



# Wirewound Ferrite Beads 0402AF (1005)

- Higher performance than other surface mount ferrite beads in the market
- High impedance across wide bandwidth; up to GHz band
- Extremely low DCR for high current applications
- Ferrite construction and heavy gauge wire for high current handling
- Eliminates high frequency noise in power supplies or RF signal isolation applications

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent Tolerance	Impedance typ (Ohms)		SRF typ <sup>3</sup> (MHz)	DCR max <sup>4</sup> (Ohms)	Irms <sup>5</sup> (mA)
			100 MHz	900 MHz			
0402AF-200XJL_	20	5	11.23	82.23	2600	0.050	1600
0402AF-220XJL_	22	5,3,2	12.49	94.90	2500	0.065	1300
0402AF-330XJL_	33	5	18.91	140.7	2300	0.060	1400
0402AF-360XJL_	36	5,3,2	20.17	155.8	2300	0.075	1300
0402AF-390XJL_	39	5,3,2	22.58	171.3	2200	0.115	830
0402AF-510XJL_	51	5,3,2	28.76	216.5	1930	0.070	1100
0402AF-560XJL_	56	5	31.20	237.4	1900	0.095	1000
0402AF-720XJL_	72	5	40.27	308.6	1650	0.100	1000
0402AF-780XJL_	78	5,3,2	44.19	341.6	1600	0.130	970
0402AF-101XJL_	100	5,3,2	62.13	508.2	1400	0.160	900
0402AF-141XJL_	140	5,3,2	78.73	624.1	1220	0.260	630
0402AF-181XJL_	180	5,3,2	99.92	824.7	1150	0.280	560
0402AF-201XJL_	200	5	116.4	1094	1000	0.440	400
0402AF-221XJL_	220	5,3,2	126.1	1042	1150	0.530	380
0402AF-251XJL_	250	5	140.2	1212	900	0.360	520
0402AF-271XJL_	270	5,3,2	156.2	1312	860	0.550	360
0402AF-301XJL_	300	5,3,2	173.8	1534	860	0.410	420
0402AF-331XJL_	330	5	190.1	1829	820	0.560	350
0402AF-361XJL_	360	5	207.0	1899	810	0.575	360
0402AF-391XJL_	390	5	222.4	2327	760	0.750	300
0402AF-421XJL_	420	5	245.4	2250	700	0.700	340
0402AF-471XJL_	470	5,3,2	281.5	2659	650	0.730	310
0402AF-561XJL_	560	5,3,2	331.3	3593	600	0.920	200

1. When ordering, specify **tolerance**, **termination** and **packaging** codes:

0402AF-561XJLW

**Tolerance:** G = 2% H = 3% J = 5%

(Table shows stock values and tolerances in bold.)

**Termination:** L = RoHS compliant gold over nickel over silver-palladium-glass frit.  
Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

**Packaging:** W = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel).

Q = 7" machine-ready reel. EIA-481 punched paper tape (5000 parts per full reel).

U = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter W instead.

2. Inductance measured at 7.9 MHz, 0.1 Vrms, using an Agilent/HP 4286A LCR meter or equivalent with a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces.

3. SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.

4. DCR measured on Cambridge Technology micro-ohmmeter and a Coilcraft CCF858 test fixture.

5. Current that causes a 15°C temperature rise from 25°C ambient. Because of their open construction, these parts will not saturate. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information.](#)

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Designer's Kit C397** contains 20 each of all values

**Core material** Ferrite

**Terminations** RoHS compliant gold over nickel over silver-palladium-glass frit. Other terminations available at additional cost.

**Weight** 0.9 – 1.1 mg

**Ambient temperature** -40°C to +85°C with Irms current

**Maximum part temperature** +100°C (ambient + temp rise) [Derating.](#)

**Storage temperature** Component: -40°C to +100°C.

Tape and reel packaging: -40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)** +25 to +150 ppm/°C

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

One per billion hours / one billion hours, calculated per Telcordia SR-332

**Packaging** 2000 or 5000 per 7" reel. Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing

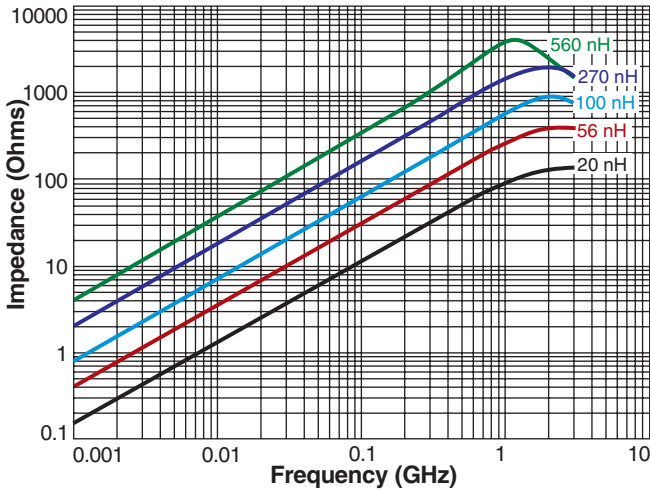
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE WEB SITE **TEST FIXTURES**



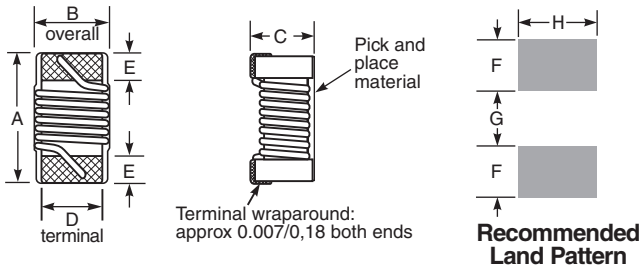
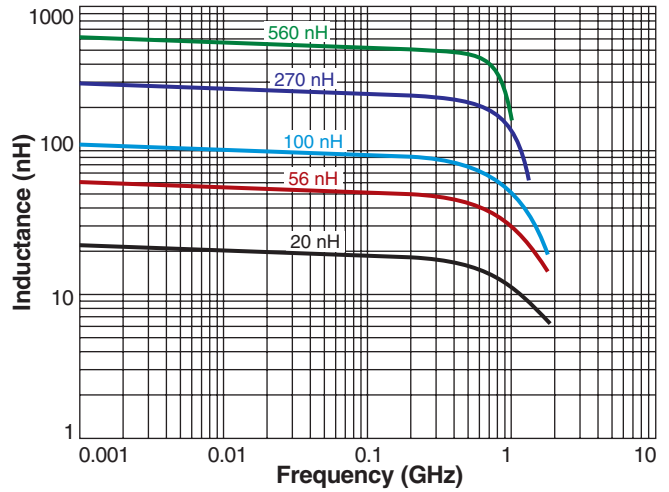
# Chip Inductors – 0402AF Series

## Typical Impedance vs Frequency



**S-Parameter files**  
ON OUR WEB SITE  
**SPICE models**  
ON OUR WEB SITE

## Typical L vs Frequency



Amax <sup>2</sup>	Bmax	Cmax <sup>3</sup>	D	E	F	G	H
0.044	0.026	0.026	0.020	0.009	0.017	0.018	0.026 inches
1,12	0,66	0,66	0,51	0,23	0,43	0,46	0,66 mm

- Notes:**
1. Unless otherwise indicated, all dimensions are nominal.
  2. Length dimension (A) is before optional solder application. Maximum dimension including solder is 0.045 in / 1.143 mm.
  3. Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.



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Document 1478-2 Revised 11/05/19

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