

# Chip Inductors for Critical Applications ST413RAM

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

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>$\pm 10\%$ ( $\mu$ H) | Q min <sup>3</sup> | SRF min <sup>4</sup><br>(MHz) | DCR max <sup>5</sup><br>(Ohms) | Isat <sup>6</sup><br>(A) | Imax<br>(A) |
|--------------------------|--|--------------------|-------------------------------|--------------------------------|--------------------------|-------------|
| ST413RAM901KLZ           | 0.9  | 20                 | 415                           | 0.120                          | 1.4                      | 1.3         |
| ST413RAM112KLZ           | 1.1  | 19                 | 376                           | 0.130                          | 1.3                      | 1.2         |
| ST413RAM132KLZ           | 1.3  | 29                 | 198                           | 0.145                          | 1.2                      | 1.1         |
| ST413RAM152KLZ           | 1.5  | 17                 | 135                           | 0.155                          | 1.1                      | 1.0         |
| ST413RAM192KLZ           | 1.9  | 23                 | 126                           | 0.180                          | 1.0                      | 1.0         |
| ST413RAM222KLZ           | 2.2  | 16                 | 106                           | 0.186                          | 0.95                     | 0.95        |
| ST413RAM272KLZ           | 2.7  | 17                 | 70                            | 0.210                          | 0.80                     | 0.90        |
| ST413RAM332KLZ           | 3.3  | 16                 | 59                            | 0.240                          | 0.75                     | 0.80        |
| ST413RAM392KLZ           | 3.9  | 16                 | 55                            | 0.260                          | 0.70                     | 0.80        |
| ST413RAM472KLZ           | 4.7  | 21                 | 48                            | 0.450                          | 0.70                     | 0.65        |
| ST413RAM582KLZ           | 5.8  | 16                 | 37                            | 0.320                          | 0.55                     | 0.75        |
| ST413RAM682KLZ           | 6.8  | 16                 | 33                            | 0.355                          | 0.50                     | 0.70        |
| ST413RAM822KLZ           | 8.2  | 16                 | 34                            | 0.380                          | 0.50                     | 0.65        |
| ST413RAM103KLZ           | 10.0   | 17                 | 26                            | 0.540                          | 0.45                     | 0.55        |

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

**ST413RAM103KLZ**

**Termination:** L = Silver-palladium-platinum-glass frit.

**Special order:**

T = Tin-silver-copper (95.5/4/0.5) over silver-palladium-platinum-glass frit or

S = Tin-lead (63/37) over silver-palladium-platinum-glass frit.

**Testing:** Z = Unscreened

H = Group A screening per Coilcraft CP-SA-10001

All screening performed to the document's latest revision  
Custom screening also available

2. 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.
3. Q measured at 2.5 MHz 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 with a Coilcraft SMD-D fixture.
5. DCR measured on a Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF858 test fixture.
6. DC current at 25°C that causes a 10% (typ) inductance drop from its value without current.
7. Electrical specifications at 25°C.

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

**Core material** Ferrite

**Terminations** Silver-palladium-platinum-glass frit. Other terminations available at additional cost.

**Ambient temperature** -40°C to +85°C with Imax current

**Maximum part temperature** +125°C (ambient + temp rise).

**Storage temperature** Component: -55°C to +125°C.  
Tape and reel 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)** +100 to +350 ppm/°C

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

**Packaging** 2000 per 7" reel Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 2.0 mm pocket depth

**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE WEB SITE **TEST FIXTURES**

Document ST578-1 Revised 05/17/17

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.

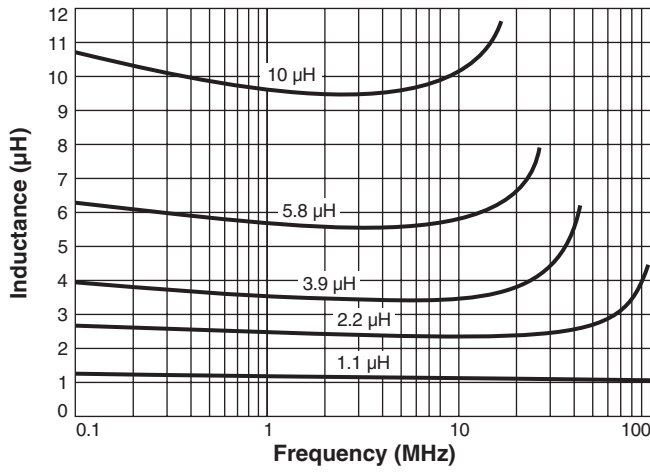
**Coilcraft** CPS  
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road  
Cary, IL 60013  
Phone 800-981-0363

