



Chip Inductors – 0402AF Series (1005)

- Higher inductance values than other 0402 inductors
- Ferrite construction for high current handling
- 23 inductance values from 20 nH to 560 nH

Part number ¹	Inductance ² ±5% (nH)	Impedance typ (Ohms)		SRF typ ³ (MHz)	DCR max ⁴ (Ohms)	Irms ⁵ (mA)
		900 MHz	1.7 GHz			
0402AF-200XJL_	20	83	118	2600	0.050	1600
0402AF-220XJL_	22	96	146	2500	0.065	1300
0402AF-330XJL_	33	142	207	2300	0.060	1400
0402AF-360XJL_	36	157	249	2300	0.075	1300
0402AF-390XJL_	39	173	263	2200	0.115	830
0402AF-510XJL_	51	218	330	1930	0.070	1100
0402AF-560XJL_	56	239	360	1900	0.095	1000
0402AF-720XJL_	72	311	453	1650	0.100	1000
0402AF-780XJL_	78	344	522	1600	0.130	970
0402AF-101XJL_	100	513	850	1400	0.160	900
0402AF-141XJL_	140	629	949	1220	0.260	630
0402AF-181XJL_	180	832	1270	1150	0.280	560
0402AF-201XJL_	200	1110	1890	1000	0.440	400
0402AF-221XJL_	220	1050	1560	1150	0.530	380
0402AF-251XJL_	250	1230	1940	900	0.360	520
0402AF-271XJL_	270	1320	1960	860	0.550	360
0402AF-301XJL_	300	1550	2230	860	0.410	420
0402AF-331XJL_	330	1850	2880	820	0.560	350
0402AF-361XJL_	360	1920	2640	810	0.575	360
0402AF-391XJL_	390	2350	2970	760	0.750	300
0402AF-421XJL_	420	2270	2800	700	0.700	340
0402AF-471XJL_	470	2680	3010	650	0.730	310
0402AF-561XJL_	560	3620	3110	600	0.920	200

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

0402AF-561XJLW

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.

- 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.
- SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.
- DCR measured on Cambridge Technology micro-ohmmeter and a Coilcraft CCF858 test fixture.
- 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

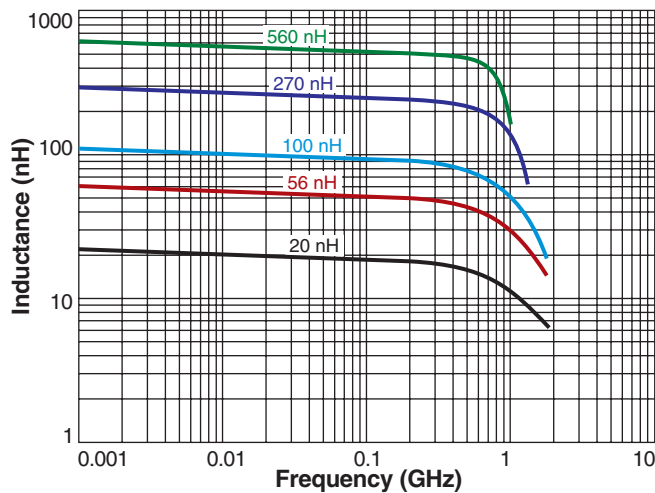
Packaging 2000 or 5000 per 7" reel. Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

