

Chip Inductors (wire wound - open)

FASTRON wire wound chip inductors are designed particularly for RF applications that require optimal Q on high frequency circuits. Its gold flash pad metallization provides better solderability for a higher yield in your production. In addition, their encapsulation not only protects the winding but also allows surface mount assembly. It comes in compact sizes (from 0402 to 1812) available in reel packing. Inductance values between those listed in this catalog are mostly available on request. Ferrite core versions are also available for selected case sizes for applications which require higher inductances in a smaller case size.

Applications Used in LC resonant circuits such as oscillator and signal generators, impedance matching, circuit isolation, RF filters, etc.
 Mobile Telecommunication: GSM, CDMA, TCDMA, cordless phones, 2 way radio
 Automotive Subsystems: TPMS, Keyless Entry, Anti-Theft, GPS
 Wireless Communication: LAN, WIFI, WIMAX, RFID, Bluetooth, ZigBee

Technical Data

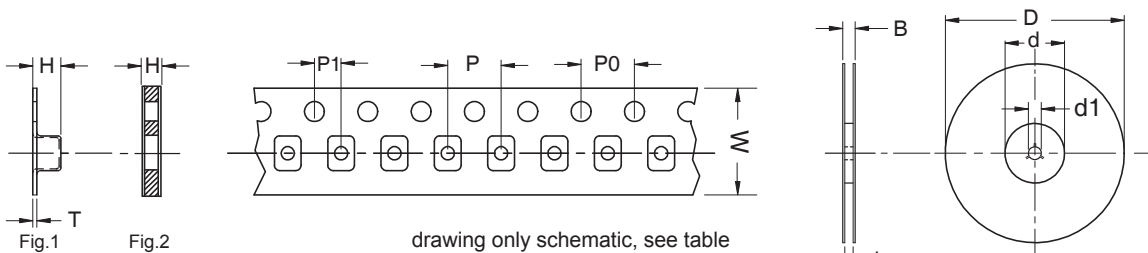
L – Value (rated inductance)	Measured with HP 4287A RF LCR meter at frequency f_L
Q – Factor (min)	Measured with HP 4287A RF LCR meter at frequency f_Q
SRF (min)	Measured with HP 8753 Network Analyzer
DCR (max)	Measured at 25°C
Rated DC Current	I_{rms} : Average current for 15°C rise from 25°C ambient
Operating Temperature	For ceramic core from -55°C to +125°C (includes component self-heating) For ferrite core from -55°C to +85°C (includes component self-heating)
Surface Finishing	Epoxy molded flat top for perfect pick and place assembly
Pad Metallization	Gold flash as top layer
Wire Termination	Spot welding
Recommended soldering method	Reflow
Solderability	Using lead free solder (Sn 99.9) at 260°C ± 5°C for 5 ± 0.5 seconds, min 90% solder coverage of metallization Standard: IEC 68-2-20 (Ta)
Resistance to Soldering Heat	Resistant to 260°C ± 5°C for 10 ± 1 seconds Standard: IEC 68-2-20 (Tb)
Resistance to Solvent	Resistant to Isopropyl alcohol for 5 ± 0.5 minutes at 23°C ± 5°C Standard: IEC 68-2-45
Climatic Test	Defined by the following standards IEC 68-2-1 for Cold test: -55°C for 96 hours IEC 68-2-2 for Dry heat test: +85°C for ferrite core and 125°C for ceramic core for 96 hours IEC 60068-2-78 for Humidity test: 40°C at RH 95% for 4 days
Thermal Shock Test	Temperature cycle (ceramic) : -55°C to +125°C to -55°C Temperature cycle (ferrite) : -55°C to +85°C to -55°C Max/Min temperature duration: 15 minutes Temperature transition duration: 5 minutes Cycles: 25 Standard: MIL-STD-202G
Shear Test	Components withstand a pushing force of 10N for 10 ± 1 seconds Standard: IEC 60068-2-21, method Ue3

Ordering Code Example: 0402AS-1N0X-01

0402 **AS** - **1N0** **X** - **01**
 (Case Size) (Core Type) (Inductance Value) (Tolerance) (Packing Code)

- Case Sizes - 0402, 0603, 0805, 1008, 1206, 1210, 1812
- Core Type - AS (Ceramic), F (Ferrite), AF (Ceramic & Ferrite)
- Tolerances - F (1%), G (2%), A (3%), J (5%), K (10%), M (20%)
- Packing Code - 01 (Reel)

