

AMERICAN
TECHNICAL
CERAMICS

INDUCTOR PRODUCTS

Manufactured for ATC

THE ENGINEERS' CHOICE®

Corporate Profile

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. For over fifty years, ATC's family of superior component and custom integrated packaging solutions has been represented by **THE ENGINEERS' CHOICE™** brand.

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.

American Technical Ceramics' Sales and Customer Service Center, serving Europe, Africa and the Middle East, is located in the Czech Republic. ATC's Western European Sales Office is located in Surrey, England. The Company's wholly-owned subsidiary offering Sales and Technical Support for Asia is located in Shenzhen, P.R. China.

American Technical Ceramics is a wholly-owned subsidiary of AVX Corp. The common stock of AVX is listed on the New York Stock Exchange (symbol "AVX").

RLC Product Offerings

- Multilayer Ceramic Capacitors
- Capacitor Assemblies for Power Applications
- Single Layer Ceramic Capacitors
- Resistor Products
- Inductor Products

Process and Packaging Offerings

- Thin Film Custom Products: metalization and patterned substrates for a broad range of hybrid circuit requirements

Markets Served

- Wireless Communications Infrastructure
- Semiconductor Manufacturing Equipment
- Medical Diagnostic Equipment
- Sattelite Systems
- Public Safety Radio
- Avionic Systems
- Military and Aerospace
- Commerical Broadcast Transmitters
- Fiber Optic Communications
- Automotive Electronics



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



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

Facilities

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

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

Inductance (nH)	Tolerance Code	Q min.	SRF (GHz) min.	RDC (Ohms) max.	IDC (mA) max.	900 MHz L typ.	900 MHz Q typ.	1.7 GHz L typ.	1.7 GHz 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	—	—	—	—
1.8 @ 250 (MHz)	G, J, K	16	11.3	0.07	1040	1.72	68	1.74	82
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	2.10	0.820	100	50.4	47	59.4	37
56 @ 250 (MHz)	G, J, K	25	1.75	0.970	100	57.4	49	72.4	40
68 @ 250 (MHz)	G, J, K	22	1.76	1.120	100	69.6	45	83.4	38
72 @ 250 (MHz)	G, J, K	22	1.3	1.12	100	—	—	—	—
82 @ 250 (MHz)	G, J, K	22	1.62	1.550	50	—	—	—	—
100 @ 250 (MHz)	G, J, K	22	1.16	2.000	30	—	—	—	—
120 @ 250 (MHz)	G, J, K	20	1.8	2.6	50	—	—	—	—

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.

Packaging: T - Tape & Reel

Tolerance: See table below.

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

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.

