 MHz to 3.4 GHz wireless applications where cost and performance are major factors. These applications include but are not limited to: cellular base stations, broadband wireless services, point-to-point and point-to-multipoint radio as well as other RF and microwave telecommunications systems.

All WL Series Inductor Products are supplied in tape and reel (2000 to 4000 parts per reel depending on case size) as standard, making them ideal for automated pick and place manufacturing applications. The terminations consist of a barrier layer with a lead-free tin-plated finish that exhibits excellent solderability for trouble-free attachments.

### Features

- High Q
- High SRF
- Low DC Resistance
- Wide Range of Standard EIA Inductance Values  
1 nH to 15000 nH
- Traditional EIA Case Sizes 0402, 0603, 0805, 1008, and 1206
- Lead-Free, RoHS Compliant Terminations,  
Tin Plated over Nickel Barrier
- Rugged Ceramic Core Construction
- Tape and Reel for Automated Placement

### General Electrical Specifications:

- Inductance Range: 1 nH to 15000 nH, See Tables
- Operating Temperature: -40°C to +125°C
- Temperature Coefficient of Inductance (TCL):  
+25 to +125 ppm/°C Typical From -40°C to +125°C
- Rated Current: See Tables, Pages 2-6
- SRF: See Tables, Pages 2-6
- IDC: See Tables, Pages 2-6
- RDC: See Tables, Pages 2-6

### Applications:

- Cellular Base Station Equipment
- Broadband Wireless Services
- Point-to-Point and Point-to-Multipoint Radio
- Satcom Equipment
- Telecommunications Wireless Applications
- RF and Microwave Communications Systems

### Circuit Applications:

- Amplifier Matching Networks
- Bias Networks
- Filters
- Oscillators
- Synthesizers

A M E R I C A N T E C H N I C A L C E R A M I C S

ATC North America  
+1-631-622-4700 • sales@atceramics.com

ATC Europe  
+46 8 6800410 • sales@atceramics-europe.com

ATC Asia  
+86-755-2396-8759 • sales@atceramics-asia.com

w w w . a t c e r a m i c s . c o m

# ATC 0402 WL SERIES WIRE WOUND CHIP INDUCTORS

| Inductance (nH) | Tolerance Code | Q min. | SRF (GHz) min. | RDC (Ohms) max. | IDC (mA) max. | 900 MHz |        | 1.7 GHz |        |
|-----------------|----------------|--------|----------------|-----------------|---------------|---------|--------|---------|--------|
|                 |                |        |                |                 |               | L typ.  | Q typ. | L typ.  | Q typ. |
| 1.0 @ 250 (MHz) | J, K           | 16     | 12.7           | 0.045           | 1360          | 1.02    | 77     | 1.02    | 69     |
| 1.2 @ 250 (MHz) | J, K           | 14     | 12.0           | 0.045           | 1360          | —       | —      | —       | —      |
| 1.5 @ 250 (MHz) | J, K           | 14     | 10.0           | 0.100           | 300           | —       | —      | —       | —      |
| 1.9 @ 250 (MHz) | J, K           | 16     | 11.3           | 0.070           | 1040          | 1.72    | 68     | 1.74    | 82     |
| 2.0 @ 250 (MHz) | J, K           | 16     | 11.1           | 0.070           | 1040          | 1.93    | 54     | 1.93    | 75     |
| 2.2 @ 250 (MHz) | J, K           | 19     | 10.8           | 0.070           | 960           | 2.19    | 59     | 2.23    | 100    |
| 2.4 @ 250 (MHz) | J, K           | 15     | 10.5           | 0.070           | 790           | 2.24    | 51     | 2.27    | 68     |
| 2.7 @ 250 (MHz) | J, K           | 16     | 10.4           | 0.120           | 640           | 2.23    | 42     | 2.25    | 61     |
| 3.3 @ 250 (MHz) | G, J, K        | 19     | 7.00           | 0.066           | 840           | 3.10    | 65     | 3.12    | 87     |
| 3.6 @ 250 (MHz) | G, J, K        | 19     | 6.80           | 0.066           | 840           | 3.56    | 65     | 3.62    | 71     |
| 3.9 @ 250 (MHz) | G, J, K        | 19     | 5.80           | 0.066           | 840           | 3.89    | 50     | 4.00    | 75     |
| 4.3 @ 250 (MHz) | G, J, K        | 18     | 6.00           | 0.090           | 700           | 4.19    | 47     | 4.30    | 71     |
| 4.7 @ 250 (MHz) | G, J, K        | 15     | 4.70           | 0.130           | 640           | 4.55    | 48     | 4.68    | 68     |
| 5.1 @ 250 (MHz) | G, J, K        | 20     | 4.80           | 0.083           | 800           | 5.15    | 56     | 5.25    | 82     |
| 5.6 @ 250 (MHz) | G, J, K        | 20     | 4.80           | 0.083           | 760           | 5.16    | 54     | 5.28    | 81     |
| 6.2 @ 250 (MHz) | G, J, K        | 20     | 4.80           | 0.083           | 760           | 6.16    | 52     | 6.37    | 76     |
| 6.8 @ 250 (MHz) | G, J, K        | 20     | 4.80           | 0.080           | 680           | 6.56    | 63     | 6.93    | 78     |
| 7.5 @ 250 (MHz) | G, J, K        | 22     | 4.80           | 0.104           | 680           | 7.91    | 60     | 8.22    | 88     |
| 8.2 @ 250 (MHz) | G, J, K        | 22     | 4.40           | 0.104           | 680           | 8.50    | 57     | 8.85    | 84     |
| 8.7 @ 250 (MHz) | G, J, K        | 18     | 4.10           | 0.200           | 480           | 8.78    | 54     | 9.21    | 73     |
| 9.0 @ 250 (MHz) | G, J, K        | 22     | 4.16           | 0.104           | 680           | 9.07    | 62     | 9.53    | 78     |
| 9.5 @ 250 (MHz) | G, J, K        | 18     | 4.00           | 0.200           | 480           | 9.42    | 54     | 9.98    | 69     |
| 10 @ 250 (MHz)  | G, J, K        | 21     | 3.90           | 0.195           | 480           | 9.8     | 50     | 10.1    | 67     |
| 11 @ 250 (MHz)  | G, J, K        | 24     | 3.68           | 0.120           | 640           | 10.7    | 52     | 11.2    | 78     |
| 12 @ 250 (MHz)  | G, J, K        | 24     | 3.60           | 0.120           | 640           | 11.9    | 53     | 12.7    | 71     |
| 13 @ 250 (MHz)  | G, J, K        | 24     | 3.45           | 0.210           | 440           | 13.4    | 51     | 14.6    | 57     |
| 15 @ 250 (MHz)  | G, J, K        | 24     | 3.28           | 0.172           | 560           | 14.6    | 55     | 15.5    | 77     |
| 16 @ 250 (MHz)  | G, J, K        | 24     | 3.10           | 0.220           | 560           | 16.6    | 46     | 18.8    | 47     |
| 18 @ 250 (MHz)  | G, J, K        | 24     | 3.10           | 0.230           | 420           | 18.3    | 57     | 20.3    | 62     |
| 19 @ 250 (MHz)  | G, J, K        | 24     | 3.04           | 0.202           | 480           | 19.1    | 50     | 21.1    | 67     |
| 20 @ 250 (MHz)  | G, J, K        | 25     | 3.00           | 0.250           | 420           | 20.7    | 52     | 23.7    | 53     |
| 22 @ 250 (MHz)  | G, J, K        | 25     | 2.80           | 0.300           | 400           | 23.2    | 53     | 26.8    | 53     |
| 23 @ 250 (MHz)  | G, J, K        | 24     | 2.72           | 0.214           | 400           | 23.8    | 49     | 26.9    | 64     |
| 24 @ 250 (MHz)  | G, J, K        | 25     | 2.70           | 0.300           | 400           | 25.1    | 51     | 29.5    | 50     |
| 27 @ 250 (MHz)  | G, J, K        | 24     | 2.48           | 0.298           | 400           | 28.7    | 49     | 33.5    | 63     |
| 30 @ 250 (MHz)  | G, J, K        | 25     | 2.35           | 0.350           | 400           | 31.1    | 46     | 38.5    | 39     |
| 33 @ 250 (MHz)  | G, J, K        | 24     | 2.35           | 0.350           | 400           | 34.9    | 31     | 41.7    | 32     |
| 36 @ 250 (MHz)  | G, J, K        | 24     | 2.32           | 0.403           | 320           | 39.5    | 44     | 48.4    | 53     |
| 39 @ 250 (MHz)  | G, J, K        | 25     | 2.10           | 0.550           | 200           | 41.7    | 47     | 50.2    | 45     |
| 40 @ 250 (MHz)  | G, J, K        | 24     | 2.24           | 0.438           | 320           | 39.0    | 44     | 47.4    | 33     |
| 43 @ 250 (MHz)  | G, J, K        | 25     | 2.03           | 0.810           | 100           | 45.8    | 46     | 61.6    | 34     |
| 47 @ 250 (MHz)  | G, J, K        | 20     | 2.10           | 0.830           | 150           | 50.0    | 38     | 59.4    | 37     |
| 51 @ 250 (MHz)  | G, J, K        | 25     | 1.75           | 0.820           | 100           | 50.4    | 47     | 59.4    | 37     |
| 56 @ 250 (MHz)  | G, J, K        | 25     | 1.76           | 0.970           | 100           | 57.4    | 49     | 72.4    | 40     |
| 68 @ 250 (MHz)  | G, J, K        | 22     | 1.62           | 1.120           | 100           | 69.6    | 45     | 83.4    | 38     |
| 82 @ 250 (MHz)  | G, J, K        | 22     | 1.26           | 1.550           | 50            | —       | —      | —       | —      |
| 100 @ 250 (MHz) | G, J, K        | 22     | 1.16           | 2.000           | 30            | —       | —      | —       | —      |

