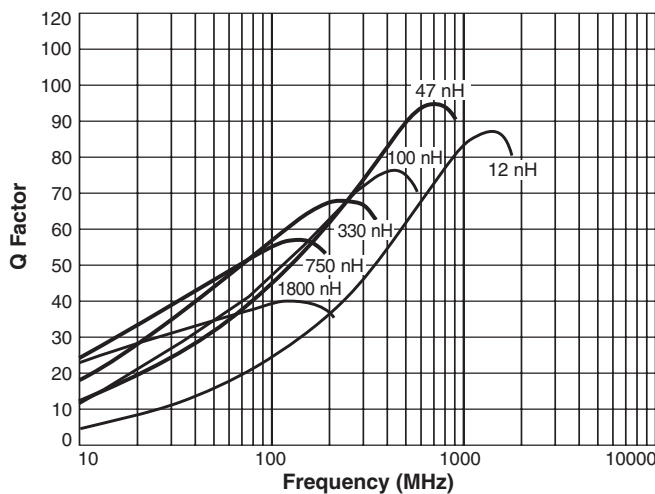


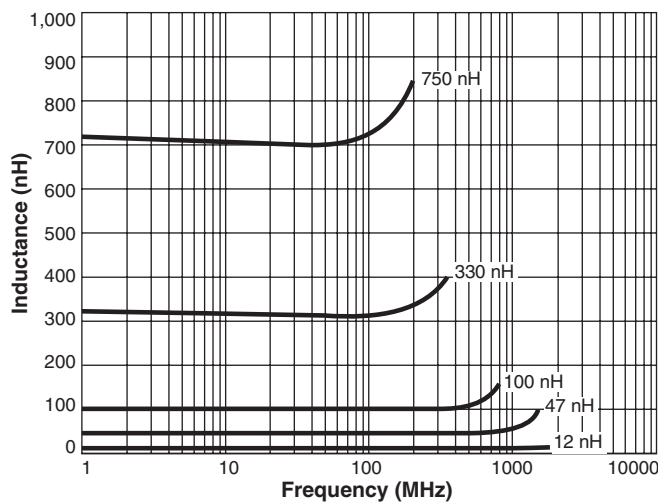
Chip Inductors for Critical Applications ST413RAA

- High SRF and excellent Q values
- Tight tolerances, many values at 1%
- 39 inductance values from 10 nH to 802 μ H

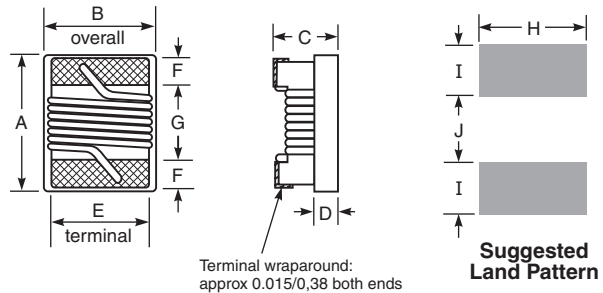
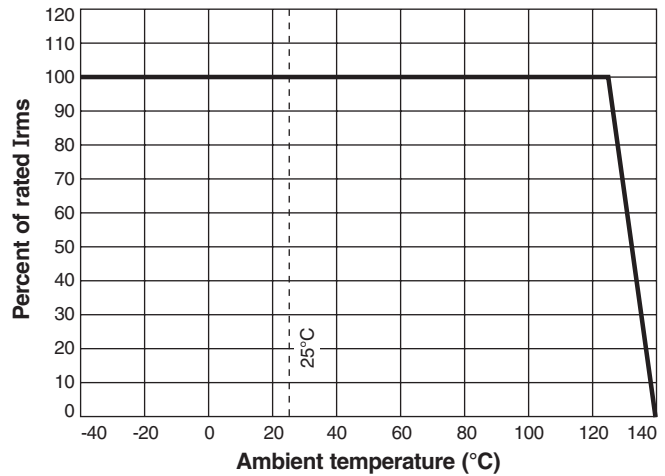
Typical Q vs Frequency



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

Core material Ceramic

Terminations Silver-palladium-platinum-glass frit

Ambient temperature -40°C to +125°C with I max current, +125°C to +140°C with derated current

Storage temperature Component: -40°C to +140°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 +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

ST413RAA Series (1008)

