

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 μH , all at 10% tolerance.

Part number ¹	Inductance ² $\pm 10\%$ (μH)	Q min ³	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	Isat ⁶ (A)	Imax (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	22	33	0.330	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.

R = Matte tin over nickel over silver-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

- 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 16197A 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 25°C that causes a 10% (typ) inductance drop from its value without current.
- 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 $+85^{\circ}\text{C}$ with Imax current

Maximum part temperature $+125^{\circ}\text{C}$ (ambient + temp rise).

Storage temperature Component: -55°C to $+125^{\circ}\text{C}$.
Tape and reel packaging: -40°C to $+80^{\circ}\text{C}$

Resistance to soldering heat Max three 40 second reflows at $+260^{\circ}\text{C}$, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) $+100$ to $+350$ ppm/ $^{\circ}\text{C}$

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 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 11/30/18

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

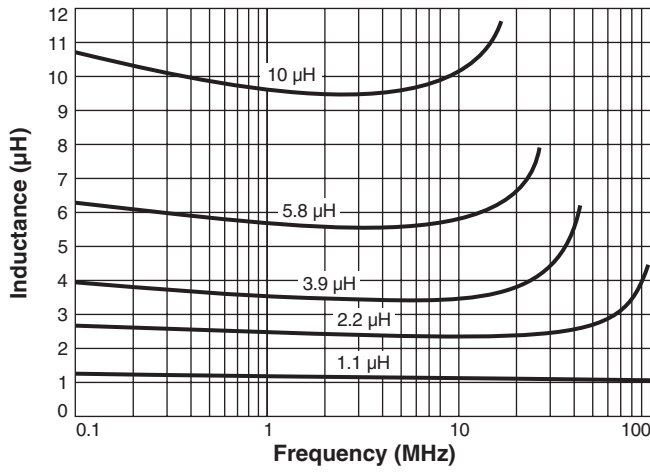
1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

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

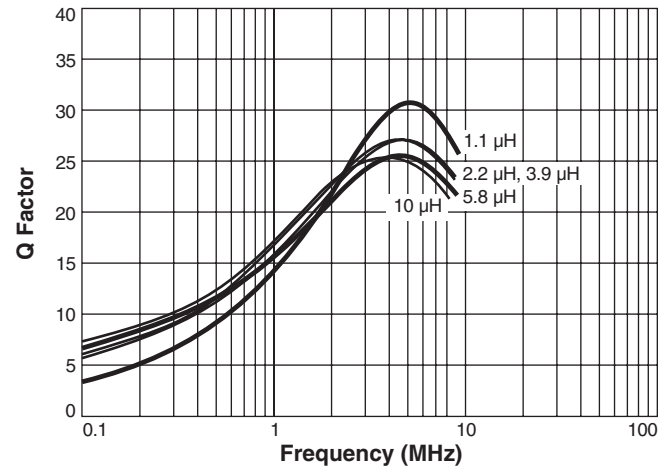
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

ST413RAM Series (1008)

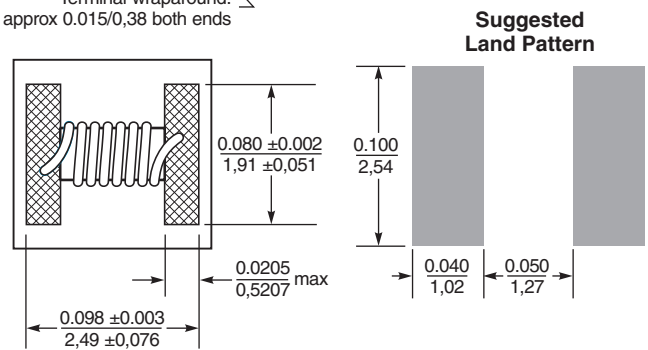
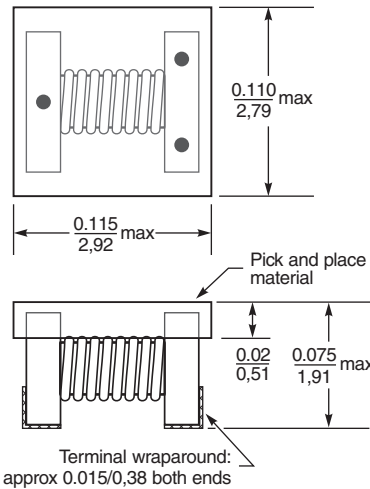
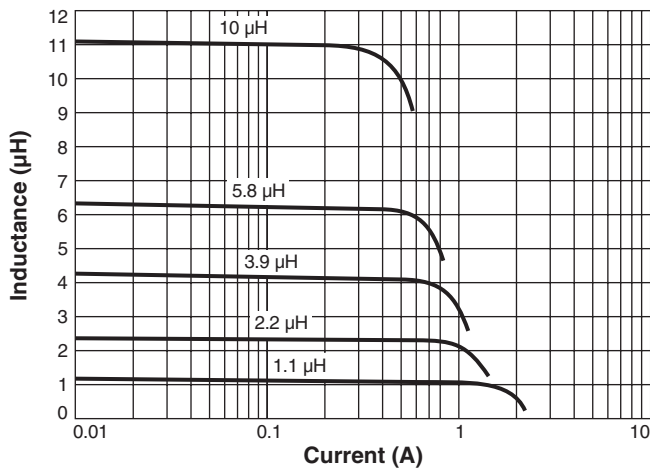
Typical L vs Frequency



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. 2018

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

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

Document ST578-2 Revised 11/30/18

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.