Packing Specification



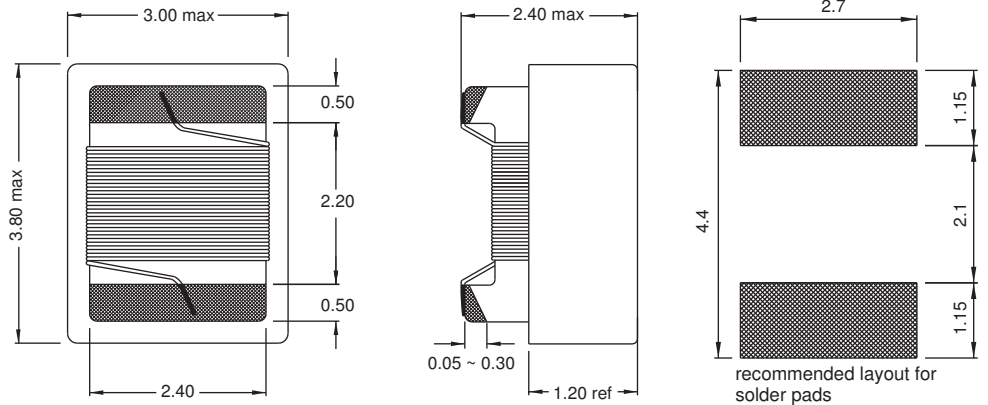
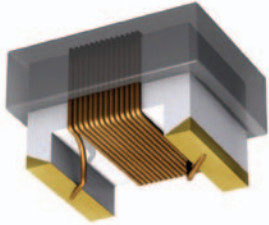
Type	D	d	d1	B	b	W	P	P0	P1	H	T	Fig
0402	180	60	13	12.7	8.4	8	2	4	2	0.8	-	2
0603	180	60	13	12.7	8.4	8	4	4	2	2.5	0.25	1
0805	180	60	13	12.7	8.4	8	4	4	2	1.86	0.25	1
1008	180	60	13	12.7	8.4	8	4	4	2	2.5	0.229	1
1206	180	60	13	12.7	8.4	8	4	4	2	2.5	0.2	1
1210	180	60	13	18.7	12.4	12	8	4	2	2.5	0.4	1
1812	180	60	13	18.4	15.4	12	8	4	2	4.28	0.28	1

Technical Data & Packing Spec

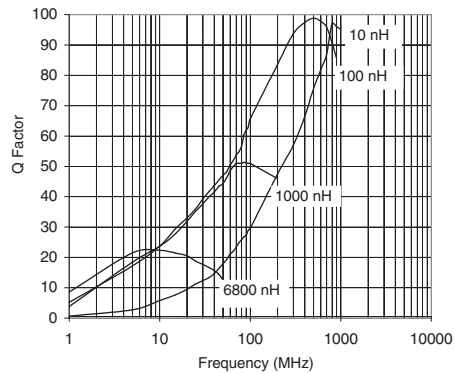
1210 AS

New

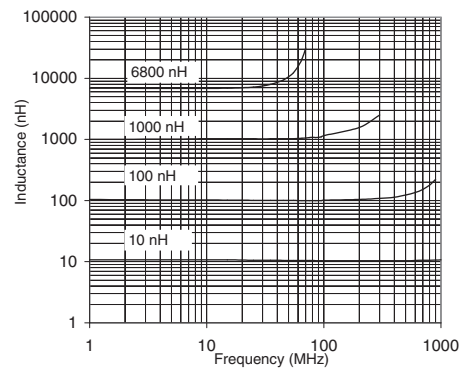
Sample Kit : SK 1210 AS



Typical Q vs Frequency(f)



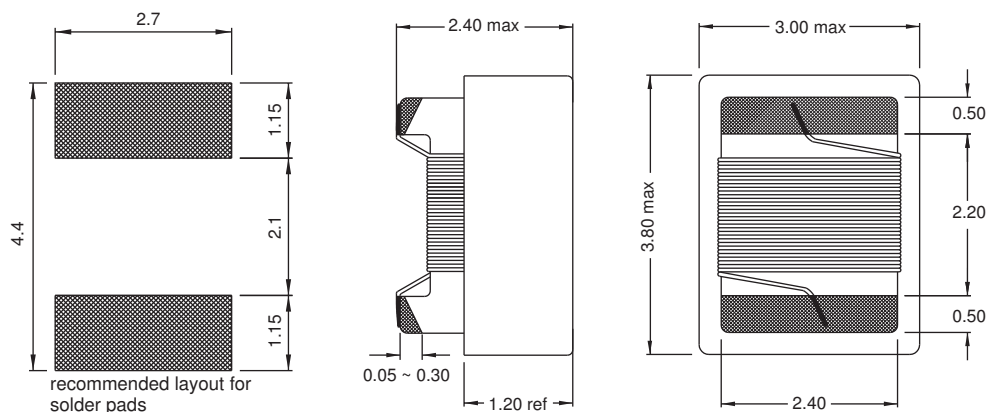
Typical L vs Frequency(f)