Part number ¹	Inductance ² (nH)	Percent tolerance	Q min ³	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	I _{max} (mA)
ST413RAA100_LZ	10 @ 50 MHz	5,2	44 @ 500 MHz	3060	0.08	1000
ST413RAA120_LZ	12 @ 50 MHz	5,2	45 @ 500 MHz	2680	0.09	1000
ST413RAA150_LZ	15 @ 50 MHz	5,2	50 @ 500 MHz	2220	0.10	1000
ST413RAA180_LZ	18 @ 50 MHz	5,2	50 @ 350 MHz	2200	0.11	1000
ST413RAA220_LZ	22 @ 50 MHz	5,2,1	55 @ 350 MHz	2100	0.12	1000
ST413RAA270_LZ	27 @ 50 MHz	5,2	55 @ 350 MHz	1380	0.13	1000
ST413RAA330_LZ	33 @ 50 MHz	5,2	60 @ 350 MHz	1600	0.14	1000
ST413RAA390_LZ	39 @ 50 MHz	5,2	60 @ 350 MHz	1420	0.15	1000
ST413RAA470_LZ	47 @ 50 MHz	5,2,1	65 @ 350 MHz	1420	0.16	1000
ST413RAA560_LZ	56 @ 50 MHz	5,2,1	60 @ 350 MHz	1140	0.18	1000
ST413RAA680_LZ	68 @ 50 MHz	5,2,1	46 @ 100 MHz	1140	0.20	1000
ST413RAA820_LZ	82 @ 50 MHz	5,2,1	48 @ 100 MHz	940	0.22	1000
ST413RAA101_LZ	100 @ 25 MHz	5,2,1	37 @ 100 MHz	900	0.56	650
ST413RAA121_LZ	120 @ 25 MHz	5,2,1	40 @ 100 MHz	840	0.63	650
ST413RAA151_LZ	150 @ 25 MHz	5,2,1	40 @ 100 MHz	740	0.70	580
ST413RAA181_LZ	180 @ 25 MHz	5,2,1	38 @ 100 MHz	680	0.77	620
ST413RAA221_LZ	220 @ 25 MHz	5,2,1	40 @ 100 MHz	580	0.84	500
ST413RAA271_LZ	270 @ 25 MHz	5,2,1	45 @ 100 MHz	540	0.91	500
ST413RAA331_LZ	330 @ 25 MHz	5,2,1	45 @ 100 MHz	500	1.05	450
ST413RAA391_LZ	390 @ 25 MHz	5,2,1	45 @ 100 MHz	480	1.12	350
ST413RAA471_LZ	470 @ 25 MHz	5,2,1	45 @ 100 MHz	400	1.19	350
ST413RAA561_LZ	560 @ 25 MHz	5,2,1	40 @ 100 MHz	360	1.33	325
ST413RAA621_LZ	620 @ 25 MHz	5,2,1	45 @ 100 MHz	360	1.40	300
ST413RAA681_LZ	680 @ 25 MHz	5,2,1	45 @ 100 MHz	345	1.47	400
ST413RAA751_LZ	750 @ 25 MHz	5,2,1	45 @ 100 MHz	335	1.54	360
ST413RAA821_LZ	820 @ 25 MHz	5,2,1	45 @ 100 MHz	310	1.61	400
ST413RAA911_LZ	910 @ 25 MHz	5,2,1	35 @ 50 MHz	280	1.68	380
ST413RAA102_LZ	1000 @ 25 MHz	5,2,1	34 @ 50 MHz	280	1.75	370
ST413RAA122_LZ	1200 @ 7.9 MHz	5,2	32 @ 50 MHz	220	2.0	310
ST413RAA152_LZ	1500 @ 7.9 MHz	5,2	28 @ 50 MHz	180	2.3	330
ST413RAA182_LZ	1800 @ 7.9 MHz	5,2	28 @ 50 MHz	160	2.6	300
ST413RAA222_LZ	2200 @ 7.9 MHz	5,2	19 @ 7.9 MHz	150	2.8	280
ST413RAA272_LZ	2700 @ 7.9 MHz	5,2	20 @ 7.9 MHz	110	3.2	290
ST413RAA332_LZ	3300 @ 7.9 MHz	5,2	20 @ 7.9 MHz	110	3.4	290
ST413RAA392_LZ	3900 @ 7.9 MHz	5,2	20 @ 7.9 MHz	85	3.6	260
ST413RAA472_LZ	4700 @ 7.9 MHz	5,2	13 @ 2.5 MHz	75	4.0	170
ST413RAA562JLZ	5600 @ 7.9 MHz	5	14 @ 2.5 MHz	20	4.0	170
ST413RAA682JLZ	6800 @ 7.9 MHz	5	14 @ 2.5 MHz	40	4.9	170
ST413RAA822JLZ	8200 @ 7.9 MHz	5	14 @ 2.5 MHz	25	6.5	170

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

ST413RAA102G LZ

Tolerance: F = 1% G = 2% J = 5%

Termination: L = RoHS compliant silver-palladium-platinum-glass frit.

Special order: T = RoHS tin-silvercopper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

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 Agilent/HP 16197A test fixture or equivalents.

4. SRF measured using an Agilent/HP 8753ES network analyzer or equivalent and a Coilcraft SMD-D test fixture.

5. DCR measured on a Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF858 test fixture.

6. Electrical specifications at 25°C.

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



CRITICAL PRODUCTS & SERVICES

Specifications subject to change without notice.

Please check our website for latest information.

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