

Wirewound Ferrite Beads 0402DF (1005)



- Higher performance than other surface mount ferrite beads in the market
- Extremely low DCR for high current applications
- Ferrite construction and heavy gauge wire for high current handling
- High impedance across wide bandwidth; up to GHz band
- Eliminates high frequency noise in power supplies or RF signal isolation applications
- Can also be used for ground-to-ground isolation
- AEC-Q200 Grade 1 qualified (−40°C to +125°C ambient)

Part number ¹	Inductance ² ±5% (nH)	Impedance typ (Ohms)		SRF typ ³ (MHz)	DCR max ⁴ (Ohms)	Irms ⁵ (mA)
		100 MHz	900 MHz			
0402DF-200XJR_	20	11.98	93.76	2950	0.049	1400
0402DF-300XJR_	30	17.57	120.0	2600	0.055	1300
0402DF-330XJR_	33	19.14	135.0	2550	0.055	1300
0402DF-360XJR_	36	21.30	170.7	2400	0.055	1300
0402DF-560XJR_	56	32.15	269.0	2200	0.061	1200
0402DF-770XJR_	77	42.52	359.7	2050	0.072	1100
0402DF-900XJR_	90	51.76	415.9	2300	0.079	1000
0402DF-101XJR_	105	59.50	519.6	1660	0.104	850
0402DF-121XJR_	120	67.83	595.3	2000	0.090	950
0402DF-141XJR_	140	81.59	784.4	1450	0.141	750
0402DF-151XJR_	150	86.29	748.0	1800	0.130	830
0402DF-181XJR_	180	104.9	960.2	1680	0.172	730
0402DF-221XJR_	220	128.8	1227	1560	0.240	600
0402DF-271XJR_	270	151.8	1422	1480	0.265	590
0402DF-301XJR_	300	183.5	1983	1400	0.340	490
0402DF-331XJR_	330	191.3	2017	1340	0.435	430
0402DF-361XJR_	360	216.5	2454	1200	0.475	420
0402DF-421XJR_	420	240.3	2708	1100	0.510	400
0402DF-471XJR_	470	279.8	3178	1070	0.670	340
0402DF-531XJR_	530	321.1	4207	1000	0.715	330
0402DF-591XJR_	590	360.5	4787	960	0.780	320
0402DF-701XJR_	700	425.5	7304	600	1.30	230
0402DF-771XJR_	770	462.1	7629	585	1.35	220
0402DF-901XJR_	900	547.8	6709	760	1.50	230
0402DF-102XJR_	1000	770.7	241.4	235	1.05	190
0402DF-222XJR_	2200	4830	176.8	125	1.80	170
0402DF-332XJR_	3300	5271	153.6	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). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).
- U = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from U to W.

- 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 +125°C with Irms current

Maximum part temperature +140°C (Ambient + temperature rise)

Storage temperature Component: −40°C to +140°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](#).



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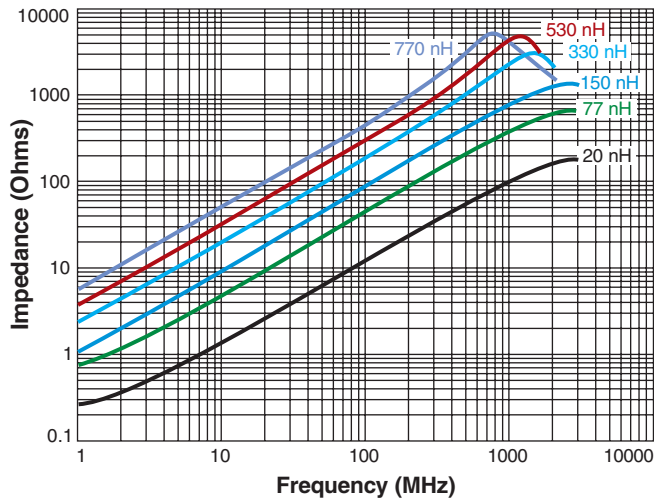
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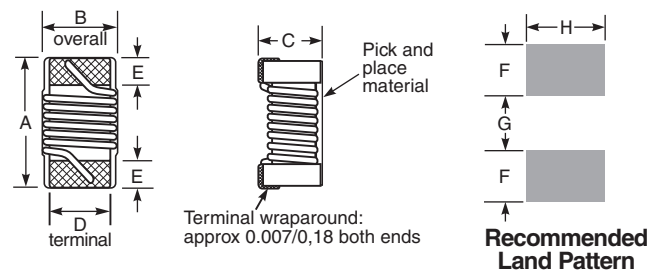
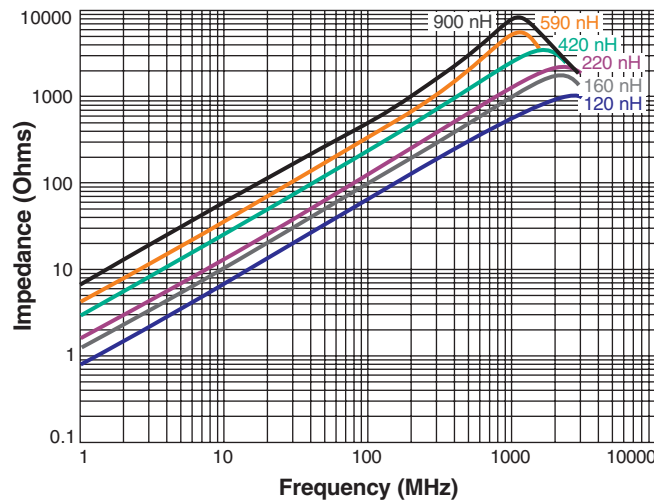
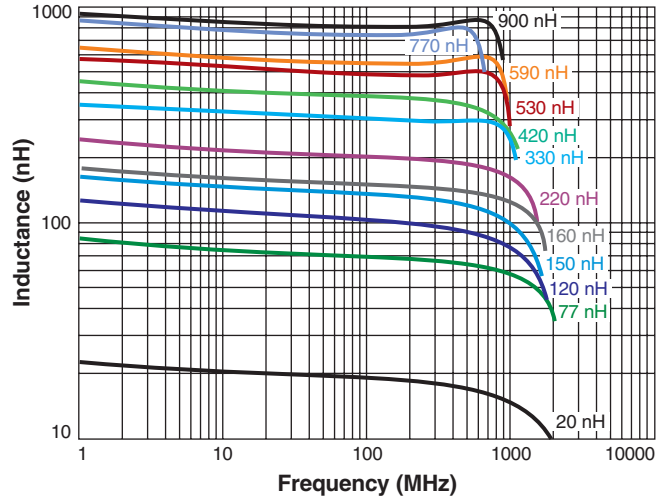


Wirewound Ferrite Beads – 0402DF Series

Typical Z vs Frequency



Typical L 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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