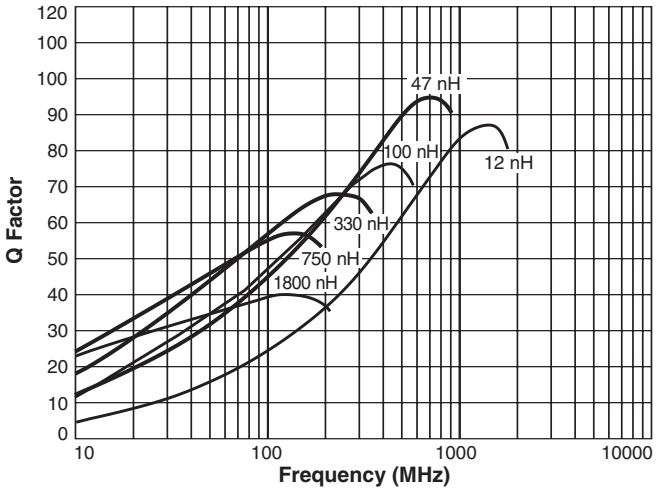
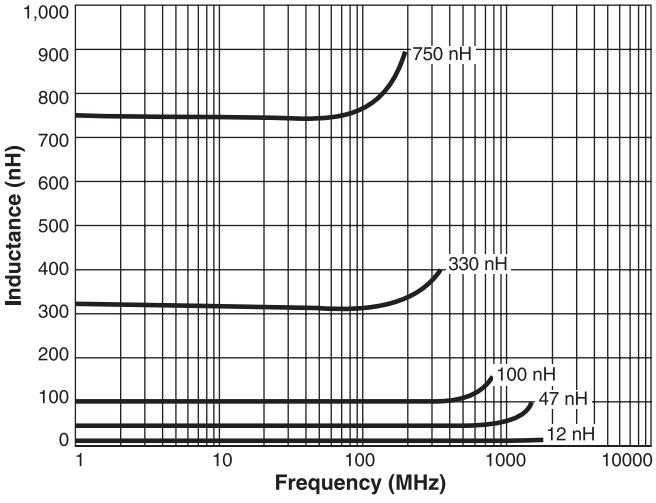
Chip Inductors for Critical Applications ST413RAA

- High SRF and excellent Q values
- Tight tolerances, many values at 1%
- 28 inductance values from 10 nH to 1 µH

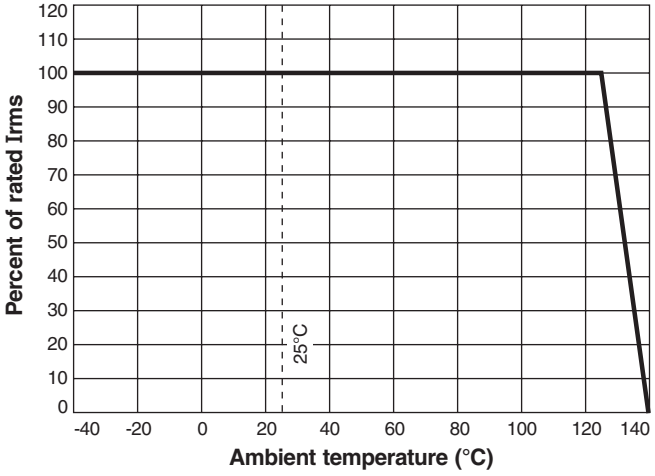
Typical Q vs Frequency

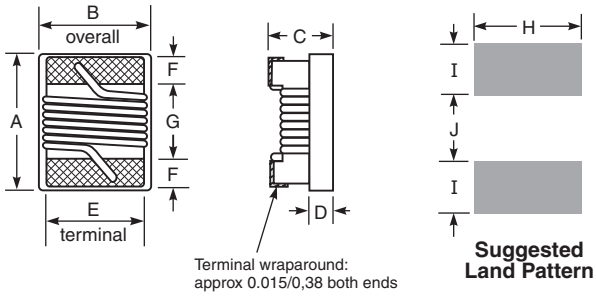


Typical L vs Frequency



Current Derating





A max	B max	C max	D ref	E	F	G	H	I	J
0.115	0.110	0.080	0.020	0.080	0.020	0.060	0.100	0.040	0.050
2,92	2,79	2,03	0,51	2,03	0,51	1,52	2,54	1,02	1,27

Note: Dimensions are before optional solder application. For maximum overall dimensions including solder, add 0.0025 in / 0,064 mm to **B** and 0.006 in / 0,15 mm to **A** and **C**.

