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

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, +85°C to +100°C with derated current

Storage temperature Component: –40°C to +100°C. 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

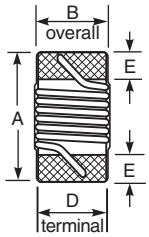
Temperature Coefficient of Inductance (TCL) +25 to +150 ppm/°C

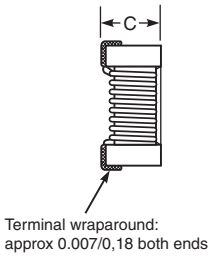
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

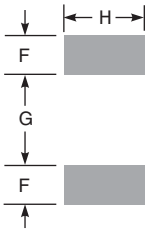
Failures in Time (FIT) / Mean Time Between Failures (MTBF) One per billion hours / one billion hours, calculated per Telcordia SR-332

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

PCB washing Only pure water or alcohol recommended







Recommended Land Pattern

A max	B max	C max	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

Part number[1]	Inductance[2] ±5% (nH)	SRF typ[3] (MHz)	DCR max[4] (Ohms)	Irms[5] (mA)
0402AF-200XJL_	20	2600	0.050	1600
0402AF-220XJL_	22	2500	0.065	1300
0402AF-330XJL_	33	2300	0.060	1400
0402AF-360XJL_	36	2300	0.075	1300
0402AF-390XJL_	39	2200	0.115	830
0402AF-510XJL_	51	1930	0.070	1100
0402AF-560XJL_	56	1900	0.095	1000
0402AF-720XJL_	72	1650	0.100	1000
0402AF-780XJL_	78	1600	0.130	970
0402AF-101XJL_	100	1400	0.160	900
0402AF-141XJL_	140	1220	0.260	630
0402AF-181XJL_	180	1150	0.280	560
0402AF-201XJL_	200	1000	0.440	400
0402AF-221XJL_	220	1150	0.530	380
0402AF-251XJL_	250	900	0.360	520
0402AF-271XJL_	270	860	0.550	360
0402AF-301XJL_	300	860	0.410	420
0402AF-331XJL_	330	820	0.560	350
0402AF-361XJL_	360	810	0.575	360
0402AF-391XJL_	390	760	0.750	300
0402AF-421XJL_	420	700	0.700	340
0402AF-471XJL_	470	650	0.730	310
0402AF-561XJL_	560	600	0.920	200

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

0402AF-561XJ L W

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).

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 using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286 impedance analyzer.
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.

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

COILCRAFT PRECISION TEST FIXTURES
ACCURATE REPEATABLE MEASUREMENTS
SEE INDEX

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S-Parameter files
ON OUR WEB SITE OR CD
SPICE models
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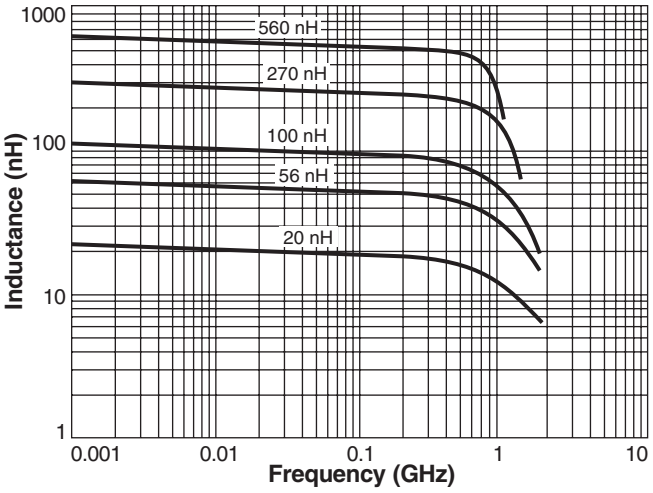
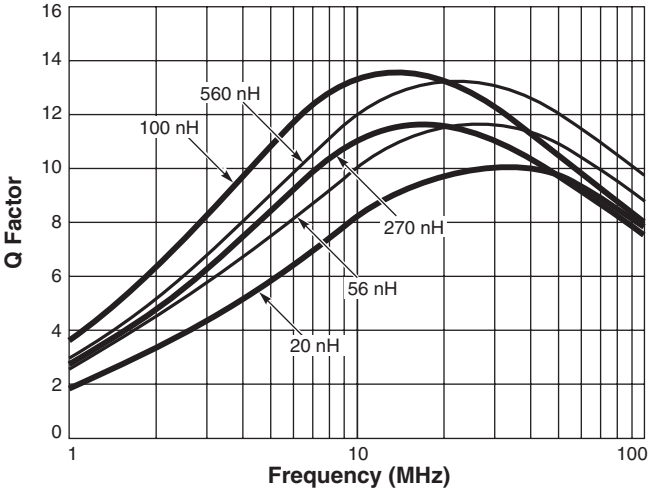
Chip Inductors – 0402AF Series

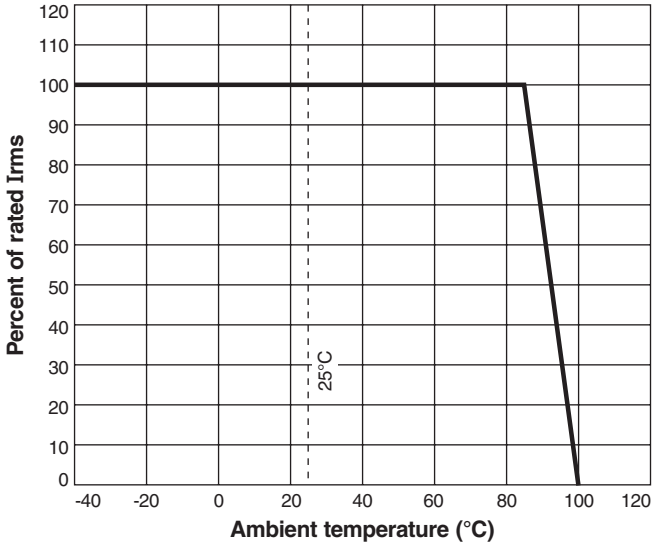
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



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