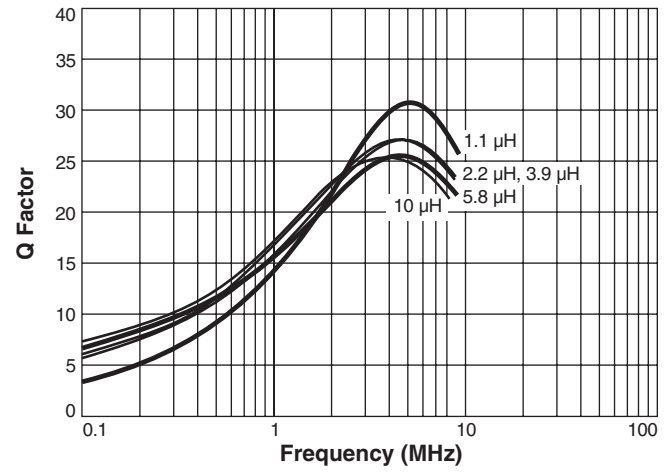
Fax 847-639-1508  
Email cps@coilcraft.com  
www.coilcraft-cps.com

# ST413RAM Series (1008)

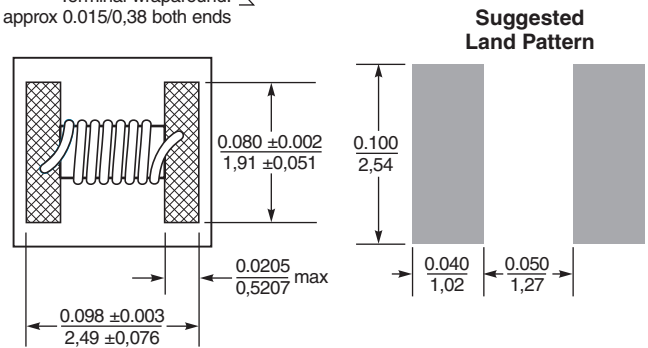
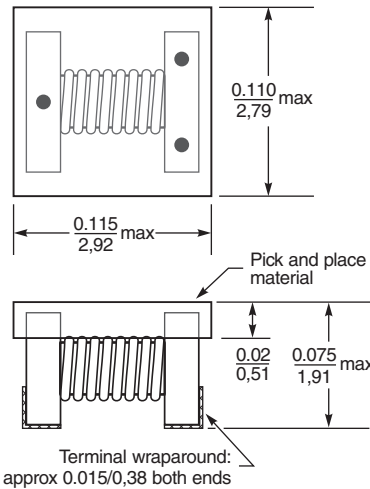
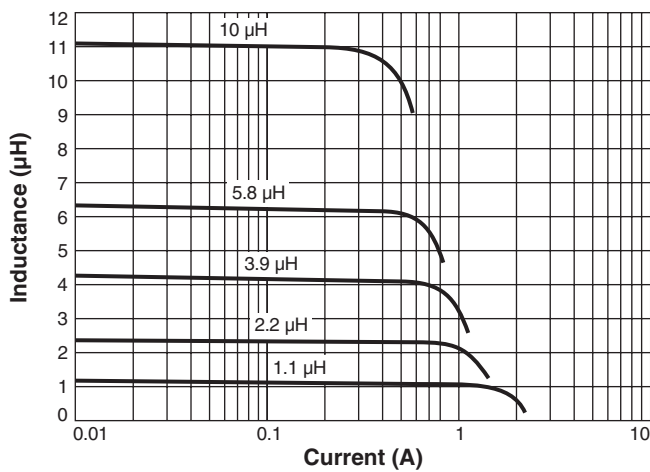
## Typical L vs Frequency



## Typical Q vs Frequency



## Typical L vs Current



Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

Terminal dimensions are without optional solder applied. For dimensions with optional solder, add 0.006 inches / 0.152 mm.

Visit <http://www.coilcraft-cps.com/support/colorcode.aspx> for an explanation of the color dots.



CRITICAL PRODUCTS & SERVICES  
© Coilcraft, Inc. 2017

1102 Silver Lake Road  
Cary, IL 60013  
Phone 800-981-0363

Fax 847-639-1508  
Email [cps@coilcraft.com](mailto:cps@coilcraft.com)  
[www.coilcraft-cps.com](http://www.coilcraft-cps.com)

Document ST578-2 Revised 05/17/17

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.