

# High-Reliability Chip Inductors ML413RAM

- Ferrite construction provides lowest DCR and highest current rating of our 1008 size inductors.
- Available in 14 inductance values from 0.9 to 10  $\mu\text{H}$ , all at 10% tolerance.

This robust version of Coilcraft's standard 1008AF series features high temperature materials that allow operation in ambient temperatures up to 155°C.

Part number <sup>1</sup>	Inductance <sup>2</sup> $\pm 10\%$ ( $\mu\text{H}$ )	Q typ <sup>3</sup>	SRF min <sup>4</sup> (MHz)	DCR max <sup>5</sup> (Ohms)	Isat <sup>6</sup> (A)	Imax (A)
ML413RAM901KLZ	0.9	25	415	0.120	1.4	0.76
ML413RAM112KLZ	1.1	24	376	0.130	1.3	0.72
ML413RAM132KLZ	1.3	37	198	0.145	1.2	0.64
ML413RAM152KLZ	1.5	22	135	0.155	1.1	0.62
ML413RAM192KLZ	1.9	29	126	0.180	1.0	0.60
ML413RAM222KLZ	2.2	21	106	0.186	0.95	0.58
ML413RAM272KLZ	2.7	22	70	0.210	0.80	0.57
ML413RAM332KLZ	3.3	21	59	0.240	0.75	0.53
ML413RAM392KLZ	3.9	21	55	0.260	0.70	0.50
ML413RAM472KLZ	4.7	27	48	0.450	0.70	0.36
ML413RAM582KLZ	5.8	21	37	0.320	0.55	0.45
ML413RAM682KLZ	6.8	20	33	0.355	0.50	0.42
ML413RAM822KLZ	8.2	20	34	0.380	0.50	0.42
ML413RAM103KLZ	10.0	22	26	0.540	0.45	0.36

1. When ordering, please specify **testing** code:

**ML413RAM103KLZ**

**Testing: Z** = COTS

**H** = Screening per Coilcraft CP-SA-10001

**N** = Screening per Coilcraft CP-SA-10003

- Inductance measured at 2.5 MHz using Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer or equivalent with Coilcraft-provided correlation pieces.
  - Q measured at 2.5 MHz using an Agilent/HP 4291A with an Agilent/HP 16197 test fixture or equivalents.
  - SRF measured using an Agilent/HP 8753ES network analyzer or equivalent with a Coilcraft SMD-D fixture.
  - DCR measured on a Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF858 test fixture.
  - DC current at which the inductance drops 10% (typ.) from its value without current.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Core material** Ferrite

**Terminations** RoHS compliant silver-palladium-platinum-glass frit.

**Ambient temperature** -55°C to +125°C with Imax 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)** +100 to +350 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



CRITICAL PRODUCTS & SERVICES

Specifications subject to change without notice.  
Please check our website for latest information.

