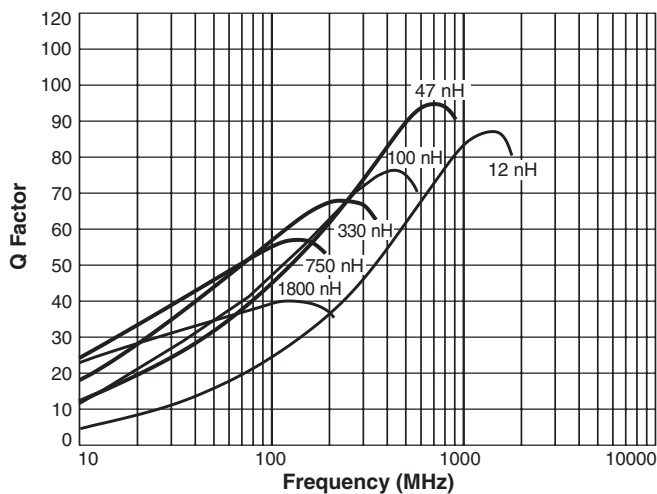


High-Reliability Chip Inductors ML413RAA

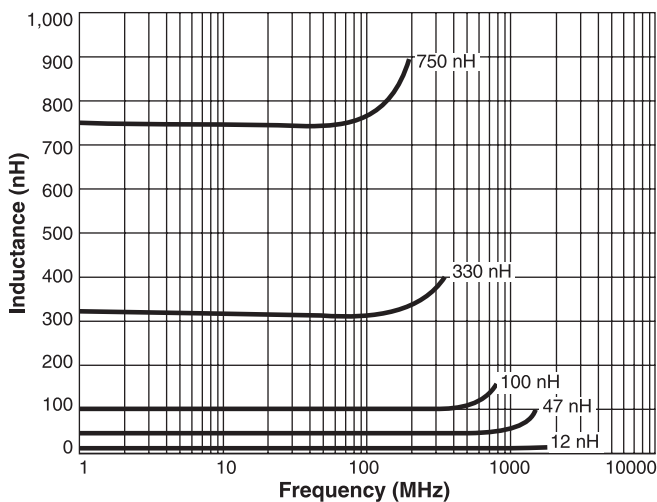
- High SRF and excellent Q values
- Tight tolerances, many values at 1%
- 28 inductance values from 10 nH to 1 μ H

Features high temperature materials that allow operation in ambient temperatures up to 155°C.

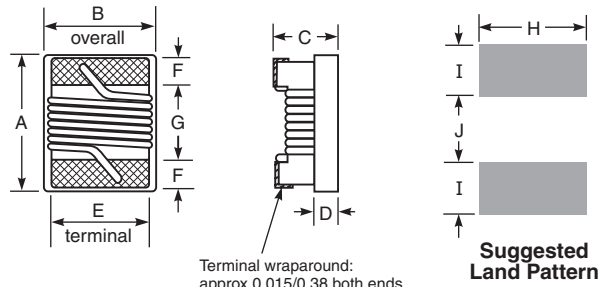
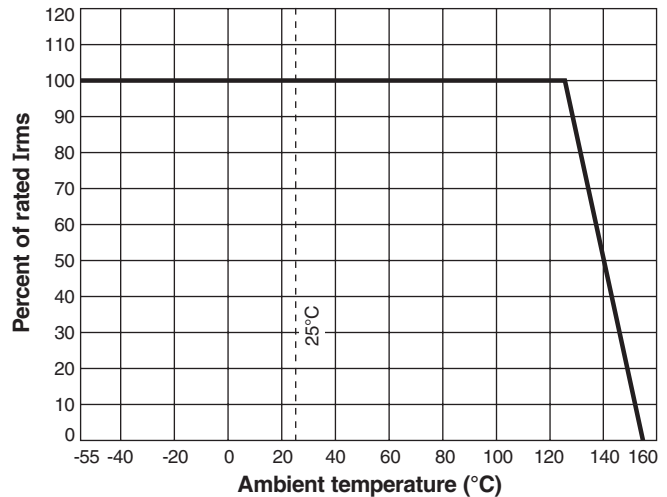
Typical Q vs Frequency



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 -55°C to +125°C with I_{max} current, +125°C to +155°C with derated current

Storage temperature Component: -55°C to +155°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



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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.