NOTE: For Mechanical Configurations, see page 7.

## ATC Part Number Code

**0402    WL    100    K    T**

EIA Case Size: 0402, 0603, 0805, 1008, 1206

Wire Wound Inductor

Inductance value in nH.  
1st and 2nd digits are significant digits. 3rd digit is multiplier. R is decimal point.

The above part number refers to an ATC 0402 WL wire wound chip inductor, 10 nH, K (±10%) tolerance, in tape and reel packaging. Tighter tolerances are available. Consult factory.

Terminations for all WL Series Inductor Case Sizes are **Lead-Free, RoHS Compliant**, Tin Plated over Nickel Barrier.

Packaging: T - Tape & Reel

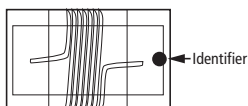
Tolerance: See table below.

| Inductance Tolerances |      |      |       |
|-----------------------|------|------|-------|
| Code                  | G    | J    | K     |
| Tol.                  | ± 2% | ± 5% | ± 10% |

## Marking Code

0402- No mark due to size.

0603 and 0805 Series - Because of their small size, these parts are marked with a single dot. The inductance value represented by the dot is shown on the data sheet for each series.



## Terminations

Terminations for all WL Series Inductor Case Sizes are **Lead-Free, RoHS Compliant**, Tin Plated over Nickel Barrier.

