

Chip Inductors for Critical Applications ST413RAB

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

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.

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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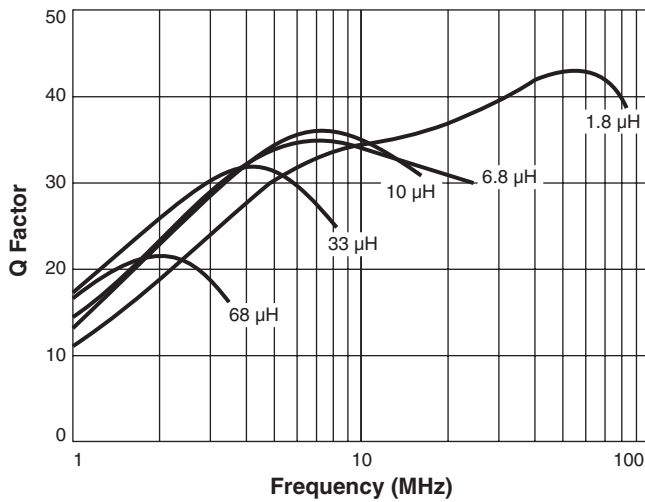
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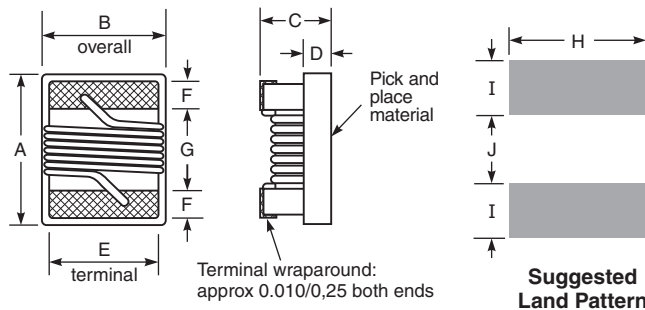
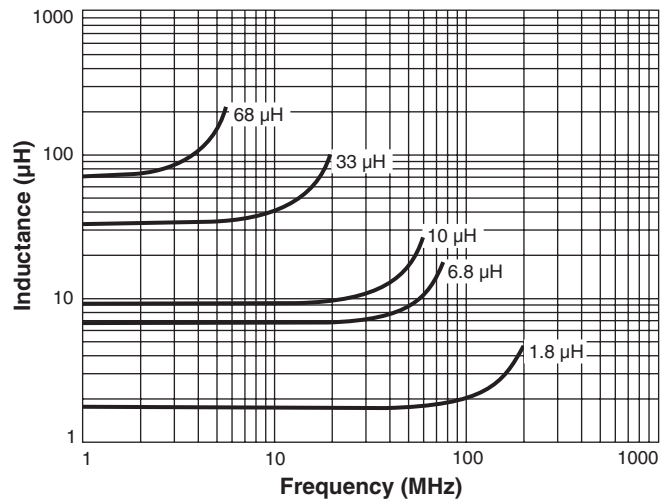
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ST413RAB Series (1008)

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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