

Chip Inductors for Critical Applications ST413RAB

- Lower DCR than other 1008 inductors
- Inductance values: 1.0 – 100 μ H
- Ferrite construction for high current handling

Part number ¹	Inductance ² (μ H)	Percent tolerance	Q min ³	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	I _{max} (mA)	Color dot
ST413RAB102JLZ	1.0 @ 7.9MHz	5	16 @ 2.5MHz	230	0.62	370	Black
ST413RAB122JLZ	1.2 @ 7.9MHz	5	18 @ 2.5MHz	210	0.68	370	Red
ST413RAB152JLZ	1.5 @ 7.9MHz	5	20 @ 2.5MHz	190	0.76	370	Green
ST413RAB182JLZ	1.8 @ 7.9MHz	5	20 @ 2.5MHz	170	0.84	370	Gray
ST413RAB222JLZ	2.2 @ 7.9MHz	5	22 @ 2.5MHz	150	1.10	310	Red
ST413RAB272JLZ	2.7 @ 7.9MHz	5	20 @ 2.5MHz	135	1.28	270	Violet
ST413RAB332JLZ	3.3 @ 7.9MHz	5	20 @ 2.5MHz	120	1.46	260	Orange
ST413RAB392JLZ	3.9 @ 7.9MHz	5	22 @ 2.5MHz	105	1.56	250	White
ST413RAB432JLZ	4.3 @ 7.9MHz	5	24 @ 2.5MHz	85	1.70	230	Orange
ST413RAB472JLZ	4.7 @ 7.9MHz	5	24 @ 2.5MHz	90	1.68	230	Violet
ST413RAB502JLZ	5.0 @ 7.9MHz	5	23 @ 2.5MHz	30	2.20	200	Black
ST413RAB562JLZ	5.6 @ 7.9MHz	5	23 @ 2.5MHz	80	1.82	220	Blue
ST413RAB622JLZ	6.2 @ 7.9MHz	5	24 @ 2.5MHz	75	2.50	195	Red
ST413RAB682JLZ	6.8 @ 7.9MHz	5	24 @ 2.5MHz	70	2.00	210	Gray
ST413RAB822JLZ	8.2 @ 7.9MHz	5	23 @ 2.5MHz	65	2.65	190	Red
ST413RAB912JLZ	9.1 @ 7.9MHz	5	25 @ 2.5MHz	57	2.90	170	Brown
ST413RAB103JLZ	10 @ 7.9MHz	5	24 @ 2.5MHz	60	2.95	165	Black
ST413RAB123JLZ	12 @ 2.5MHz	5	28 @ 2.5MHz	38	3.30	160	Red
ST413RAB153JLZ	15 @ 2.5MHz	5	28 @ 2.5MHz	30	3.70	150	Green
ST413RAB183JLZ	18 @ 2.5MHz	5	28 @ 2.5MHz	26	4.00	140	Gray
ST413RAB223JLZ	22 @ 2.5MHz	5	28 @ 2.5MHz	22	6.14	115	Red
ST413RAB273JLZ	27 @ 2.5MHz	5	28 @ 2.5MHz	12	6.45	110	Violet
ST413RAB333JLZ	33 @ 2.5MHz	5	30 @ 2.5MHz	19	7.00	110	Orange
ST413RAB393JLZ	39 @ 2.5MHz	5	29 @ 2.5MHz	26	10.0	90	White
ST413RAB473JLZ	47 @ 2.5MHz	5	30 @ 2.5MHz	12	10.7	80	Violet
ST413RAB563JLZ	56 @ 2.5MHz	5	20 @ 0.79MHz	8.0	10.0	95	Blue
ST413RAB683JLZ	68 @ 0.79MHz	5	17 @ 0.79MHz	5.7	13.5	85	Gray
ST413RAB104JLZ	100 @ 0.79MHz	5	18 @ 0.79MHz	4.5	20.5	65	Black

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

ST413RAB104JLZ

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 using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer or equivalent with Coilcraft-provided correlation pieces.
- Q measured 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.
- Electrical specifications at 25°C.

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

Core material Ceramic/Ferrite

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

Weight 38.3 – 41.0 mg

Ambient temperature –40°C to +85°C with I_{max} current

Maximum part temperature +100°C (ambient + temp rise)

Storage temperature Component: –55°C to +100°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 +125 ppm/°C

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

Enhanced crush-resistant packaging 2000/7" reel

Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 2.0 mm pocket depth



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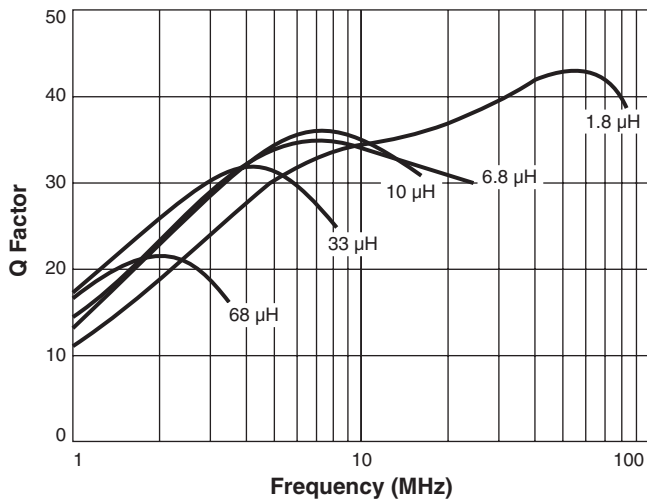
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Document ST103-1 Revised 10/23/18

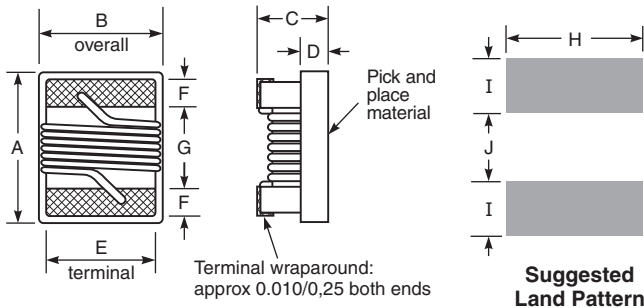
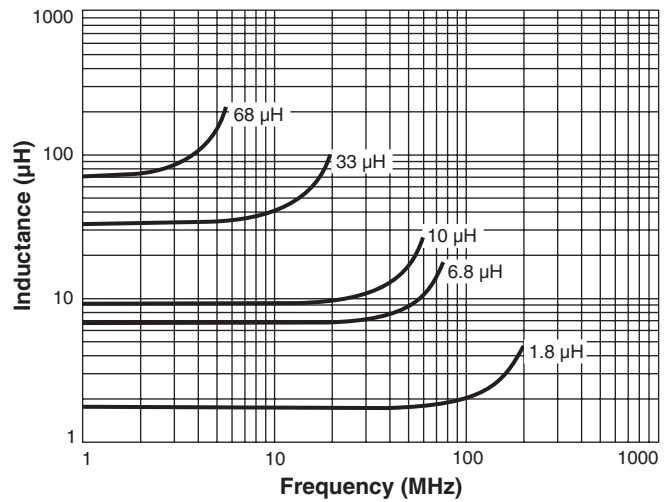
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

ST413RAB Series (1008)

Typical Q vs Frequency



Typical L vs Frequency



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
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
inches									
mm									

Note: Dimensions are before optional solder application. For maximum overall dimensions including solder, add 0.0025 in / 0,064 mm to B and 0.006 in / 0,15 mm to A and C.

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