**A M E R I C A N   T E C H N I C A L   C E R A M I C S**

ATC North America  
+1-631-622-4700 • sales@atceramics.com

ATC Europe  
+46 8 6800410 • sales@atceramics-europe.com

ATC Asia  
+86-755-2396-8759 • sales@atceramics-asia.com

# ATC 0603 WL SERIES WIRE WOUND CHIP INDUCTORS

| Inductance (nH) | Tolerance Code | Q min. | SRF (MHz) min. | RDC (Ohms) max. | IDC (mA) max. | 900 MHz |        | 1.7 GHz |        | Color Code |
|-----------------|----------------|--------|----------------|-----------------|---------------|---------|--------|---------|--------|------------|
|                 |                |        |                |                 |               | L typ.  | Q typ. | L typ.  | Q typ. |            |
| 1.6 @ 250 (MHz) | J, K           | 16     | 12,500         | 0.040           | 700           | 1.53    | 35     | 1.58    | 55     | Blue       |
| 1.8 @ 250 (MHz) | J, K           | 16     | 12,500         | 0.045           | 700           | 1.63    | 35     | 1.66    | 50     | Black      |
| 2.2 @ 250 (MHz) | J, K           | 15     | 6000           | 0.100           | 700           | 2.18    | 41     | 2.20    | 64     | White      |
| 2.3 @ 250 (MHz) | J, K           | 16     | >4000          | 0.140           | 700           | 2.32    | 32     | 2.35    | 40     | Yellow     |
| 3.3 @ 250 (MHz) | G, J, K        | 22     | 6000           | 0.080           | 700           | 3.35    | 47     | 3.40    | 65     | Red        |
| 3.6 @ 250 (MHz) | G, J, K        | 22     | 5900           | 0.063           | 700           | 3.72    | 53     | 3.71    | 65     | Violet     |
| 3.9 @ 250 (MHz) | G, J, K        | 22     | 6900           | 0.080           | 700           | 3.95    | 49     | 3.96    | 67     | Brown      |
| 4.3 @ 250 (MHz) | G, J, K        | 22     | 5900           | 0.063           | 700           | 4.32    | 50     | 4.33    | 70     | Orange     |
| 4.5 @ 250 (MHz) | G, J, K        | 20     | 5800           | 0.120           | 700           | 4.74    | 55     | 4.87    | 92     | Gray       |
| 4.7 @ 250 (MHz) | G, J, K        | 20     | 5800           | 0.116           | 700           | 4.72    | 47     | 4.75    | 57     | Violet     |
| 5.1 @ 250 (MHz) | G, J, K        | 20     | 5700           | 0.140           | 700           | 4.93    | 47     | 4.95    | 56     | Green      |
| 5.6 @ 250 (MHz) | G, J, K        | 20     | 5800           | 0.170           | 700           | 5.53    | 56     | 5.86    | 77     | Yellow     |
| 6.2 @ 250 (MHz) | G, J, K        | 25     | 5800           | 0.110           | 700           | 6.28    | 60     | 6.40    | 85     | Black      |
| 6.3 @ 250 (MHz) | G, J, K        | 25     | 5800           | 0.110           | 700           | 6.67    | 41     | 6.86    | 61     | Black      |
| 6.8 @ 250 (MHz) | G, J, K        | 27     | 5800           | 0.110           | 700           | 6.75    | 60     | 7.10    | 81     | Red        |
| 7.5 @ 250 (MHz) | G, J, K        | 28     | 4800           | 0.106           | 700           | 7.70    | 60     | 7.82    | 65     | Brown      |
| 8.2 @ 250 (MHz) | G, J, K        | 28     | 4700           | 0.109           | 700           | 8.30    | 60     | 8.50    | 60     | Green      |
| 8.7 @ 250 (MHz) | G, J, K        | 28     | 4600           | 0.109           | 700           | 8.86    | 62     | 9.32    | 58     | Yellow     |
| 9.1 @ 250 (MHz) | G, J, K        | 35     | 4800           | 0.130           | 700           | 9.20    | 70     | 9.70    | 80     | Black      |
| 9.5 @ 250 (MHz) | G, J, K        | 28     | 5400           | 0.135           | 700           | 9.70    | 59     | 9.92    | 61     | Blue       |
| 10 @ 250 (MHz)  | G, J, K        | 31     | 4800           | 0.130           | 700           | 10.00   | 66     | 10.60   | 83     | Orange     |
| 11 @ 250 (MHz)  | G, J, K        | 33     | 4000           | 0.086           | 700           | 11.00   | 53     | 11.50   | 5      | Gray       |
| 12 @ 250 (MHz)  | G, J, K        | 35     | 4000           | 0.130           | 700           | 12.30   | 72     | 13.50   | 83     | Yellow     |
| 15 @ 250 (MHz)  | G, J, K        | 35     | 4000           | 0.170           | 700           | 15.40   | 64     | 16.80   | 89     | Green      |
| 16 @ 250 (MHz)  | G, J, K        | 34     | 3300           | 0.104           | 700           | 16.20   | 55     | 17.30   | 52     | White      |
| 17 @ 250 (MHz)  | G, J, K        | 35     | 3200           | 0.170           | 700           | 17.60   | 56     | 19.40   | 44     | Red        |
| 18 @ 250 (MHz)  | G, J, K        | 35     | 3100           | 0.170           | 700           | 18.70   | 70     | 21.40   | 69     | Blue       |
| 20 @ 250 (MHz)  | G, J, K        | 40     | 3000           | 0.190           | 700           | 20.70   | 80     | 23.50   | 30     | Green      |
| 22 @ 250 (MHz)  | G, J, K        | 38     | 3000           | 0.190           | 700           | 22.80   | 73     | 26.10   | 71     | Violet     |
| 23 @ 250 (MHz)  | G, J, K        | 38     | 2850           | 0.190           | 700           | 24.10   | 71     | 28.00   | 71     | Orange     |
| 24 @ 250 (MHz)  | G, J, K        | 37     | 2650           | 0.135           | 700           | 24.50   | 45     | 28.70   | 39     | Black      |
| 27 @ 250 (MHz)  | G, J, K        | 40     | 2800           | 0.220           | 600           | 29.20   | 74     | 34.60   | 65     | Gray       |
| 30 @ 250 (MHz)  | G, J, K        | 37     | 2250           | 0.144           | 600           | 31.40   | 47     | 39.90   | 28     | Brown      |
| 33 @ 250 (MHz)  | G, J, K        | 40     | 2300           | 0.220           | 600           | 36.00   | 67     | 49.50   | 42     | White      |
| 36 @ 250 (MHz)  | G, J, K        | 38     | 2080           | 0.250           | 600           | 39.40   | 47     | 52.70   | 24     | Red        |
| 39 @ 250 (MHz)  | G, J, K        | 40     | 2200           | 0.250           | 600           | 42.70   | 60     | 60.20   | 40     | Black      |
| 43 @ 250 (MHz)  | G, J, K        | 39     | 2000           | 0.280           | 600           | 47.00   | 44     | 64.90   | 21     | Orange     |
| 47 @ 200 (MHz)  | G, J, K        | 38     | 2000           | 0.280           | 600           | 52.20   | 62     | 77.20   | 35     | Brown      |
| 51 @ 200 (MHz)  | G, J, K        | 38     | 1900           | 0.280           | 600           | 55.50   | 69     | 82.20   | 34     | Blue       |
| 56 @ 200 (MHz)  | G, J, K        | 38     | 1900           | 0.310           | 600           | 62.50   | 56     | 97.00   | 26     | Red        |
| 62 @ 200 (MHz)  | G, J, K        | 37     | 1800           | 0.340           | 600           | 68.00   | 40     | 110.00  | 10     | Gray       |
| 68 @ 200 (MHz)  | G, J, K        | 37     | 1700           | 0.340           | 600           | 80.50   | 54     | 168.00  | 21     | Orange     |
| 72 @ 150 (MHz)  | G, J, K        | 34     | 1700           | 0.490           | 400           | 82.00   | 53     | 135.00  | 20     | Yellow     |
| 82 @ 150 (MHz)  | G, J, K        | 34     | 1700           | 0.540           | 400           | 96.20   | 54     | 177.00  | 21     | Green      |
| 91 @ 150 (MHz)  | G, J, K        | 30     | 1700           | 0.500           | 400           | 110.00  | 50     | 416.40  | 6      | Brown      |
| 100 @ 150 (MHz) | G, J, K        | 34     | 1400           | 0.580           | 400           | 124.00  | 49     | 319.50  | 13     | Blue       |
| 110 @ 150 (MHz) | G, J, K        | 32     | 1350           | 0.610           | 300           | 138.00  | 43     | 342.70  | 15     | Violet     |
| 120 @ 150 (MHz) | G, J, K        | 32     | 1300           | 0.650           | 300           | 166.00  | 39     | 529.30  | 8      | Gray       |
| 130 @ 150 (MHz) | G, J, K        | 30     | 1400           | 0.720           | 300           | 185.00  | 60     | -       | -      | White      |
| 140 @ 100 (MHz) | G, J, K        | 28     | 1300           | 0.870           | 280           | 190.00  | 80     | -       | -      | Blue       |
| 150 @ 150 (MHz) | G, J, K        | 32     | 1300           | 0.950           | 280           | 230.00  | 25     | -       | -      | White      |
| 160 @ 100 (MHz) | G, J, K        | 25     | 1300           | 1.400           | 280           | 215.00  | 20     | -       | -      | Yellow     |
| 180 @ 100 (MHz) | G, J, K        | 25     | 1250           | 1.400           | 250           | 303.00  | 20     | -       | -      | Black      |
| 220 @ 100 (MHz) | G, J, K        | 25     | 1200           | 1.600           | 250           | 440.00  | 15     | -       | -      | Brown      |
| 260 @ 100 (MHz) | G, J, K        | 25     | 1000           | 2.000           | 200           | 469.00  | 21     | -       | -      | Violet     |
| 270 @ 100 (MHz) | G, J, K        | 25     | 900            | 2.100           | 200           | 580.00  | 12     | -       | -      | Red        |
| 280 @ 100 (MHz) | G, J, K        | 25     | 900            | 2.400           | 100           | 524.00  | 18     | -       | -      | Green      |
| 300 @ 100 (MHz) | G, J, K        | 25     | 750            | 2.500           | 150           | 539.70  | 21     | -       | -      | Orange     |
| 330 @ 100 (MHz) | G, J, K        | 25     | 900            | 3.800           | 100           | 440.00  | 15     | -       | -      | Blue       |
| 390 @ 100 (MHz) | G, J, K        | 25     | 900            | 4.350           | 100           | 580.00  | 12     | -       | -      | Yellow     |
| 470 @ 100 (MHz) | G, J, K        | 23     | 600            | 3.600           | 80            | -       | -      | -       | -      | White      |

NOTE: For Mechanical Configurations, see page 7.

## ATC Part Number Code

0603
WL
100
J
T

**EIA Case Size:** 0402, 0603, 0805, 1008, 1206

**Wire Wound Inductor**

**Inductance value in nH.**  
1st and 2nd digits are significant digits. 3rd digit is multiplier. R is decimal point.  
The above part number refers to an ATC 0603 WL wire wound chip inductor, 10 nH, J (±5%) tolerance, in tape and reel packaging.  
Tighter tolerances are available. Consult factory.

Terminations for all WL Series Inductor Case Sizes are **Lead-Free, RoHS Compliant, Tin Plated over Nickel Barrier.**

**Packaging:** T - Tape & Reel

**Tolerance:** See table below.

| Inductance Tolerances |      |      |       |
|-----------------------|------|------|-------|
| Code                  | G    | J    | K     |
| <b>Tol.</b>           | ± 2% | ± 5% | ± 10% |