Terminations

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

Inductance (nH)	Tolerance Code	Q min.	SRF (MHz) min.	RDC (Ohms) max.	IDC (mA) max.	900 MHz L typ.	900 MHz Q typ.	1.7 GHz L typ.	1.7 GHz Q typ.
1.6 @ 250 (MHz)	J, K	16	12,500	0.040	700	1.53	35	1.58	55
1.8 @ 250 (MHz)	J, K	16	12,500	0.045	700	1.63	35	1.66	50
2.2 @ 250 (MHz)	J, K	15	6000	0.100	700	2.18	41	2.20	64
2.3 @ 250 (MHz)	J, K	16	>4000	0.140	700	2.32	32	2.35	40
3.3 @ 250 (MHz)	G, J, K	22	6000	0.080	700	3.35	47	3.40	65
3.6 @ 250 (MHz)	G, J, K	22	5900	0.063	700	3.72	53	3.71	65
3.9 @ 250 (MHz)	G, J, K	22	6900	0.080	700	3.95	49	3.96	67
4.3 @ 250 (MHz)	G, J, K	22	5900	0.063	700	4.32	50	4.33	70
4.5 @ 250 (MHz)	G, J. K	20	5800	0.120	700	4.74	55	4.87	92
4.7 @ 250 (MHz)	G, J, K	20	5800	0.116	700	4.72	47	4.75	57
5.1 @ 250 (MHz)	G, J, K	20	5700	0.140	700	4.93	47	4.95	56
5.6 @ 250 (MHz)	G, J, K	20	5800	0.170	700	5.53	56	5.86	77
6.2 @ 250 (MHz)	G, J, K	25	5800	0.110	700	6.28	60	6.40	85
6.3 @ 250 (MHz)	G, J, K	25	5800	0.110	700	6.67	41	6.86	61
6.8 @ 250 (MHz)	G, J, K	27	5800	0.110	700	6.75	60	7.10	81
7.5 @ 250 (MHz)	G, J, K	28	4800	0.106	700	7.70	60	7.82	65
8.2 @ 250 (MHz)	G, J, K	28	4700	0.109	700	8.30	60	8.50	60
8.7 @ 250 (MHz)	G, J, K	28	4600	0.109	700	8.86	62	9.32	58
9.1 @ 250 (MHz)	G, J, K	35	4800	0.130	700	9.20	70	9.70	80
9.5 @ 250 (MHz)	G, J, K	28	5400	0.135	700	9.70	59	9.92	61
10 @ 250 (MHz)	G, J, K	31	4800	0.130	700	10.00	66	10.60	83
11 @ 250 (MHz)	G, J, K	33	4000	0.086	700	11.00	53	11.50	5
12 @ 250 (MHz)	G, J, K	35	4000	0.130	700	12.30	72	13.50	83
15 @ 250 (MHz)	G, J, K	35	4000	0.170	700	15.40	64	16.80	89
16 @ 250 (MHz)	G, J, K	34	3300	0.104	700	16.20	55	17.30	52
17 @ 250 (MHz)	G, J, K	35	3200	0.170	700	17.60	56	19.40	44
18 @ 250 (MHz)	G, J, K	35	3100	0.170	700	18.70	70	21.40	69
20 @ 250 (MHz)	G, J, K	40	3000	0.190	700	20.70	80	23.50	30
22 @ 250 (MHz)	G, J, K	38	3000	0.190	700	22.80	73	26.10	71