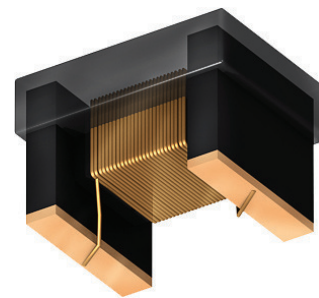
Part No	Inductance L (nH)	f _L (MHz)	Tol ± (%)	Q min	f ₀ (MHz)	SRF min (MHz)	DCR max (Ω)	Rated DC Current (mA)
1210AS-010K-01	10	50	10	50	500	4100	0.08	1000
1210AS-012X-01	12	50	2,5,10	50	500	2400	0.09	1000
1210AS-015X-01	15	50	2,5,10	50	500	2400	0.1	1000
1210AS-018X-01	18	50	2,5,10	50	350	2400	0.11	1000
1210AS-022X-01	22	50	2,5,10	55	350	2400	0.12	1000
1210AS-027X-01	27	50	2,5,10	55	350	1800	0.13	1000
1210AS-033X-01	33	50	2,5,10	60	350	1600	0.14	1000
1210AS-039X-01	39	50	2,5,10	60	350	1500	0.15	1000
1210AS-047X-01	47	50	2,5,10	65	350	1200	0.16	1000
1210AS-056X-01	56	50	2,5,10	65	350	1200	0.16	1000
1210AS-068X-01	68	50	2,5,10	65	350	1000	0.2	1000
1210AS-082X-01	82	50	2,5,10	60	350	1000	0.22	1000
1210AS-R10X-01	100	25	2,5,10	60	350	1000	0.24	980
1210AS-R12X-01	120	25	2,5,10	60	350	850	0.26	920
1210AS-R15X-01	150	25	2,5,10	50	100	750	0.29	870
1210AS-R18X-01	180	25	2,5,10	50	100	700	0.31	830
1210AS-R22X-01	220	25	2,5,10	50	100	650	0.35	790
1210AS-R27X-01	270	25	2,5,10	45	100	600	0.42	730
1210AS-R33X-01	330	25	2,5,10	45	100	500	0.49	680
1210AS-R39X-01	390	25	2,5,10	45	100	500	0.54	640
1210AS-R47X-01	470	25	2,5,10	45	100	450	0.6	610
1210AS-R56X-01	560	25	2,5,10	45	100	415	1	460
1210AS-R68X-01	680	25	2,5,10	45	100	350	1.15	420
1210AS-R82X-01	820	25	2,5,10	45	100	350	1.93	350
1210AS-1R0X-01	1000	25	2,5,10	35	50	290	2.16	330
1210AS-1R2X-01	1200	7.9	2,5,10	35	50	250	2.38	310
1210AS-1R5X-01	1500	7.9	2,5,10	25	50	200	2.64	300
1210AS-1R8X-01	1800	7.9	2,5,10	25	50	160	2.76	290
1210AS-2R2X-01	2200	7.9	2,5,10	25	50	160	2.98	280
1210AS-2R7X-01	2700	7.9	2,5,10	25	25	140	3.3	260
1210AS-3R3X-01	3300	7.9	2,5,10	25	25	120	3.66	250
1210AS-3R9X-01	3900	7.9	2,5,10	25	25	100	4	240
1210AS-4R7X-01	4700	7.9	2,5,10	25	25	90	4.3	230
1210AS-5R6X-01	5600	7.9	5,10	25	25	60	4.3	230
1210AS-6R8X-01	6800	7.9	5,10	25	25	60	5.2	210

Material : Ceramic
SPQ : Reel 800 [-01]

Chip Inductors (wire wound - open)