## A M E R I C A N T E C H N I C A L C E R A M I C S

**ATC North America**  
+1-631-622-4700 • sales@atceramics.com

**ATC Europe**  
+46 8 6800410 • sales@atceramics-europe.com

**ATC Asia**  
+86-755-2396-8759 • sales@atceramics-asia.com

# ATC 0805 WL SERIES WIRE WOUND CHIP INDUCTORS

| Inductance (nH)  | Tolerance Code | Q (MHz) min. | SRF (MHz) min. | RDC (Ohms) max. | IDC (mA) max. | Color Code |
|------------------|----------------|--------------|----------------|-----------------|---------------|------------|
| 2.7 @ 250 (MHz)  | J, K           | 80 @ 1500    | 7900           | 0.060           | 800           | Brown      |
| 2.8 @ 250 (MHz)  | J, K           | 80 @ 1500    | 7900           | 0.060           | 800           | Gray       |
| 3.0 @ 250 (MHz)  | J, K           | 65 @ 1500    | 7900           | 0.060           | 800           | White      |
| 3.3 @ 250 (MHz)  | J, K           | 50 @ 1500    | 7900           | 0.080           | 600           | Black      |
| 5.6 @ 250 (MHz)  | J, K           | 65 @ 1500    | 5500           | 0.080           | 600           | Orange     |
| 6.2 @ 250 (MHz)  | J, K           | 50 @ 1000    | 5500           | 0.110           | 600           | Green      |
| 6.8 @ 250 (MHz)  | J, K           | 50 @ 1000    | 5500           | 0.110           | 600           | Brown      |
| 7.5 @ 250 (MHz)  | J, K           | 50 @ 1000    | 4500           | 0.140           | 600           | Green      |
| 8.2 @ 250 (MHz)  | J, K           | 50 @ 1000    | 4700           | 0.120           | 600           | Red        |
| 8.7 @ 250 (MHz)  | J, K           | 50 @ 1000    | 3900           | 0.210           | 400           | White      |
| 10 @ 250 (MHz)   | G, J, K        | 60 @ 500     | 4200           | 0.100           | 600           | Blue       |
| 12 @ 250 (MHz)   | G, J, K        | 50 @ 500     | 4000           | 0.150           | 600           | Orange     |
| 15 @ 250 (MHz)   | G, J, K        | 50 @ 500     | 3400           | 0.170           | 600           | Yellow     |
| 18 @ 250 (MHz)   | G, J, K        | 50 @ 500     | 3300           | 0.200           | 600           | Green      |
| 22 @ 250 (MHz)   | G, J, K        | 55 @ 500     | 2600           | 0.220           | 500           | Blue       |
| 24 @ 250 (MHz)   | G, J, K        | 50 @ 500     | 2000           | 0.220           | 500           | Gray       |
| 27 @ 250 (MHz)   | G, J, K        | 55 @ 500     | 2500           | 0.250           | 500           | Violet     |
| 33 @ 250 (MHz)   | G, J, K        | 60 @ 500     | 2050           | 0.270           | 500           | Gray       |
| 36 @ 250 (MHz)   | G, J, K        | 55 @ 500     | 1700           | 0.270           | 500           | Orange     |
| 39 @ 250 (MHz)   | G, J, K        | 60 @ 500     | 2000           | 0.290           | 500           | White      |
| 43 @ 200 (MHz)   | G, J, K        | 60 @ 500     | 1650           | 0.340           | 500           | Yellow     |
| 47 @ 200 (MHz)   | G, J, K        | 60 @ 500     | 1650           | 0.310           | 500           | Black      |
| 56 @ 200 (MHz)   | G, J, K        | 60 @ 500     | 1550           | 0.340           | 500           | Brown      |
| 68 @ 200 (MHz)   | G, J, K        | 60 @ 500     | 1450           | 0.380           | 500           | Red        |
| 72 @ 150 (MHz)   | G, J, K        | 65 @ 500     | 1400           | 0.400           | 500           | Green      |
| 82 @ 150 (MHz)   | G, J, K        | 65 @ 500     | 1300           | 0.420           | 400           | Orange     |
| 91 @ 150 (MHz)   | G, J, K        | 65 @ 500     | 1200           | 0.480           | 400           | Black      |
| 100 @ 150 (MHz)  | G, J, K        | 65 @ 500     | 1200           | 0.460           | 400           | Yellow     |
| 110 @ 150 (MHz)  | G, J, K        | 50 @ 250     | 1000           | 0.480           | 400           | Brown      |
| 120 @ 150 (MHz)  | G, J, K        | 50 @ 250     | 1100           | 0.510           | 400           | Green      |
| 150 @ 100 (MHz)  | G, J, K        | 50 @ 250     | 920            | 0.560           | 400           | Blue       |
| 180 @ 100 (MHz)  | G, J, K        | 50 @ 250     | 870            | 0.640           | 400           | Violet     |
| 200 @ 100 (MHz)  | G, J, K        | 50 @ 250     | 860            | 0.660           | 400           | Orange     |
| 220 @ 100 (MHz)  | G, J, K        | 50 @ 250     | 850            | 0.700           | 400           | Gray       |
| 240 @ 100 (MHz)  | G, J, K        | 44 @ 250     | 690            | 1.000           | 350           | Red        |
| 250 @ 100 (MHz)  | G, J, K        | 45 @ 250     | 680            | 1.000           | 350           | Green      |
| 270 @ 100 (MHz)  | G, J, K        | 48 @ 250     | 650            | 1.300           | 350           | White      |
| 300 @ 100 (MHz)  | G, J, K        | 48 @ 250     | 620            | 1.200           | 330           | Yellow     |
| 330 @ 100 (MHz)  | G, J, K        | 48 @ 250     | 600            | 1.650           | 310           | Black      |
| 360 @ 100 (MHz)  | G, J, K        | 48 @ 250     | 580            | 1.450           | 300           | Green      |
| 390 @ 100 (MHz)  | G, J, K        | 48 @ 250     | 560            | 1.800           | 290           | Brown      |
| 430 @ 50 (MHz)   | G, J, K        | 33 @ 100     | 430            | 1.700           | 230           | Blue       |
| 470 @ 50 (MHz)   | G, J, K        | 22 @ 100     | 375            | 2.000           | 250           | Red        |
| 560 @ 25 (MHz)   | G, J, K        | 23 @ 50      | 340            | 2.100           | 230           | Orange     |
| 600 @ 25 (MHz)   | G, J, K        | 23 @ 50      | 260            | 1.600           | 450           | White      |
| 620 @ 25 (MHz)   | G, J, K        | 23 @ 50      | 220            | 2.200           | 210           | Yellow     |
| 680 @ 25 (MHz)   | G, J, K        | 23 @ 50      | 188            | 2.300           | 190           | Green      |
| 750 @ 25 (MHz)   | G, J, K        | 23 @ 50      | 200            | 2.300           | 180           | Blue       |
| 820 @ 25 (MHz)   | G, J, K        | 23 @ 50      | 200            | 2.350           | 180           | Violet     |
| 910 @ 25 (MHz)   | G, J, K        | 18 @ 50      | 120            | 1.900           | 170           | Black      |
| 1000 @ 25 (MHz)  | G, J, K        | 20 @ 50      | 100            | 2.500           | 170           | Gray       |
| 1200 @ 25 (MHz)  | G, J, K        | 18 @ 25      | 100            | 2.500           | 170           | White      |
| 1500 @ 25 (MHz)  | G, J, K        | 16 @ 25      | 100            | 2.500           | 170           | Black      |
| 1800 @ 25 (MHz)  | G, J, K        | 16 @ 7.9     | 80             | 2.500           | 170           | Brown      |
| 2200 @ 25 (MHz)  | G, J, K        | 16 @ 7.9     | 60             | 2.700           | 160           | Red        |
| 2700 @ 25 (MHz)  | G, J, K        | 16 @ 7.9     | 50             | 2.950           | 150           | Orange     |
| 3300 @ 7.9 (MHz) | G, J, K        | 15 @ 7.9     | 40             | 4.400           | 90            | Blue       |
| 4700 @ 7.9 (MHz) | G, J, K        | 15 @ 7.9     | 40             | 6.400           | 90            | Green      |

NOTE: For Mechanical Configurations, see page 7.

## ATC Part Number Code

**0805    WL    100    K    T**

EIA Case Size: 0402, 0603, 0805, 1008, 1206

Wire Wound Inductor

Inductance value in nH.  
1st and 2nd digits are significant digits. 3rd digit is multiplier. R is decimal point.

The above part number refers to an ATC 0805 WL wire wound chip inductor, 10 nH, J (±10%) tolerance, in tape and reel packaging. Tighter tolerances are available. Consult factory.

