



Chip Inductors – 0402DF (1005)

- Higher inductance values than other 0402 inductors
- Ferrite construction for high current handling
- 25 inductance values from 20 nH to 3.3 µH
- Ideal for use in both mobile and infrastructure equipment
- Equally effective on-board or modular
- Developed for use in cellular applications:
 - As a filter element in bandstop and low pass filters
 - As a one pole filter or RF choke in cellular bands
- Can also be used for ground-to-ground isolation

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			
0402DF-200XJR_	20	90	150	2950	0.049	1400
0402DF-360XJR_	36	150	250	2400	0.055	1300
0402DF-560XJR_	56	250	480	2200	0.061	1200
0402DF-770XJR_	77	350	580	2050	0.072	1100
0402DF-900XJR_	90	400	600	2300	0.079	1000
0402DF-101XJR_	105	530	1000	1660	0.104	850
0402DF-121XJR_	120	515	900	2000	0.090	950
0402DF-141XJR_	140	650	1075	1450	0.141	750
0402DF-151XJR_	150	700	1170	1800	0.130	830
0402DF-181XJR_	180	850	1460	1680	0.172	730
0402DF-221XJR_	220	1100	2050	1560	0.240	600
0402DF-271XJR_	270	1300	2150	1480	0.265	590
0402DF-301XJR_	300	1725	2630	1400	0.340	490
0402DF-331XJR_	330	2100	2750	1340	0.435	430
0402DF-361XJR_	360	2150	3100	1200	0.475	420
0402DF-421XJR_	420	2175	3350	1100	0.510	400
0402DF-471XJR_	470	2550	3670	1070	0.670	340
0402DF-531XJR_	530	3950	3050	1000	0.715	330
0402DF-591XJR_	590	4770	3090	960	0.780	320
0402DF-701XJR_	700	5750	1830	600	1.30	230
0402DF-771XJR_	770	4900	1800	585	1.35	220
0402DF-901XJR_	900	7130	4470	760	1.50	230
0402DF-102XJR_	1000	280	180	235	1.05	190
0402DF-222XJR_	2200	200	120	125	1.80	170
0402DF-332XJR_	3300	160	80	80	2.20	150

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

0402DF-771XJRW

- Termination:** **R** = RoHS compliant matte tin over nickel over silver-platinum-glass frit.
Special order: **Q** = RoHS tin-silver-copper (95.5/4/0.5) or **P** = 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.

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

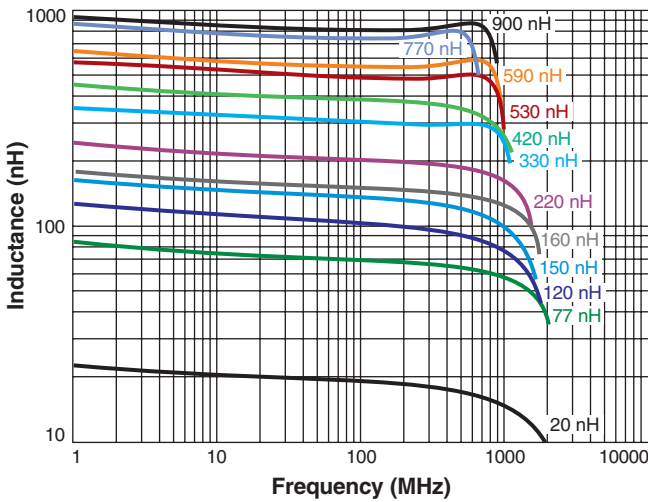
Core material Ferrite

- Environmental** RoHS compliant without exemption, halogen free
- Terminations** RoHS compliant matte tin over nickel over silver-platinum-glass frit.
- Weight** 0.9 – 1.1 mg
- Ambient temperature** -40°C to +85°C with Irms current
- Maximum part temperature** +100°C (Ambient + temperature rise)
- 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 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](#).

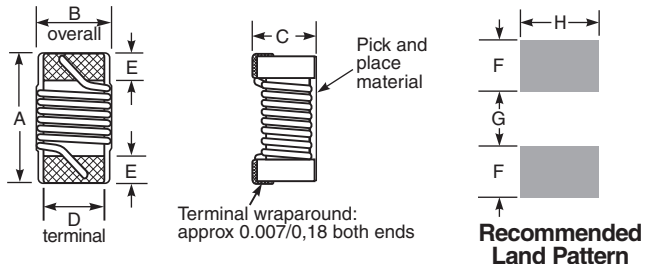
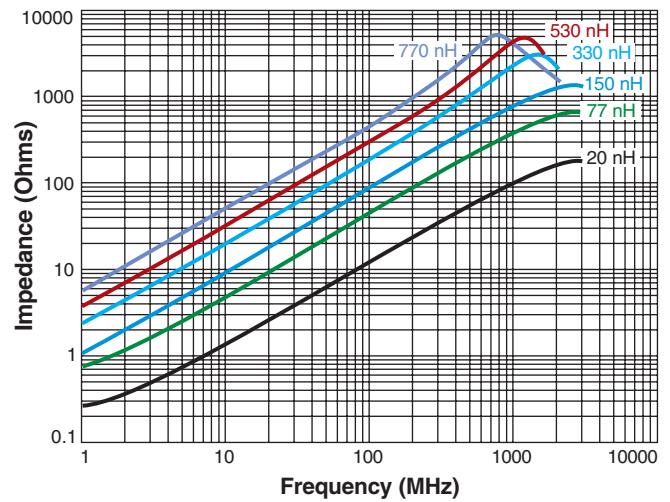


Chip Inductors – 0402DF Series

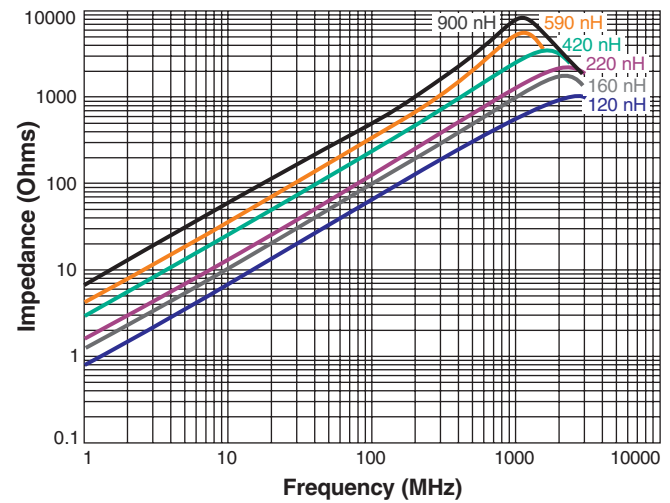
Typical L vs Frequency



Typical Z vs Frequency



Amax	Bmax	Cmax	D	E	F	G	H
0.044	0.026	0.026	0.018	0.008	0.014	0.025	0.026
1,11	0,66	0,66	0,46	0,20	0,36	0,635	0,66



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