23 @ 250 (MHz)	G, J, K	38	2850	0.190	700	24.10	71	28.00	71
24 @ 250 (MHz)	G, J, K	37	2650	0.135	700	24.50	45	28.70	39
27 @ 250 (MHz)	G, J, K	40	2800	0.220	600	29.20	74	34.60	65
30 @ 250 (MHz)	G, J, K	37	2250	0.144	600	31.40	47	39.90	28
33 @ 250 (MHz)	G, J, K	40	2300	0.220	600	36.00	67	49.50	42
36 @ 250 (MHz)	G, J, K	38	2080	0.250	600	39.40	47	52.70	24
39 @ 250 (MHz)	G, J, K	40	2200	0.250	600	42.70	60	60.20	40
43 @ 250 (MHz)	G, J, K	39	2000	0.280	600	47.00	44	64.90	21
47 @ 200 (MHz)	G, J, K	38	2000	0.280	600	52.20	62	77.20	35
51 @ 200 (MHz)	G, J, K	38	1900	0.280	600	55.50	69	82.20	34
56 @ 200 (MHz)	G, J, K	38	1900	0.310	600	62.50	56	97.00	26
62 @ 200 (MHz)	G, J, K	37	1800	0.340	600	68.00	40	110.00	10
68 @ 200 (MHz)	G, J, K	37	1700	0.340	600	80.50	54	168.00	21
72 @ 150 (MHz)	G, J, K	34	1700	0.490	400	82.00	53	135.00	20
82 @ 150 (MHz)	G, J, K	34	1700	0.540	400	96.20	54	177.00	21
91 @ 150 (MHz)	G, J, K	30	1700	0.500	400	110.00	50	416.40	6
100 @ 150 (MHz)	G, J, K	34	1400	0.580	400	124.00	49	319.50	13
110 @ 150 (MHz)	G, J, K	32	1350	0.610	300	138.00	43	342.70	15
120 @ 150 (MHz)	G, J, K	32	1300	0.650	300	166.00	39	529.30	8
130 @ 150 (MHz)	G, J, K	30	1400	0.720	300	185.00	60	–	–
140 @ 100 (MHz)	G, J, K	28	1300	0.870	280	190.00	80	–	–
150 @ 150 (MHz)	G, J, K	32	1300	0.950	280	230.00	25	–	–
160 @ 100 (MHz)	G, J, K	25	1300	1.400	280	215.00	20	–	–
180 @ 100 (MHz)	G, J, K	25	1250	1.400	250	303.00	20	–	–
220 @ 100 (MHz)	G, J, K	25	1200	1.600	250	440.00	15	–	–
240 @ 100 (MHz)	G, J, K	38	2.8	0.13	700	25.7	45	30.9	40
260 @ 100 (MHz)	G, J, K	25	1000	2.000	200	469.00	21	–	–
270 @ 100 (MHz)	G, J, K	25	900	2.100	200	580.00	12	–	–
280 @ 100 (MHz)	G, J, K	25	900	2.400	100	524.00	18	–	–
300 @ 100 (MHz)	G, J, K	25	750	2.500	150	539.70	21	–	–
330 @ 100 (MHz)	G, J, K	25	900	3.800	100	440.00	15	–	–
390 @ 100 (MHz)	G, J, K	25	900	4.350	100	580.00	12	–	–
470 @ 100 (MHz)	G, J, K	23	600	3.600	80	–	–	–	–