Terminations for all WL Series Inductor Case Sizes are **Lead-Free, RoHS Compliant, Tin Plated over Nickel Barrier.**

Packaging: T - Tape & Reel  
Tolerance: See table below.

| Inductance Tolerances |      |      |       |
|-----------------------|------|------|-------|
| Code                  | G    | J    | K     |
| Tol.                  | ± 2% | ± 5% | ± 10% |

## A M E R I C A N   T E C H N I C A L   C E R A M I C S

**ATC North America**  
+1-631-622-4700 • sales@atceramics.com

**ATC Europe**  
+46 8 6800410 • sales@atceramics-europe.com

**ATC Asia**  
+86-755-2396-8759 • sales@atceramics-asia.com

# ATC 1008 WL SERIES WIRE WOUND CHIP INDUCTORS

| Inductance (nH)    | Tolerance Code | Q (MHz)   | SRF (MHz) | RDC (Ohms) | IDC (mA) | Color Code |
|--------------------|----------------|-----------|-----------|------------|----------|------------|
|                    |                | min.      | min.      | max.       | max.     |            |
| 4.7 @ 50 (MHz)     | J, K           | 50 @ 1500 | 4000      | 0.15       | 1000     | Green      |
| 5.6 @ 50 (MHz)     | J, K           | 50 @ 1500 | 4000      | 0.15       | 1000     | Black      |
| 10 @ 50 (MHz)      | G, J, K        | 50 @ 500  | 4100      | 0.08       | 1000     | Brown      |
| 12 @ 50 (MHz)      | G, J, K        | 50 @ 500  | 3300      | 0.09       | 1000     | Red        |
| 15 @ 50 (MHz)      | G, J, K        | 50 @ 500  | 2500      | 0.11       | 1000     | Orange     |
| 18 @ 50 (MHz)      | G, J, K        | 50 @ 350  | 2400      | 0.12       | 1000     | Yellow     |
| 22 @ 50 (MHz)      | G, J, K        | 55 @ 350  | 2400      | 0.12       | 1000     | Green      |
| 24 @ 50 (MHz)      | G, J, K        | 55 @ 350  | 1900      | 0.12       | 1000     | Blue       |
| 27 @ 50 (MHz)      | G, J, K        | 55 @ 350  | 1600      | 0.13       | 1000     | Violet     |
| 33 @ 50 (MHz)      | G, J, K        | 60 @ 350  | 1600      | 0.14       | 1000     | Gray       |
| 36 @ 50 (MHz)      | G, J, K        | 60 @ 350  | 1600      | 0.15       | 1000     | Orange     |
| 39 @ 50 (MHz)      | G, J, K        | 60 @ 350  | 1500      | 0.15       | 1000     | White      |
| 47 @ 50 (MHz)      | G, J, K        | 65 @ 350  | 1500      | 0.16       | 1000     | Black      |
| 56 @ 50 (MHz)      | G, J, K        | 65 @ 350  | 1300      | 0.18       | 1000     | Brown      |
| 62 @ 50 (MHz)      | G, J, K        | 65 @ 350  | 1250      | 0.20       | 1000     | Blue       |
| 68 @ 50 (MHz)      | G, J, K        | 65 @ 350  | 1300      | 0.20       | 1000     | Red        |
| 75 @ 50 (MHz)      | G, J, K        | 60 @ 350  | 1100      | 0.21       | 1000     | White      |
| 82 @ 50 (MHz)      | G, J, K        | 60 @ 350  | 1000      | 0.22       | 1000     | Orange     |
| 100 @ 25 (MHz)     | G, J, K        | 60 @ 350  | 1000      | 0.56       | 650      | Yellow     |
| 120 @ 25 (MHz)     | G, J, K        | 60 @ 350  | 950       | 0.63       | 650      | Green      |
| 150 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 850       | 0.70       | 800      | Blue       |
| 180 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 750       | 0.77       | 620      | Violet     |
| 220 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 700       | 0.84       | 500      | Gray       |
| 240 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 650       | 0.88       | 500      | White      |
| 270 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 600       | 0.91       | 690      | Black      |
| 300 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 585       | 1.00       | 450      | Brown      |
| 330 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 570       | 1.05       | 450      | Red        |
| 360 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 530       | 1.10       | 470      | Orange     |
| 390 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 500       | 1.12       | 630      | Yellow     |
| 430 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 480       | 1.15       | 470      | Green      |
| 470 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 450       | 1.19       | 470      | Blue       |
| 560 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 415       | 1.33       | 580      | Violet     |
| 620 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 375       | 1.40       | 300      | Gray       |
| 680 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 375       | 1.47       | 540      | White      |
| 750 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 360       | 1.54       | 360      | Black      |
| 820 @ 25 (MHz)     | G, J, K        | 45 @ 100  | 350       | 1.61       | 400      | Brown      |
| 910 @ 25 (MHz)     | G, J, K        | 35 @ 50   | 320       | 1.68       | 380      | Red        |
| 1000 @ 25 (MHz)    | G, J, K        | 35 @ 50   | 290       | 1.75       | 370      | Orange     |
| 1200 @ 7.9 (MHz)   | G, J, K        | 35 @ 50   | 250       | 2.00       | 310      | Yellow     |
| 1500 @ 7.9 (MHz)   | G, J, K        | 28 @ 50   | 200       | 2.30       | 330      | Green      |
| 1800 @ 7.9 (MHz)   | G, J, K        | 28 @ 50   | 160       | 2.60       | 300      | Blue       |
| 2200 @ 7.9 (MHz)   | G, J, K        | 28 @ 50   | 160       | 2.80       | 280      | Violet     |
| 2700 @ 7.9 (MHz)   | G, J, K        | 22 @ 25   | 140       | 3.20       | 290      | Gray       |
| 3300 @ 7.9 (MHz)   | G, J, K        | 22 @ 25   | 110       | 3.40       | 290      | White      |
| 3900 @ 7.9 (MHz)   | G, J, K        | 20 @ 25   | 100       | 3.60       | 260      | Black      |
| 4700 @ 7.9 (MHz)   | G, J, K        | 18 @ 25   | 90        | 4.00       | 260      | Brown      |
| 5600 @ 7.9 (MHz)   | G, J, K        | 16 @ 7.96 | 20        | 4.00       | 240      | Red        |
| 6800 @ 7.9 (MHz)   | G, J, K        | 15 @ 7.96 | 40        | 4.90       | 200      | Orange     |
| 8200 @ 7.9 (MHz)   | G, J, K        | 15 @ 7.96 | 25        | 6.00       | 170      | Yellow     |
| 10000 @ 2.52 (MHz) | G, J, K        | 16 @ 7.96 | 20        | 9.00       | 150      | Green      |
| 12000 @ 2.52 (MHz) | G, J, K        | 15 @ 7.96 | 18        | 10.5       | 130      | Blue       |
| 15000 @ 2.52 (MHz) | G, J, K        | 15 @ 7.96 | 15        | 11.5       | 120      | Violet     |

NOTE: For Mechanical Configurations, see page 7.

## ATC Part Number Code

**1008**    **WL**    **100**    **K**    **T**

**EIA Case Size:** 0402, 0603, 0805, 1008, 1206  
**Wire Wound Inductor**  
**Inductance value in nH.** 1st and 2nd digits are significant digits. 3rd digit is multiplier. R is decimal point.  
 The above part number refers to an ATC 1008 WL wire wound chip inductor, 10 nH, J ( $\pm 10\%$ ) tolerance, in tape and reel packaging. Tighter tolerances are available. Consult factory.  
 Terminations for all WL Series Inductor Case Sizes are **Lead-Free, RoHS Compliant, Tin Plated over Nickel Barrier.**

**Packaging:** T - Tape & Reel  
**Tolerance:** See table below.

| Inductance Tolerances |           |           |            |
|-----------------------|-----------|-----------|------------|
| Code                  | G         | J         | K          |
| Tol.                  | $\pm 2\%$ | $\pm 5\%$ | $\pm 10\%$ |