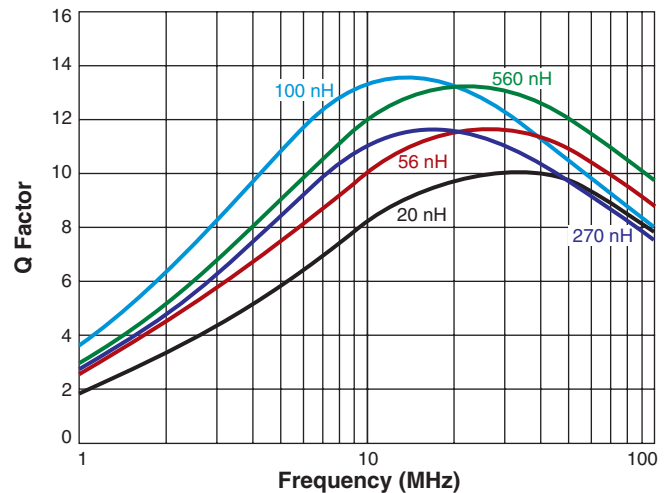


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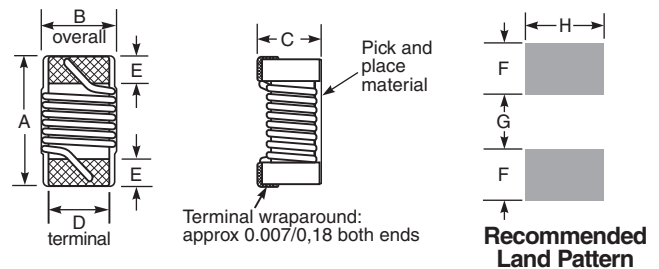
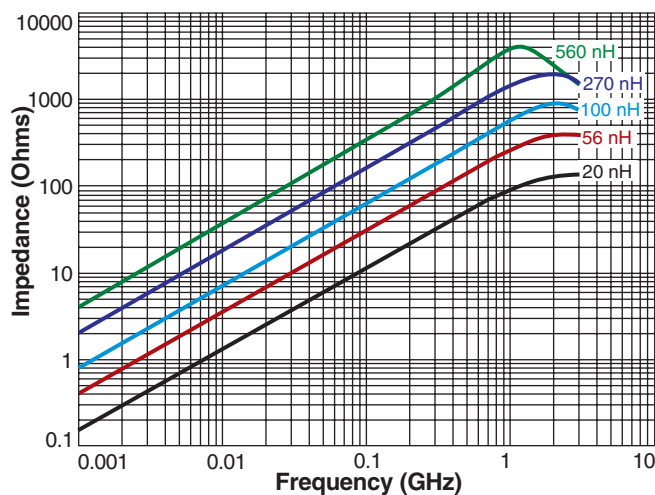
Typical L vs Frequency



Typical Q vs Frequency



Typical Impedance vs Frequency



Amax	Bmax	Cmax	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

Note: 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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Coilcraft:

<u>0402AF-471XJLU</u>	<u>0402AF-361XJLW</u>	<u>0402AF-720XJLU</u>	<u>0402AF-391XJLW</u>	<u>0402AF-330XJLU</u>	<u>0402AF-330XJLW</u>
<u>0402AF-331XJLW</u>	<u>0402AF-221XJLW</u>	<u>0402AF-101XJLU</u>	<u>0402AF-220XJLW</u>	<u>0402AF-301XJLW</u>	<u>0402AF-510XJLU</u>
<u>0402AF-220XJLU</u>	<u>0402AF-561XJLW</u>	<u>0402AF-561XJLU</u>	<u>0402AF-510XJLW</u>	<u>0402AF-360XJLU</u>	<u>0402AF-361XJLU</u>
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<u>0402AF-200XJLU</u>	<u>0402AF-251XJLU</u>	<u>0402AF-421XJLU</u>	<u>0402AF-720XJLW</u>	<u>0402AF-780XJLW</u>	<u>0402AF-181XJLW</u>
<u>0402AF-560XJLU</u>	<u>0402AF-390XJLU</u>	<u>0402AF-391XJLU</u>	<u>0402AF-181XJLU</u>	<u>0402AF-251XJLW</u>	<u>0402AF-331XJLU</u>
<u>0402AF-560XJLW</u>	<u>0402AF-141XJLW</u>	<u>0402AF-421XJLW</u>	<u>0402AF-141XJLU</u>		