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.

Packaging: T - Tape & Reel

Tolerance: See table below.

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

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

Inductance (nH)	Tolerance Code	Q (MHz) min.	SRF (MHz) min.	RDC (Ohms) max.	IDC (mA) max.
2.7 @ 250 (MHz)	J, K	80 @ 1500	7900	0.060	800
2.8 @ 250 (MHz)	J, K	80 @ 1500	7900	0.060	800
3.0 @ 250 (MHz)	J, K	65 @ 1500	7900	0.060	800
3.3 @ 250 (MHz)	J, K	50 @ 1500	7900	0.080	600
5.6 @ 250 (MHz)	J, K	65 @ 1500	5500	0.080	600
6.2 @ 250 (MHz)	J, K	50 @ 1000	5500	0.110	600
6.8 @ 250 (MHz)	J, K	50 @ 1000	5500	0.110	600
7.5 @ 250 (MHz)	J, K	50 @ 1000	4500	0.140	600
8.2 @ 250 (MHz)	J, K	50 @ 1000	4700	0.120	600
8.7 @ 250 (MHz)	J, K	50 @ 1000	3900	0.210	400
10 @ 250 (MHz)	G, J, K	60 @ 500	4200	0.100	600
12 @ 250 (MHz)	G, J, K	50 @ 500	4000	0.150	600
15 @ 250 (MHz)	G, J, K	50 @ 500	3400	0.170	600
18 @ 250 (MHz)	G, J, K	50 @ 500	3300	0.200	600
22 @ 250 (MHz)	G, J, K	55 @ 500	2600	0.220	500
24 @ 250 (MHz)	G, J, K	50 @ 500	2000	0.220	500
27 @ 250 (MHz)	G, J, K	55 @ 500	2500	0.250	500
30 @ 250 (MHz)	G, J, K	55 @ 500	2000	0.260	500
33 @ 250 (MHz)	G, J, K	60 @ 500	2050	0.270	500
36 @ 250 (MHz)	G, J, K	55 @ 500	1700	0.270	500
39 @ 250 (MHz)	G, J, K	60 @ 500	2000	0.290	500
43 @ 200 (MHz)	G, J, K	60 @ 500	1650	0.340	500
47 @ 200 (MHz)	G, J, K	60 @ 500	1650	0.310	500
56 @ 200 (MHz)	G, J, K	60 @ 500	1550	0.340	500
68 @ 200 (MHz)	G, J, K	60 @ 500	1450	0.380	500
72 @ 150 (MHz)	G, J, K	65 @ 500	1400	0.400	500
82 @ 150 (MHz)	G, J, K	65 @ 500	1300	0.420	400
91 @ 150 (MHz)	G, J, K	65 @ 500	1200	0.480	400
100 @ 150 (MHz)	G, J, K	65 @ 500	1200	0.460	400
110 @ 150 (MHz)	G, J, K	50 @ 250	1000	0.480	400
120 @ 150 (MHz)	G, J, K	50 @ 250	1100	0.510	400
150 @ 100 (MHz)	G, J, K	50 @ 250	920	0.560	400
180 @ 100 (MHz)	G, J, K	50 @ 250	870	0.640	400
200 @ 100 (MHz)	G, J, K	50 @ 250	860	0.660	400
220 @ 100 (MHz)	G, J, K	50 @ 250	850	0.700	400
240 @ 100 (MHz)	G, J, K	44 @ 250	690	1.000	350
250 @ 100 (MHz)	G, J, K	45 @ 250	680	1.000	350
270 @ 100 (MHz)	G, J, K	48 @ 250	650	1.300	350
300 @ 100 (MHz)	G, J, K	48 @ 250	620	1.200	330
330 @ 100 (MHz)	G, J, K	48 @ 250	600	1.650	310
360 @ 100 (MHz)	G, J, K	48 @ 250	580	1.450	300
390 @ 100 (MHz)	G, J, K	48 @ 250	560	1.800	290
430 @ 50 (MHz)	G, J, K	33 @ 100	430	1.700	230
470 @ 50 (MHz)	G, J, K	22 @ 100	375	2.000	250
560 @ 25 (MHz)	G, J, K	23 @ 50	340	2.100	230
600 @ 25 (MHz)	G, J, K	23 @ 50	260	1.600	450
620 @ 25 (MHz)	G, J, K	23 @ 50	220	2.200	210
680 @ 25 (MHz)	G, J, K	23 @ 50	188	2.300	190
750 @ 25 (MHz)	G, J, K	23 @ 50	200	2.300	180
820 @ 25 (MHz)	G, J, K	23 @ 50	200	2.350	180
910 @ 25 (MHz)	G, J, K	18 @ 50	120	1.900	170
1000 @ 25 (MHz)	G, J, K	20 @ 50	100	2.500	170
1200 @ 25 (MHz)	G, J, K	18 @ 25	100	2.500	170
1500 @ 25 (MHz)	G, J, K	16 @ 25	100	2.500	170
1800 @ 25 (MHz)	G, J, K	16 @ 7.9	80	2.500	170
2200 @ 25 (MHz)	G, J, K	16 @ 7.9	60	2.700	160
2700 @ 25 (MHz)	G, J, K	16 @ 7.9	50	2.950	150
3300 @ 7.9 (MHz)	G, J, K	15 @ 7.9	40	4.400	90
4700 @ 7.9 (MHz)	G, J, K	15 @ 7.9			

