Chip Inductors for Critical Applications 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)	Imax (mA)
ST450RAA102JLZ	1.0 @ 7.9 MHz	5	59 @ 50 MHz	260	1.1	530
ST450RAA122JLZ	1.2 @ 7.9 MHz	5	54 @ 50 MHz	230	1.2	480
ST450RAA152_LZ	1.5 @ 7.9 MHz	5,2	57 @ 50 MHz	210	1.6	430
ST450RAA182JLZ	1.8 @ 7.9 MHz	5	57 @ 50 MHz	190	2.0	380
ST450RAA222JLZ	2.2 @ 7.9 MHz	5	52 @ 50 MHz	170	2.2	340
ST450RAA272JLZ	2.7 @ 7.9 MHz	5	53 @ 50 MHz	160	3.2	300
ST450RAA332JLZ	3.3 @ 7.9 MHz	5	53 @ 50 MHz	145	3.8	270
ST450RAA392_LZ	3.9 @ 7.9 MHz	5,2	53 @ 50 MHz	130	5.0	240
ST450RAA472JLZ	4.7 @ 7.9 MHz	5	32 @ 10 MHz	115	5.4	230
ST450RAA562JLZ	5.6 @ 7.9 MHz	5	32 @ 10 MHz	100	5.7	220
ST450RAA682JLZ	6.8 @ 7.9 MHz	5	32 @ 10 MHz	90	6.6	210
ST450RAA822JLZ	8.2 @ 7.9 MHz	5	32 @ 10 MHz	80	7.0	200
ST450RAA103JLZ	10.0 @ 7.9 MHz	5	32 @ 10 MHz	70	7.7	190
ST450RAA123JLZ	12.0 @ 2.5 MHz	5	26 @ 5 MHz	60	8.7	180
ST450RAA153JLZ	15.0 @ 2.5 MHz	5	26 @ 5 MHz	50	9.6	170
ST450RAA183JLZ	18.0 @ 2.5 MHz	5	28 @ 5 MHz	40	10.5	155
ST450RAA223_LZ	22.0 @ 2.5 MHz	5,2	28 @ 5 MHz	40	11.5	155
ST450RAA273JLZ	27.0 @ 2.5 MHz	5	28 @ 5 MHz	30	12.5	150
ST450RAA333_LZ	33.0 @ 2.5 MHz	5,2	24 @ 2.5 MHz	20	13.5	145

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

ST450RAA333 J L Z

Tolerance: **G** = 2% **J** = 5%

Termination: **L** = RoHS compliant silver-palladium-platinum-glass frit. Special order: **T** = RoHS tin-silvercopper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

Testing: **Z** = COTS
H = Screening per Coilcraft CP-SA-10001

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 16197 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 Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF859 test fixture.
6. Electrical specifications at 25°C.

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

Core material Ceramic

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

Weight: 109 – 128 mg

Ambient temperature –40°C to +125°C with Imax current, +125°C to +140°C with derated current

Storage temperature Component: –40°C to +140°C. 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) +25 to +155 ppm/°C

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

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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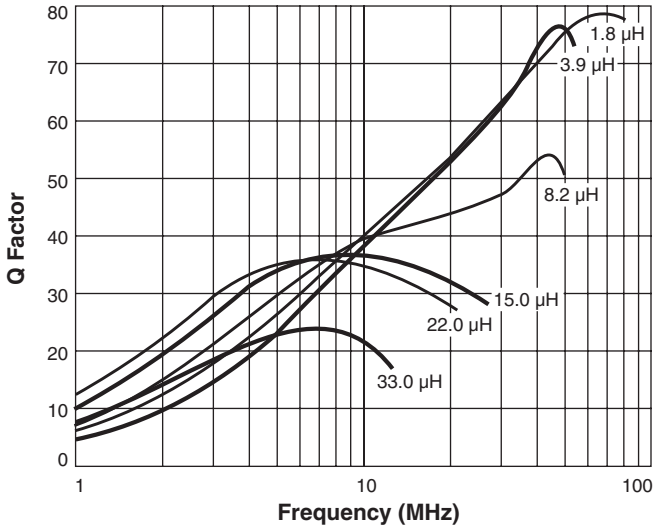
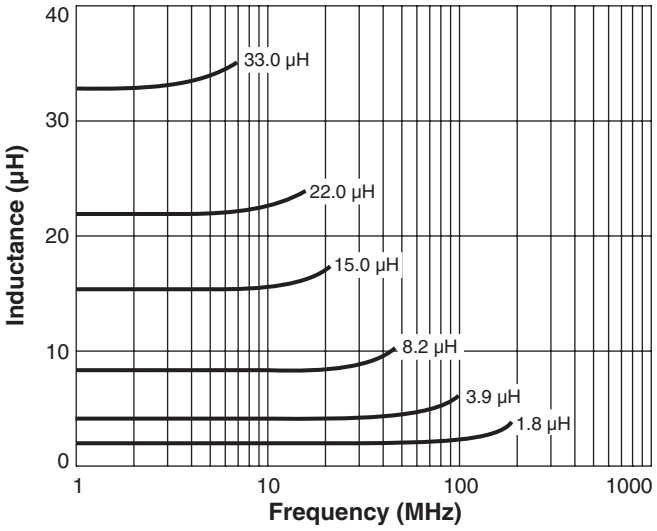
Specifications subject to change without notice.
Please check our website for latest information. Document ST105-1 Revised 05/13/10

ST450RAA Series (1812)

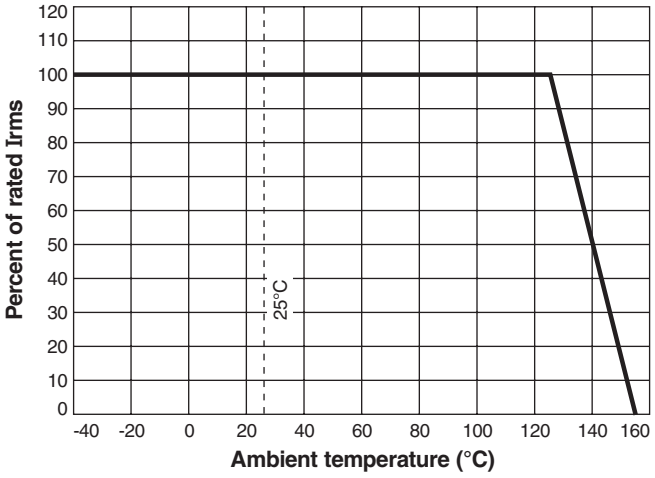
Typical Q vs Frequency

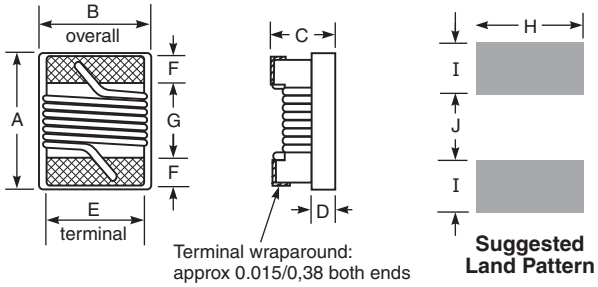


Typical L vs Frequency



Current Derating





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

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