Document ML578-1 Revised 11/17/11

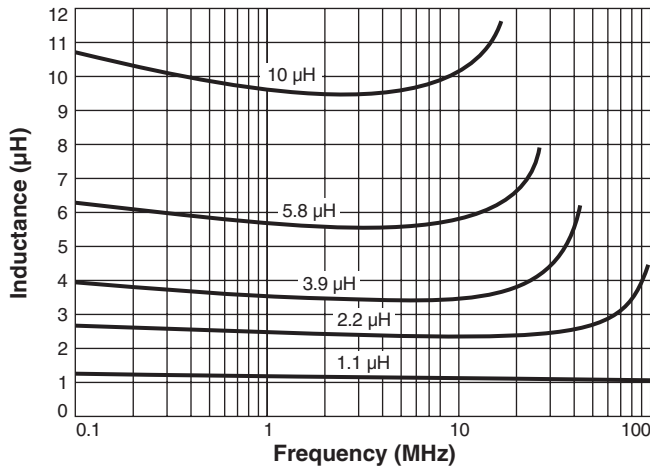
1102 Silver Lake Road  
Cary IL 60013

Phone 800-981-0363  
Fax 847-639-1508

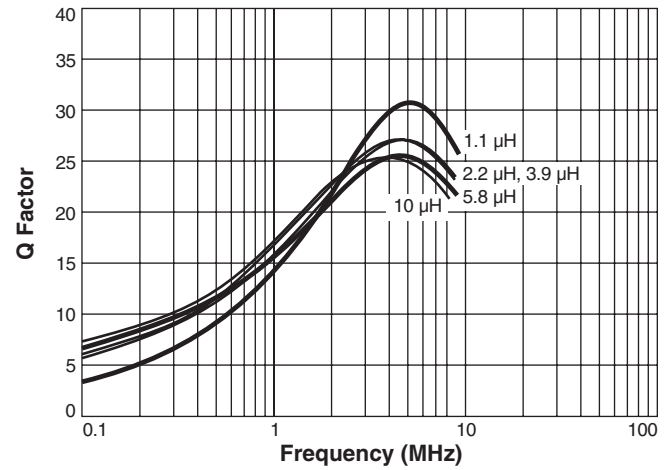
E-mail cps@coilcraft.com  
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# ML413RAM Series (1008)

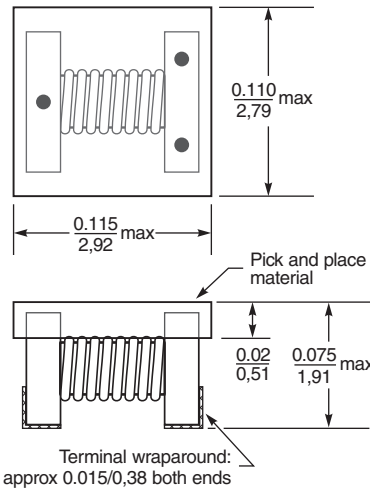
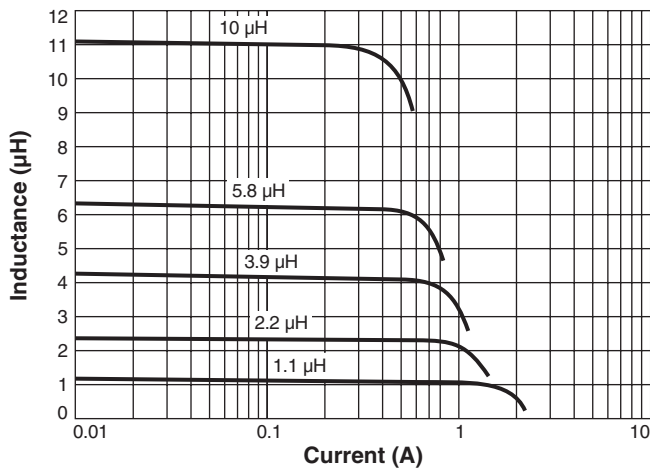
## Typical L vs Frequency



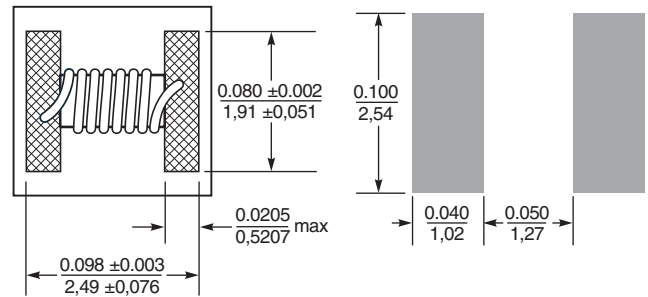
## Typical Q vs Frequency



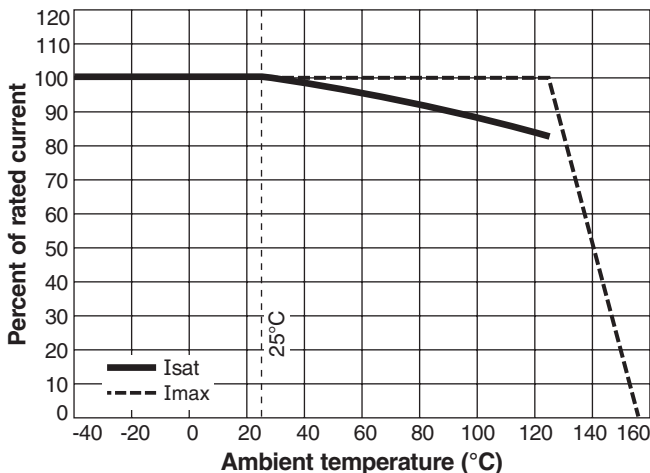
## Typical L vs Current



### Suggested Land Pattern



## Typical Current Derating



Dimensions are in inches mm