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.

Packaging: T - Tape & Reel

Tolerance: See table below.

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

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.

Inductance (nH)	Tolerance Code	Q (MHz) min.	SRF (MHz) min.	RDC (Ohms) max.	IDC (mA) max.
4.7 @ 50 (MHz)	J, K	50 @ 1500	4000	0.15	1000
5.6 @ 50 (MHz)	J, K	50 @ 1500	4000	0.15	1000
10 @ 50 (MHz)	G, J, K	50 @ 500	4100	0.08	1000
12 @ 50 (MHz)	G, J, K	50 @ 500	3300	0.09	1000
15 @ 50 (MHz)	G, J, K	50 @ 500	2500	0.11	1000
18 @ 50 (MHz)	G, J, K	50 @ 350	2400	0.12	1000
22 @ 50 (MHz)	G, J, K	55 @ 350	2400	0.12	1000
24 @ 50 (MHz)	G, J, K	55 @ 350	1900	0.12	1000
27 @ 50 (MHz)	G, J, K	55 @ 350	1600	0.13	1000
33 @ 50 (MHz)	G, J, K	60 @ 350	1600	0.14	1000
36 @ 50 (MHz)	G, J, K	60 @ 350	1600	0.15	1000
39 @ 50 (MHz)	G, J, K	60 @ 350	1500	0.15	1000
47 @ 50 (MHz)	G, J, K	65 @ 350	1500	0.16	1000
56 @ 50 (MHz)	G, J, K	65 @ 350	1300	0.18	1000
62 @ 50 (MHz)	G, J, K	65 @ 350	1250	0.20	1000
68 @ 50 (MHz)	G, J, K	65 @ 350	1300	0.20	1000
75 @ 50 (MHz)	G, J, K	60 @ 350	1100	0.21	1000
82 @ 50 (MHz)	G, J, K	60 @ 350	1000	0.22	1000
91 @ 50 (MHz)	G, J, K	50 @ 350	1000	0.45	1000
100 @ 25 (MHz)	G, J, K	60 @ 350	1000	0.56	650
120 @ 25 (MHz)	G, J, K	60 @ 350	950	0.63	650
150 @ 25 (MHz)	G, J, K	45 @ 100	850	0.70	800
180 @ 25 (MHz)	G, J, K	45 @ 100	750	0.77	620
220 @ 25 (MHz)	G, J, K	45 @ 100	700	0.84	500
240 @ 25 (MHz)	G, J, K	45 @ 100	650	0.88	500
270 @ 25 (MHz)	G, J, K	45 @ 100	600	0.91	690
300 @ 25 (MHz)	G, J, K	45 @ 100	585	1.00	450
330 @ 25 (MHz)	G, J, K	45 @ 100	570	1.05	450
360 @ 25 (MHz)	G, J, K	45 @ 100	530	1.10	470
390 @ 25 (MHz)	G, J, K	45 @ 100	500	1.12	630
430 @ 25 (MHz)	G, J, K	45 @ 100	480	1.15	470
470 @ 25 (MHz)	G, J, K	45 @ 100	450	1.19	470
490 @ 25 (MHz)	G, J, K	45 @ 100	420	1.25	470
560 @ 25 (MHz)	G, J, K	45 @ 100	415	1.33	580
620 @ 25 (MHz)	G, J, K	45 @ 100	375	1.40	300
680 @ 25 (MHz)	G, J, K	45 @ 100	375	1.47	540
750 @ 25 (MHz)	G, J, K	45 @ 100	360	1.54	360
820 @ 25 (MHz)	G, J, K	45 @ 100	350	1.61	400
910 @ 25 (MHz)	G, J, K	35 @ 50	320	1.68	380
1000 @ 25 (MHz)	G, J, K	35 @ 50	290	1.75	370
1200 @ 7.9 (MHz)	G, J, K	35 @ 50	250	2.00	310
1500 @ 7.9 (MHz)	G, J, K	28 @ 50	200	2.30	330
1800 @ 7.9 (MHz)	G, J, K	28 @ 50	160	2.60	300
2200 @ 7.9 (MHz)	G, J, K	28 @ 50	160	2.80	280
2700 @ 7.9 (MHz)	G, J, K	22 @ 25	140	3.20	290
3300 @ 7.9 (MHz)	G, J, K	22 @ 25	110	3.40	290
3900 @ 7.9 (MHz)	G, J, K	20 @ 25	100	3.60	260
4700 @ 7.9 (MHz)	G, J, K	18 @ 25	90	4.00	260
5600 @ 7.9 (MHz)	G, J, K	16 @ 7.96	20	4.00	240
6800 @ 7.9 (MHz)	G, J, K	15 @ 7.96	40	4.90	200
8200 @ 7.9 (MHz)	G, J, K	15 @ 7.96	25	6.00	170
10000 @ 2.52 (MHz)	G, J, K	16 @ 7.96	20	9.00	150
12000 @ 2.52 (MHz)	G, J, K	15 @ 7.96	18	10.5	130
15000 @ 2.52 (MHz)	G, J, K	15 @ 7.96	15	11.5	120

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.

Packaging: T - Tape & Reel

Tolerance: See table below.

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

The above part number refers to an ATC 1008 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.

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

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.

Packaging: T - Tape & Reel

Tolerance: See table below.

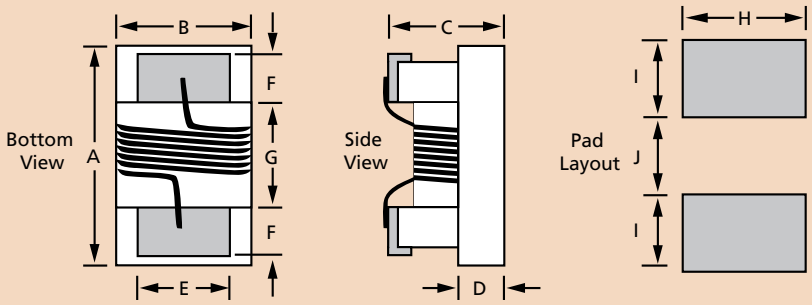
Inductance Tolerances			
Code	G	J	K
Tol.	± 2%	± 5%	± 10%

The above part number refers to an ATC 1206 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.