## A M E R I C A N T E C H N I C A L C E R A M I C S

**ATC North America**  
 +1-631-622-4700 • sales@atceramics.com

**ATC Europe**  
 +46 8 6800410 • sales@atceramics-europe.com

**ATC Asia**  
 +86-755-2396-8759 • sales@atceramics-asia.com

# ATC 1206 WL SERIES WIRE WOUND CHIP INDUCTORS

| Inductance (nH) | Tolerance Code | Q (MHz) min. | SRF (MHz) min. | RDC (Ohms) max. | IDC (mA) max. | Color Code |
|-----------------|----------------|--------------|----------------|-----------------|---------------|------------|
| 6.8 @ 100 (MHz) | J, K           | 30 @ 300     | 5500           | .070            | 1000          | Brown      |
| 10 @ 100 (MHz)  | J, K           | 40 @ 300     | 4000           | .080            | 1000          | Red        |
| 12 @ 100 (MHz)  | J, K           | 40 @ 300     | 3200           | .080            | 1000          | Orange     |
| 15 @ 100 (MHz)  | J, K           | 40 @ 300     | 3200           | .100            | 1000          | Yellow     |
| 18 @ 100 (MHz)  | J, K           | 50 @ 300     | 2800           | .100            | 1000          | Green      |
| 22 @ 100 (MHz)  | J, K           | 50 @ 300     | 2200           | .100            | 1000          | Blue       |
| 24 @ 100 (MHz)  | J, K           | 50 @ 300     | 2000           | .100            | 1000          | Red        |
| 27 @ 100 (MHz)  | G, J, K        | 50 @ 300     | 1800           | .110            | 1000          | Violet     |
| 33 @ 100 (MHz)  | G, J, K        | 55 @ 300     | 1800           | .110            | 1000          | Gray       |
| 39 @ 100 (MHz)  | G, J, K        | 55 @ 300     | 1800           | .120            | 1000          | White      |
| 47 @ 100 (MHz)  | G, J, K        | 55 @ 300     | 1500           | .130            | 1000          | Black      |
| 56 @ 100 (MHz)  | G, J, K        | 55 @ 300     | 1450           | .140            | 1000          | Brown      |
| 68 @ 100 (MHz)  | G, J, K        | 55 @ 300     | 1200           | .260            | 950           | Red        |
| 82 @ 100 (MHz)  | G, J, K        | 55 @ 300     | 1200           | .210            | 920           | Orange     |
| 91 @ 100 (MHz)  | G, J, K        | 55 @ 300     | 1100           | .240            | 900           | White      |
| 100 @ 100 (MHz) | G, J, K        | 55 @ 300     | 1100           | .260            | 850           | Yellow     |
| 120 @ 100 (MHz) | G, J, K        | 55 @ 300     | 750            | .260            | 800           | Green      |
| 150 @ 100 (MHz) | G, J, K        | 60 @ 300     | 950            | .310            | 750           | Blue       |
| 180 @ 50 (MHz)  | G, J, K        | 55 @ 300     | 900            | .430            | 700           | Violet     |
| 220 @ 50 (MHz)  | G, J, K        | 55 @ 300     | 760            | .500            | 670           | Gray       |
| 270 @ 50 (MHz)  | G, J, K        | 40 @ 300     | 740            | .560            | 630           | White      |
| 300 @ 50 (MHz)  | G, J, K        | 50 @ 150     | 680            | .600            | 600           | Green      |
| 330 @ 50 (MHz)  | G, J, K        | 45 @ 150     | 650            | .620            | 590           | Black      |
| 360 @ 50 (MHz)  | G, J, K        | 45 @ 150     | 600            | .650            | 550           | Blue       |
| 390 @ 50 (MHz)  | G, J, K        | 45 @ 150     | 600            | .750            | 530           | Brown      |
| 470 @ 50 (MHz)  | G, J, K        | 45 @ 150     | 550            | 1.30            | 490           | Red        |
| 560 @ 35 (MHz)  | G, J, K        | 45 @ 150     | 470            | 1.34            | 460           | Orange     |
| 620 @ 35 (MHz)  | G, J, K        | 45 @ 150     | 470            | 1.58            | 460           | Gray       |
| 680 @ 35 (MHz)  | G, J, K        | 45 @ 150     | 450            | 1.58            | 430           | Yellow     |
| 750 @ 35 (MHz)  | G, J, K        | 45 @ 150     | 440            | 2.25            | 320           | White      |
| 820 @ 35 (MHz)  | G, J, K        | 45 @ 150     | 420            | 1.82            | 400           | Green      |
| 910 @ 35 (MHz)  | G, J, K        | 45 @ 150     | 410            | 2.95            | 310           | Green      |
| 1000 @ 35 (MHz) | G, J, K        | 45 @ 150     | 400            | 2.80            | 320           | Blue       |
| 1200 @ 35 (MHz) | G, J, K        | 45 @ 150     | 380            | 3.20            | 300           | Violet     |

NOTE: For Mechanical Configurations, see page 7.

## ATC Part Number Code

**1206    WL    100    K    T**

EIA Case Size: 0402, 0603, 0805, 1008, 1206

Wire Wound Inductor

Inductance value in nH.  
1st and 2nd digits are significant digits. 3rd digit is multiplier. R is decimal point.

The above part number refers to an ATC 1206 WL wire wound chip inductor, 10 nH, J ( $\pm 10\%$ ) tolerance, in tape and reel packaging. Tighter tolerances are available. Consult factory.

Terminations for all WL Series Inductor Case Sizes are **Lead-Free, RoHS Compliant, Tin Plated over Nickel Barrier.**

Packaging: T - Tape & Reel

Tolerance: See table below.

| Inductance Tolerances |           |           |            |
|-----------------------|-----------|-----------|------------|
| Code                  | G         | J         | K          |
| Tol.                  | $\pm 2\%$ | $\pm 5\%$ | $\pm 10\%$ |

1206 Series available by special order non stock item, consult factory for availability.

## A M E R I C A N   T E C H N I C A L   C E R A M I C S

**ATC North America**  
+1-631-622-4700 • sales@atceramics.com

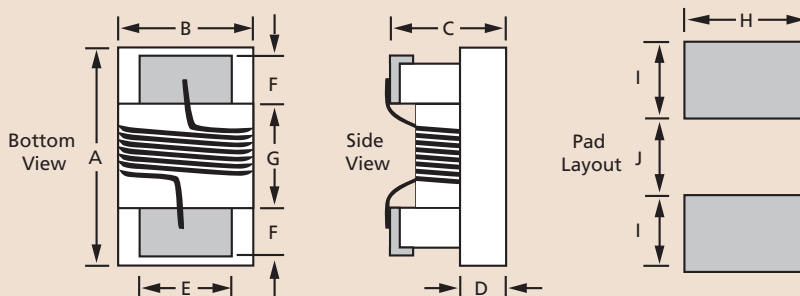
**ATC Europe**  
+46 8 6800410 • sales@atceramics-europe.com

**ATC Asia**  
+86-755-2396-8759 • sales@atceramics-asia.com



# ATC WL SERIES WIRE WOUND CHIP INDUCTORS

## Mechanical Configurations



| WL Case Size/<br>Series | A<br>max.   | B<br>max.   | C<br>max.   | D<br>ref.   | E           | F           | G           | H           | I           | J           |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 0402                    | .050 (1.27) | .030 (0.76) | .024 (0.61) | .006 (0.15) | .020 (0.51) | .009 (0.23) | .022 (0.56) | .026 (0.66) | .019 (0.50) | .018 (0.46) |
| 0603                    | .071 (1.80) | .044 (1.12) | .040 (1.02) | .015 (0.38) | .030 (0.76) | .013 (0.33) | .034 (0.86) | .040 (1.02) | .025 (0.64) | .025 (0.64) |
| 0805                    | 0.09 (2.29) | .068 (1.73) | 0.06 (1.52) | 0.02 (0.51) | 0.05 (1.27) | 0.02 (0.51) | 0.04 (1.02) | 0.07 (1.78) | 0.04 (1.02) | 0.03 (0.76) |
| 1008                    | 0.16 (2.92) | 0.11 (2.79) | 0.08 (2.03) | 0.02 (0.51) | 0.08 (2.03) | 0.02 (0.51) | 0.06 (1.52) | 0.10 (2.54) | 0.04 (1.02) | 0.05 (1.27) |
| 1206                    | 0.14 (3.56) | .085 (2.16) | 0.06 (1.52) | 0.02 (0.51) | 0.06 (1.52) | 0.02 (0.51) | 0.08 (2.03) | 0.08 (2.03) | 0.04 (1.02) | 0.07 (1.78) |

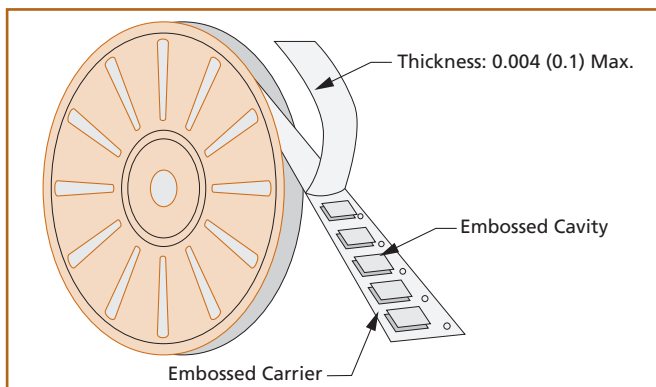
Inches (mm)

Terminations for all WL Series Inductor Case Sizes are **Lead-Free, RoHS Compliant**, Tin Plated over Nickel Barrier.