ML413RAA Series (1008)

Part number ¹	Inductance ² (nH)	Percent tolerance	Q min ³	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	I _{max} (mA)	Color code ⁶
ML413RAA100_LZ	10 @ 50 MHz	5,2	44 @ 500 MHz	3060	0.08	900	Black
ML413RAA120_LZ	12 @ 50 MHz	5,2	45 @ 500 MHz	2680	0.09	900	Red
ML413RAA150_LZ	15 @ 50 MHz	5,2	50 @ 500 MHz	2220	0.10	850	Orange
ML413RAA180_LZ	18 @ 50 MHz	5,2,1	50 @ 350 MHz	2200	0.11	900	Yellow
ML413RAA220_LZ	22 @ 50 MHz	5,2,1	55 @ 350 MHz	2100	0.12	900	Blue
ML413RAA270_LZ	27 @ 50 MHz	5,2,1	55 @ 350 MHz	1380	0.13	900	Black
ML413RAA330_LZ	33 @ 50 MHz	5,2,1	60 @ 350 MHz	1600	0.14	850	Orange
ML413RAA390_LZ	39 @ 50 MHz	5,2,1	60 @ 350 MHz	1420	0.15	850	Violet
ML413RAA470_LZ	47 @ 50 MHz	5,2,1	65 @ 350 MHz	1420	0.16	820	Red
ML413RAA560_LZ	56 @ 50 MHz	5,2,1	60 @ 350 MHz	1140	0.18	780	Yellow
ML413RAA680_LZ	68 @ 50 MHz	5,2,1	46 @ 100 MHz	1140	0.20	710	Gray
ML413RAA820_LZ	82 @ 50 MHz	5,2,1	48 @ 100 MHz	940	0.22	710	Red
ML413RAA101_LZ	100 @ 25 MHz	5,2,1	37 @ 100 MHz	900	0.56	440	Violet
ML413RAA121_LZ	120 @ 25 MHz	5,2,1	40 @ 100 MHz	840	0.63	410	White
ML413RAA151_LZ	150 @ 25 MHz	5,2,1	40 @ 100 MHz	740	0.70	400	Red
ML413RAA181_LZ	180 @ 25 MHz	5,2,1	38 @ 100 MHz	680	0.77	390	Orange
ML413RAA221_LZ	220 @ 25 MHz	5,2,1	40 @ 100 MHz	580	0.84	370	Green
ML413RAA271_LZ	270 @ 25 MHz	5,2,1	45 @ 100 MHz	540	0.91	330	White
ML413RAA331_LZ	330 @ 25 MHz	5,2,1	45 @ 100 MHz	500	1.05	330	Orange
ML413RAA391_LZ	390 @ 25 MHz	5,2,1	45 @ 100 MHz	480	1.12	310	Blue
ML413RAA471_LZ	470 @ 25 MHz	5,2,1	45 @ 100 MHz	400	1.19	280	Black
ML413RAA561_LZ	560 @ 25 MHz	5,2,1	40 @ 100 MHz	360	1.33	280	Green
ML413RAA621_LZ	620 @ 25 MHz	5,2,1	45 @ 100 MHz	360	1.40	270	Blue
ML413RAA681_LZ	680 @ 25 MHz	5,2,1	45 @ 100 MHz	345	1.47	270	Gray
ML413RAA751_LZ	750 @ 25 MHz	5,2,1	45 @ 100 MHz	335	1.54	270	Black
ML413RAA821_LZ	820 @ 25 MHz	5,2,1	45 @ 100 MHz	310	1.61	250	Brown
ML413RAA911_LZ	910 @ 25 MHz	5,2,1	35 @ 50 MHz	280	1.68	250	Red
ML413RAA102_LZ	1000 @ 25 MHz	5,2,1	34 @ 50 MHz	280	1.75	230	Yellow

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

ML413RAA102GLZ

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

Testing: Z = COTS

H = Screening per Coilcraft CP-SA-10001

N = Screening per Coilcraft CP-SA-10003

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 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.



CRITICAL PRODUCTS & SERVICES

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