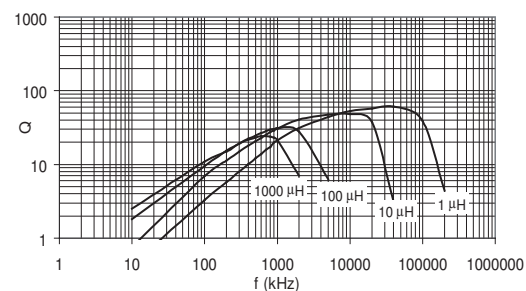
1210 F
Sample Kit : SK 1210 F



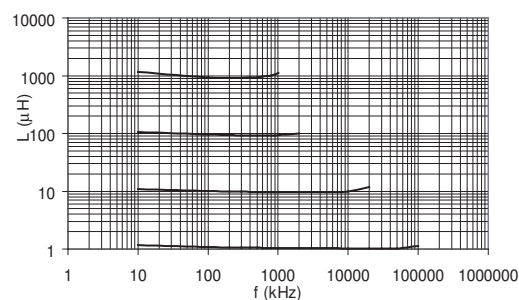
Part No	Inductance L (μH)	f _L (MHz)	ToI ± (%)	Q min	f _Q (MHz)	SRF min (MHz)	DCR max (Ω)	Rated DC Current (mA)
1210F-R10X-01	0.1	1	10	40	25	375	0.15	1131
1210F-1R0X-01	1	1	5,10	30	7.96	200	0.28	600
1210F-1R2X-01	1.2	1	5,10	30	7.96	200	0.32	560
1210F-1R5X-01	1.5	1	5,10	30	7.96	200	0.34	535
1210F-1R8X-01	1.8	1	5,10	30	7.96	150	0.41	490
1210F-2R2X-01	2.2	1	5,10	30	7.96	150	0.43	480
1210F-2R7X-01	2.7	1	5,10	30	7.96	150	0.49	450
1210F-3R3X-01	3.3	1	5,10	30	7.96	90	0.55	425
1210F-3R9X-01	3.9	1	5,10	30	7.96	80	0.59	410
1210F-4R7X-01	4.7	1	5,10	30	7.96	70	0.65	390
1210F-5R6X-01	5.9	1	5,10	30	7.96	40	0.71	375
1210F-6R8X-01	6.8	1	5,10	27	7.96	28	0.78	360
1210F-8R2X-01	8.2	1	5,10	27	7.96	25	0.92	330
1210F-100X-01	10	1	5,10	27	2.52	15	0.98	320
1210F-120X-01	12	0.1	5,10	27	2.52	13	1.1	300
1210F-150X-01	15	0.1	5,10	27	2.52	12	1.25	280
1210F-180X-01	18	0.1	5,10	27	2.52	11	1.35	270
1210F-220X-01	22	0.1	5,10	27	2.52	10	1.45	260
1210F-270X-01	27	0.1	5,10	26	2.52	9	1.65	245
1210F-330X-01	33	0.1	5,10	25	2.52	8	1.85	230
1210F-390X-01	39	0.1	5,10	25	2.52	7	2.05	220
1210F-470X-01	47	0.1	5,10	25	2.52	6.5	2.3	210
1210F-560X-01	56	0.1	5,10	24	2.52	6	2.5	200
1210F-680X-01	68	0.1	5,10	23	2.52	5.5	2.8	190
1210F-820X-01	82	0.1	5,10	22	2.52	5	3.2	175
1210F-101X-01	100	0.1	5,10	22	2.52	4.5	4.7	145
1210F-121X-01	120	0.1	5,10	30	0.796	4.2	5.2	140
1210F-151X-01	150	0.1	5,10	30	0.796	4	6.1	130
1210F-181X-01	180	0.1	5,10	27	0.796	3.6	6.9	120
1210F-221X-01	220	0.1	5,10	25	0.796	3.3	7.5	115
1210F-271X-01	270	0.1	5,10	23	0.796	3	12.5	90
1210F-331X-01	330	0.1	5,10	23	0.796	2.8	14.1	85
1210F-391X-01	390	0.1	5,10	23	0.796	2.5	15.3	80
1210F-471X-01	470	0.1	5,10	22	0.796	2.3	20.5	75
1210F-561X-01	560	0.1	5,10	22	0.796	2.2	23	70
1210F-681X-01	680	0.1	5,10	22	0.796	1.9	25	65
1210F-821X-01	820	0.1	5,10	20	0.796	1.7	28	60
1210F-102X-01	1000	0.1	5,10	18	0.796	1.6	21	55

Material : Ferrite
SPQ : Reel 800 [-01]

Typical Q vs Frequency(f)



Typical L vs Frequency(f)



Chip Inductors (wire wound - open)