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

Mechanical Configurations



WL Case Size/ Series	A max.	B max.	C max.	D 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	0.115 (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)

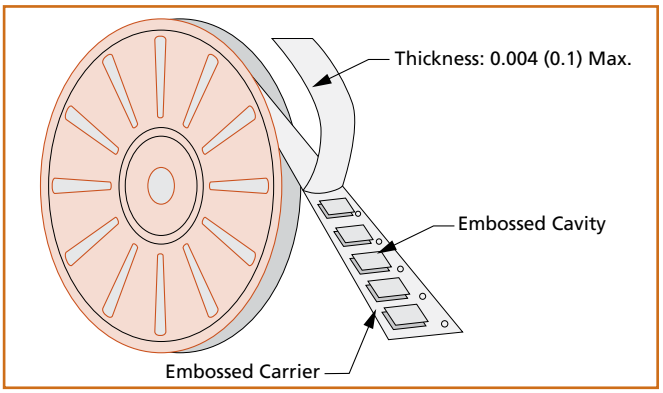
Inches (mm)

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

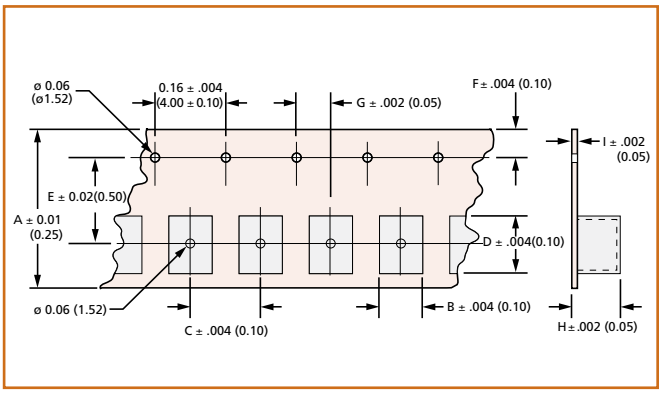
Tape and Reel Specifications

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

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.	• Inductors shall not have a shorted or open winding • Change in inductance shall not change more than ±5%. • Change in Q shall not change more than ±10%.
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 exposured 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% 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% 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 41 different values, 15 pieces per value	1.0nH to 120nH	1.0, 1.8, 2.0, 2.2, 2.7, 3.3, 3.6, 3.9, 4.3, 4.7, 5.1, 5.6, 6.2, 6.8, 7.5, 8.2, 8.7, 9, 10, 11, 12, 13, 15, 18, 20, 22, 27, 30, 33, 36, 39, 40, 43, 47, 51, 56, 68, 72, 82, 100, 120	5%	$140.00
Kit 52	DK0052	0603 WL Chip Inductors 50 different values, 15 pieces per value	1.6nH to 390nH	1.6, 1.8, 2.2, 2.4, 3.3, 3.9, 4.3, 5.1, 5.6, 6.3, 6.8, 7.5, 8.2, 8.7, 9.5, 10, 11, 12, 15, 17, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68, 75, 82, 91, 100, 110, 120, 140, 160, 180, 220, 240, 260, 280, 300, 330, 390	5%	$140.00
Kit 53	DK0053	0805 WL Chip Inductors 50 different values, 15 pieces per value	2.7nH to 2700nH	2.7, 3.0, 3.3, 5.6, 6.8, 7.5, 8.2, 8.7, 10, 12, 15, 18, 22, 24, 27, 30, 36, 39, 47, 56, 68, 72, 82, 91, 100, 110, 120, 150, 180, 200, 220, 240, 270, 300, 330, 390, 470, 560, 600, 620, 680, 750, 820, 910, 1000, 1200, 1500, 1800, 2200, 2700	5%	$140.00
Kit 54	DK0054	1008 WL Chip Inductors 45 different values, 15 pieces per value	4.7nH to 15,000nH	4.7, 10, 15, 18, 24, 27, 33, 39, 47, 56, 68, 75, 82, 91, 100, 120, 150, 180, 220, 240, 270, 300, 330, 360, 390, 430, 470, 490, 560, 620, 680, 750, 820, 910, 1000, 1200, 1500, 1800, 2200, 2700, 3300, 3900, 4700, 5600, 15,000	5%	$140.00

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ATC # 001-960 Rev. T; 11/15



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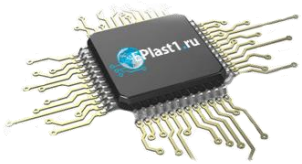
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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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