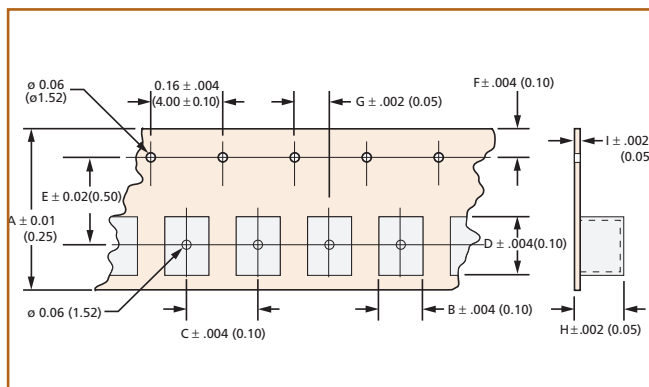
## Tape and Reel Specifications

ATC WL Series Inductor Products are supplied on tape and reel in standard quantities of 2000 and 4000 parts per reel (see table below), making them ideal for automated pick and place manufacturing applications.

### Packaging



### Tape Dimensions



| WL Case Size / Series | A Dim.      | B Dim.      | C Dim.      | D Dim.      | E Dim.      | F Dim.      | G Dim.      | H Dim.      | I Dim.      | Pcs. / per reel |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| 0402                  | 0.32 (8.00) | .044 (1.10) | .080 (2.00) | .070 (1.75) | .140 (3.50) | .070 (1.75) | .080 (2.00) | .024 (0.60) | .010 (0.25) | 4000            |
| 0603                  | 0.32 (8.00) | .044 (1.10) | 0.16 (4.00) | .070 (1.75) | .140 (3.50) | .070 (1.75) | .080 (2.00) | .042 (1.05) | .010 (0.25) | 4000            |
| 0805                  | 0.32 (8.00) | .075 (1.88) | 0.16 (4.00) | .095 (2.38) | .140 (3.50) | .070 (1.75) | .080 (2.00) | .054 (1.35) | .008 (0.20) | 2000            |
| 1008                  | 0.32 (8.00) | .109 (2.73) | 0.16 (4.00) | .115 (2.88) | .140 (3.50) | .070 (1.75) | .080 (2.00) | .090 (2.25) | .008 (0.20) | 2000            |
| 1206                  | 0.32 (8.00) | .109 (2.73) | 0.16 (4.00) | .115 (2.88) | .140 (3.50) | .070 (1.75) | .080 (2.00) | 0.10 (2.50) | .008 (0.20) | 2000            |

A M E R I C A N T E C H N I C A L C E R A M I C S

ATC North America  
+1-631-622-4700 • sales@atceramics.com

ATC Europe  
+46 8 6800410 • sales@atceramics-europe.com

ATC Asia  
+86-755-2396-8759 • sales@atceramics-asia.com

w w w . a t c e r a m i c s . c o m

# ATC WL SERIES WIRE WOUND CHIP INDUCTORS

## Inductor Quality Assurance:

ATC ensures that all of its contracted component manufacturing facilities are ISO 9000 Registered, and that an outgoing product quality level of better than 100 PPM is maintained. ATC'S WL Series products have successfully passed the most rigorous environmental, mechanical and electrical validations. All manufacturing lots receive a tollgate sample inspection of the primary parameter values used to specify an inductor. The test equipment and fixtures listed below in the RF Measurement Table are used to verify RF performance parameters for ATC'S WL Series Inductor Products.

### Quality and Reliability Testing - Environmental

| Item | Examination              | Test Method   | Performance Specs.   |
|------|--------------------------|---|--|
| 1    | High Temperature Storage | Inductors are subjected to +125°C for 48 hours, then tested after 1 hour at room temperature.   | <ul style="list-style-type: none"> <li>Inductors shall not have a shorted or open winding</li> <li>Change in inductance shall not change more than ±5%.</li> <li>Change in Q shall not change more than ±10%.</li> </ul> |
| 2    | Low Temperature Storage  | Inductors are subjected to -40°C for 48 hours, then tested after 1 hour at room temperature   |  |
| 3    | Thermal Shock            | Inductors are subjected to 10 cycles of -40°C for 30 min. and +125°C for 30 min., then tested after 1 hour at room temperature.   |  |
| 4    | Moisture Resistance      | Inductors are subjected to 10 25-hour cycles from 25°C to 65°C at 80 to 90% RH, and are exposed to -10°C for 3 hours during one of the cycles. Samples are then tested after 2 hours at room temperature. |  |
| 5    | Life Test                | Inductors are subjected to 110°C for 1,000 hours at rated current. Samples are then tested after 1 hour at room temperature.  |  |

### Quality and Reliability Testing - Mechanical

| Item | Examination       | Test Method   | Performance Specifications   |
|------|-------------------|---|--|
| 1    | Solderability Dip | Dip terminals into molten Sn63 at 235°C for 5 sec.  | Terminals shall exhibit a continuous solder coating free of defects for a minimum of 95% of surface. |
| 2    | Adhesion          | Reflow solder to circuit lands. A force gauge is applied to side of component                       | 1 lb. for 0402, 2 lbs. for 0603, 4 lbs. for all larger parts   |
| 3    | Vibration         | 10 to 2000 Hz, 5 Gs for 20 minutes, 12 cycles each, 3 orientations                                  | 1. No mechanical damage 2. Change in L less than ±5%<br>3. Change in Q less than ±10%                |
| 4    | Mechanical Shock  | MIL-STD-202, method 213, condition A. Test mounted parts 2 axes 6 times (50 G's, 11 ms, half-sine). | 1. No mechanical damage 2. Change in L less than ±5%<br>3. Change in Q less than ±10%                |

### RF Test Measurements

| Measured Parameter            | Test Equipment                   | Fixture(s)   |
|-------------------------------|----------------------------------|--|
| Inductance (L)                | HP 4291B Impedance Analyzer      | Bottom Electrode SMD Test Fixture, Model 16197A                        |
| Quality Factor (Q)            |                                  |  |
| Self Resonant Frequency (SRF) | HP 8722D Vector Network Analyzer | Anritsu Universal test fixture Model 3680K with substrate DUT adapters |
| DC Resistance (DCR)           | Micro-ohm meter                  | Four Wire Kelvin Probes  |

## Inductor Design Kits

ATC'S WL Series Inductor Design Kits contain a selection of standard inductance values for circuit prototyping.