Core material Ceramic

Terminations Silver-palladium-platinum-glass frit

Ambient temperature –40°C to +125°C with Imax current, +125°C to +140°C with derated current

Storage temperature Component: –55°C to +140°C. Tape and reel packaging: –55°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 +155 ppm/°C

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

Enhanced crush-resistant packaging 2000 per 7″ reel
Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 2.0 mm pocket depth

Document ST101-1 Revised 11/06/12

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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

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ST413RAA Series (1008)

Part number[1]	Inductance[2] (nH)	Percent tolerance	Q min[3]	SRF min[4] (MHz)	DCR max[5] (Ohms)	Imax (mA)	Color code[6]
ST413RAA100_LZ	10 @ 50 MHz	5,2	44 @ 500 MHz	3060	0.08	900	Black
ST413RAA120_LZ	12 @ 50 MHz	5,2	45 @ 500 MHz	2680	0.09	900	Red
ST413RAA150_LZ	15 @ 50 MHz	5,2	50 @ 500 MHz	2220	0.10	850	Orange
ST413RAA180_LZ	18 @ 50 MHz	5,2,1	50 @350 MHz	2200	0.11	900	Yellow
ST413RAA220_LZ	22 @ 50 MHz	5,2,1	55 @ 350 MHz	2100	0.12	900	Blue
ST413RAA270_LZ	27 @ 50 MHz	5,2,1	55 @ 350 MHz	1380	0.13	900	Black
ST413RAA330_LZ	33 @ 50 MHz	5,2,1	60 @ 350 MHz	1600	0.14	850	Orange
ST413RAA390_LZ	39 @ 50 MHz	5,2,1	60 @ 350 MHz	1420	0.15	850	Violet
ST413RAA470_LZ	47 @ 50 MHz	5,2,1	65 @ 350 MHz	1420	0.16	820	Red
ST413RAA560_LZ	56 @ 50 MHz	5,2,1	60 @ 350 MHz	1140	0.18	780	Yellow
ST413RAA680_LZ	68 @ 50 MHz	5,2,1	46 @ 100 MHz	1140	0.20	710	Gray
ST413RAA820_LZ	82 @ 50 MHz	5,2,1	48 @ 100 MHz	940	0.22	710	Red
ST413RAA101_LZ	100 @ 25 MHz	5,2,1	37 @ 100 MHz	900	0.56	440	Violet
ST413RAA121_LZ	120 @ 25 MHz	5,2,1	40 @ 100 MHz	840	0.63	410	White
ST413RAA151_LZ	150 @ 25 MHz	5,2,1	40 @ 100 MHz	740	0.70	400	Red
ST413RAA181_LZ	180 @ 25 MHz	5,2,1	38 @ 100 MHz	680	0.77	390	Orange
ST413RAA221_LZ	220 @ 25 MHz	5,2,1	40 @ 100 MHz	580	0.84	370	Green
ST413RAA271_LZ	270 @ 25 MHz	5,2,1	45 @ 100 MHz	540	0.91	330	White
ST413RAA331_LZ	330 @ 25 MHz	5,2,1	45 @ 100 MHz	500	1.05	330	Orange
ST413RAA391_LZ	390 @ 25 MHz	5,2,1	45 @ 100 MHz	480	1.12	310	Blue
ST413RAA471_LZ	470 @ 25 MHz	5,2,1	45 @ 100 MHz	400	1.19	280	Black
ST413RAA561_LZ	560 @ 25 MHz	5,2,1	40 @ 100 MHz	360	1.33	280	Green
ST413RAA621_LZ	620 @ 25 MHz	5,2,1	45 @ 100 MHz	360	1.40	270	Blue
ST413RAA681_LZ	680 @ 25 MHz	5,2,1	45 @ 100 MHz	345	1.47	270	Gray
ST413RAA751_LZ	750 @ 25 MHz	5,2,1	45 @ 100 MHz	335	1.54	270	Black
ST413RAA821_LZ	820 @ 25 MHz	5,2,1	45 @ 100 MHz	310	1.61	250	Brown
ST413RAA911_LZ	910 @ 25 MHz	5,2,1	35 @ 50 MHz	280	1.68	250	Red
ST413RAA102_LZ	1000 @ 25 MHz	5,2,1	34 @ 50 MHz	280	1.75	230	Yellow

1. When ordering, specify **tolerance, termination** and **testing** codes:

ST413RAA102GLZ

Tolerance: **F** = 1% **G** = 2% **J** = 5%
Termination: **L** = RoHS compliant silver-palladium-platinum glass frit.
Special order:
S = Tin-lead (63/37) over silver-platinum-glass frit.
T = Tin-silver-copper (95.5/4/0.5) over silver-platinum-glass frit.
P = Tin-lead (63/37) over tin over nickel over silver-platinum-glass frit.
Q = Tin-silver-copper (95.5/4/0.5) over tin over nickel over silver-platinum-glass frit.
Testing: **Z** = COTS
H = Screening per Coilcraft CP-SA-10001

2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer or equivalent with Coilcraft-provided correlation pieces.
3. Q measured using an Agilent/HP 4291A with an AgilentHP 16197A test fixture or equivalents.
4. SRF measured using an Aglilent/HP 8753ES network analyzeror equivalent and a Coilcraft CCF1297 test fixture.
5. DCR measured on a Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF858 test fixture.
6. Current production parts are marked with one dot. Prior production parts were marked with three dots. Part marking does not indicate polarity
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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Document ST101-2 Revised 11/06/12

This product may not be used in medical or high risk applications without prior Coilcraft approval.
Specifications subject to change without notice.
Please check our web site for latest information.

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