

High-Reliability Chip Inductors ST450RAA

- Higher SRF values than 1812 size parts with ferrite cores
- 5% tolerances for all values
- 19 inductance values from 1.0 to 33 μH

Part number ¹	Inductance ² (μH)	Percent tolerance	Q min ³	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	I _{max} (mA)
ST450RAA102JLZ	1.0 @ 7.9 MHz	5	59 @ 50 MHz	260	1.1	390
ST450RAA122JLZ	1.2 @ 7.9 MHz	5	54 @ 50 MHz	230	1.2	360
ST450RAA152_LZ	1.5 @ 7.9 MHz	5,2	57 @ 50 MHz	210	1.6	320
ST450RAA182JLZ	1.8 @ 7.9 MHz	5	57 @ 50 MHz	190	2.0	270
ST450RAA222JLZ	2.2 @ 7.9 MHz	5,2	52 @ 50 MHz	170	2.2	250
ST450RAA272JLZ	2.7 @ 7.9 MHz	5,2	53 @ 50 MHz	160	3.2	200
ST450RAA332JLZ	3.3 @ 7.9 MHz	5,2	53 @ 50 MHz	145	3.8	200
ST450RAA392_LZ	3.9 @ 7.9 MHz	5,2	53 @ 50 MHz	130	5.0	175
ST450RAA472JLZ	4.7 @ 7.9 MHz	5	32 @ 10 MHz	115	5.4	165
ST450RAA562JLZ	5.6 @ 7.9 MHz	5	32 @ 10 MHz	100	5.7	160
ST450RAA682JLZ	6.8 @ 7.9 MHz	5	32 @ 10 MHz	90	6.6	155
ST450RAA822JLZ	8.2 @ 7.9 MHz	5,2	32 @ 10 MHz	80	7.0	145
ST450RAA103JLZ	10.0 @ 7.9 MHz	5	32 @ 10 MHz	70	7.7	125
ST450RAA123JLZ	12.0 @ 2.5 MHz	5	26 @ 5 MHz	60	8.7	125
ST450RAA153JLZ	15.0 @ 2.5 MHz	5	26 @ 5 MHz	50	9.6	120
ST450RAA183JLZ	18.0 @ 2.5 MHz	5	28 @ 5 MHz	40	10.5	115
ST450RAA223_LZ	22.0 @ 2.5 MHz	5,2	28 @ 5 MHz	40	11.5	110
ST450RAA273JLZ	27.0 @ 2.5 MHz	5	28 @ 5 MHz	30	12.5	105
ST450RAA333_LZ	33.0 @ 2.5 MHz	5,2	24 @ 2.5 MHz	20	13.5	105

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

MS450RAA333JSZ

Tolerance: F = 1% G = 2% J = 5%

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

Special order:

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

P = Tin-lead (63/37) over tin over nickel over silver-platinum-glass frit.

Q = Tin-silver-copper (95.5/4/0.5) over 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

2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286 impedance analyzer or equivalent with Coilcraft-provided correlation pieces.

3. Q measured at the same frequency as inductance using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture or equivalents.

4. SRF measured using an Agilent/HP 8753ES network analyzer or equivalent and a Coilcraft SMD-D test fixture.

5. DCR measured on a micro-ohmmeter.

6. Electrical specifications at 25°C.

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

Core material Ceramic

Terminations Tin-lead (63/37) over silver-platinum-glass frit. Other terminations available at an additional cost.

Weight: 200–230 mg

Ambient temperature –55°C to +125°C with I_{max} current

Maximum part temperature +155°C (ambient + temp rise).

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) +25 to +155 ppm/°C

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

Enhanced crush-resistant packaging 600 per 7" reel

Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 3.7 mm pocket depth



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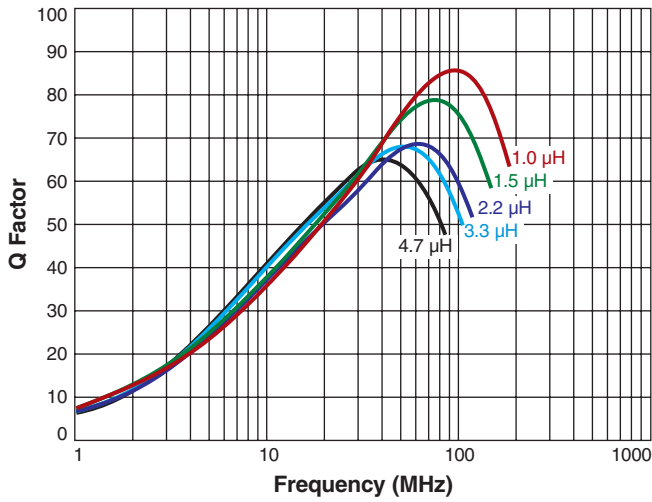
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PRECISION REPEATABLE
MEASUREMENTS
SEE WEB SITE **TEST FIXTURES**

Document ST105-1 Revised 05/17/17

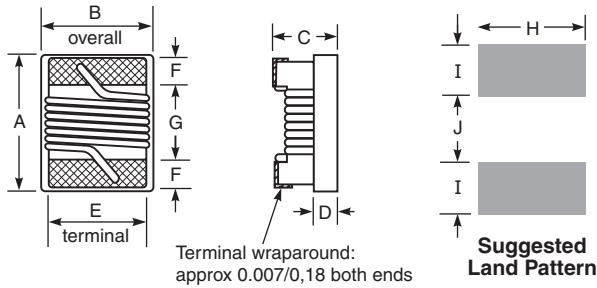
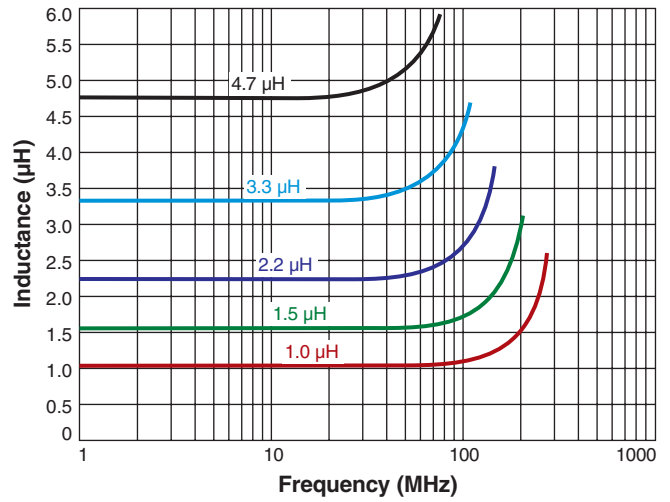
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

MS450RAA Series (1812)

Typical Q vs Frequency



Typical L vs Frequency



A max	B max	C max	D ref	E	F	G	H	I	J
0.195	0.150	0.135	0.070	0.100	0.025	0.128	0.120	0.045	0.118
4,95	3,81	3,43	1,78	2,54	0,64	3,25	3,05	1,14	3,00

Note: Dimensions are before 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**.