| Kit #  | Item # | Description   | Inductor Value range (nH) | Inductor Values (nH)  | Tol. | Price    |
|--------|--------|---|---------------------------|---|------|----------|
| Kit 51 | DK0051 | 0402 WL Chip Inductors<br>23 different values,<br>15 pieces per value | 1.0nH to 56nH             | 1.0   | 10%  | \$120.00 |
|        |        |   |                           | 2.0, 2.2, 3.3, 3.6, 3.9, 5.1, 5.6, 6.2, 7.5, 8.2, 9.0, 10, 11, 12, 15, 19, 23, 27, 36, 40, 47, 56   | 5%   |          |
| Kit 52 | DK0052 | 0603 WL Chip Inductors<br>42 different values,<br>15 pieces per value | 1.6nH to 390nH            | 1.6, 1.8, 3.3, 3.6, 3.9, 4.3, 4.7, 5.1, 5.6, 6.8, 7.5, 8.2, 8.7, 9.5, 10, 11, 12, 15, 16, 18, 22, 24, 27, 30, 33, 36, 39, 43, 47, 56, 68, 72, 82, 100, 110, 120, 150, 180, 220, 270, 330, 390                             | 5%   | \$120.00 |
| Kit 53 | DK0053 | 0805 WL Chip Inductors<br>45 different values,<br>15 pieces per value | 2.8nH to 2700nH           | 2.8, 3.0, 3.3, 5.6, 6.8, 7.5, 8.2, 10, 12, 15, 18, 22, 24, 27, 33, 36, 39, 43, 47, 56, 68, 82, 91, 100, 110, 120, 150, 180, 220, 240, 270, 330, 390, 470, 560, 620, 680, 750, 820, 1000, 1200, 1500, 1800, 2200, 2700     | 5%   | \$120.00 |
| Kit 54 | DK0054 | 1008 WL Chip Inductors<br>42 different values,<br>15 pieces per value | 10nH to 15,000nH          | 10, 12, 15, 18, 22, 27, 33, 39, 47, 56, 68, 82, 100, 120, 150, 180, 220, 270, 330, 390, 470, 560, 620, 680, 750, 820, 910, 1000, 1200, 1500, 1800, 2200, 2700, 3300, 3900, 4700, 5600, 6800, 8200, 10,000, 12,000, 15,000 | 5%   | \$120.00 |

A M E R I C A N T E C H N I C A L C E R A M I C S

ATC North America  
+1-631-622-4700 • sales@atceramics.com

ATC Europe  
+46 8 6800410 • sales@atceramics-europe.com

ATC Asia  
+86-755-2396-8759 • sales@atceramics-asia.com

# CONTACT INFORMATION

## ATC NORTH AMERICA

### AMERICAN TECHNICAL CERAMICS

One Norden Lane, Huntington Station, NY 11746-2142  
Phone: +1-631-622-4700 • Fax: +1-631-622-4748  
email: sales@atceramics.com • website: www.atceramics.com

## ATC EUROPE

For technical support in your region, please contact the local office in Germany or the UK. For sales orders and all other transactions in Europe, Africa and the Middle East, please contact the ATC Sales, Applications Support and Distribution Center in Stockholm, Sweden.

### SALES, APPLICATIONS SUPPORT & DISTRIBUTION CENTER

Serving Europe, Africa and the Middle East  
AMERICAN TECHNICAL CERAMICS AB  
Ellipsvaegen 5  
SE-141 75 Kungens Kurva, Sweden  
Phone: +46 8 6800410 • Fax: +46 8 6800415 (main) • Mobile: +46 805901399  
email: sales@atceramics-europe.com • website: www.atceramics-europe.com

### ATC EUROPE - REGIONAL SATELLITE OFFICE, GERMANY

AMERICAN TECHNICAL CERAMICS  
Raiffeisenstrasse 12  
D-83607 Holzkirchen, Germany  
Phone: +49 8024 6083978 • Fax: +49 8024 6083979 Mobile: +49 1515 4106982  
email: twiesner@atceramics-europe.com

### ATC EUROPE - REGIONAL SATELLITE OFFICE, RUSSIA

AMERICAN TECHNICAL CERAMICS  
Ellipsvaegen 5  
SE-141 75 Kungens Kurva, Sweden  
Phone: +46 8 6800410 • Fax: +46 8 6800415 (main) • Mobile: +46 805901399  
email: sales@atceramics-europe.com • website: www.atceramics-europe.com

### ATC EUROPE - REGIONAL SATELLITE OFFICE, UK

AMERICAN TECHNICAL CERAMICS  
34 Pewley Way  
Guildford, Surrey, England, GU1 3QA  
Phone: +44 1483207402 • Fax: +46 8 6800415 • Mobile: +44 8817221903  
email: mchapman@atceramics-europe.com • website: www.atceramics-europe.com

## ATC ASIA / INDIA SALES AND TECHNICAL SUPPORT OFFICE

### AMERICAN TECHNICAL CERAMICS (CHINA) LIMITED

Unit D & E, 11/F JunYun Century Building,  
No. 6033 Chegongmiao, Shennan Road, Futian Dist. Shenzhen,  
Guangdong Province, 518031 P. R. China  
Phone: +86 755 2396 8759 • Fax: +86 755 2396 8442  
e-mail: sales@atceramics-asia.com • website: www.atceramics-asia.com

*Sales of ATC products are subject to the terms and conditions contained in American Technical Ceramics Corp. Terms and Conditions of Sale (ATC document #001-992 Rev. B 12/05). Copies of these terms and conditions will be provided upon request. They may also be viewed on ATC's website at [www.atceramics.com/productfinder/default.asp](http://www.atceramics.com/productfinder/default.asp). Click on the link for Terms and Conditions of Sale.*

*ATC has made every effort to have this information as accurate as possible. However, no responsibility is assumed by ATC for its use, nor for any infringements of rights of third parties which may result from its use. ATC reserves the right to revise the content or modify its product without prior notice.*

© 2001 American Technical Ceramics Corp. All Rights Reserved.

ATC # 001-960 Rev. M; 12/10

## A M E R I C A N T E C H N I C A L C E R A M I C S

ATC North America  
+1-631-622-4700 • sales@atceramics.com

ATC Europe  
+46 8 6800410 • sales@atceramics-europe.com

ATC Asia  
+86-755-2396-8759 • sales@atceramics-asia.com

w w w . a t c e r a m i c s . c o m

## Other ATC Product Catalogs



Multilayer Capacitors  
& Power Assemblies



Inductor  
Products



High Power  
Resistive Products



Custom Thin Film  
Products



Single Layer  
Capacitors



AMERICAN TECHNICAL CERAMICS

ATC North America  
+1-631-622-4700  
sales@atceramics.com

ATC Europe  
+46 8 6800410  
sales@atceramics-europe.com

ATC Asia  
+86-755-2386-8759  
sales@atceramics-asia.com

 THE  
ENGINEERS'  
CHOICE®  
ISO 9001 REGISTERED

[www.atceramics.com](http://www.atceramics.com)

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Fixed Inductors](#) category:*

*Click to view products by [American Technical Ceramics](#) manufacturer:*

Other Similar products are found below :

[MLZ1608M6R8WTD25](#) [MLZ1608N6R8LT000](#) [MLZ1608N3R3LTD25](#) [MLZ1608N3R3LT000](#) [MLZ1608N150LT000](#)  
[MLZ1608M150WTD25](#) [MLZ1608M3R3WTD25](#) [MLZ1608M3R3WT000](#) [MLZ1608M150WT000](#) [MLZ1608A1R5WT000](#)  
[MLZ1608N1R5LT000](#) [B82432C1333K000](#) [PCMB053T-1R0MS](#) [PCMB053T-1R5MS](#) [PCMB104T-1R5MS](#) [CR32NP-100KC](#) [CR32NP-151KC](#) [CR32NP-180KC](#) [CR32NP-181KC](#) [CR32NP-1R5MC](#) [CR32NP-390KC](#) [CR32NP-3R9MC](#) [CR32NP-680KC](#) [CR32NP-820KC](#)  
[CR32NP-8R2MC](#) [CR43NP-390KC](#) [CR43NP-560KC](#) [CR43NP-680KC](#) [CR54NP-181KC](#) [CR54NP-470LC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#)  
[MGDQ4-00004-P](#) [MGDU1-00016-P](#) [MHL1ECTTP18NJ](#) [MHL1JCTTD12NJ](#) [PE-51506NL](#) [PE-53601NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-62892NL](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#) [PM06-2N7](#) [PM06-39NJ](#) [HC2LP-R47-R](#) [HC2-R47-R](#) [HC3-2R2-R](#) [HC8-1R2-R](#)