

Chip Inductors for Critical Applications^{ST450RAA}

- Higher SRF values than 1812 size parts with ferrite cores
- 2% and 1% tolerances for all values
- 9 inductance values from 1.0 to 4.7 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)
ST450RAA102JLZ	1.0 @ 7.9 MHz	5,2,1	59 @ 50 MHz	260	1.1	530
ST450RAA122JLZ	1.2 @ 7.9 MHz	5,2,1	54 @ 50 MHz	230	1.2	480
ST450RAA152_LZ	1.5 @ 7.9 MHz	5,2,1	57 @ 50 MHz	210	1.6	430
ST450RAA182JLZ	1.8 @ 7.9 MHz	5,2,1	57 @ 50 MHz	190	2.0	380
ST450RAA222JLZ	2.2 @ 7.9 MHz	5,2,1	52 @ 50 MHz	170	2.2	340
ST450RAA272JLZ	2.7 @ 7.9 MHz	5,2,1	53 @ 50 MHz	160	3.2	300
ST450RAA332JLZ	3.3 @ 7.9 MHz	5,2,1	53 @ 50 MHz	145	3.8	270
ST450RAA392_LZ	3.9 @ 7.9 MHz	5,2,1	53 @ 50 MHz	130	5.0	240
ST450RAA472JLZ	4.7 @ 7.9 MHz	5,2,1	32 @ 10 MHz	115	5.4	230

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

ST450RAA333JLZ

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

Termination: L = RoHS compliant silver-palladium-platinum glass frit.

Special order:

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

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 = 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 I_{max} current, +125°C to +140°C with derated current

Storage temperature Component: -55°C to +140°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)

Packaging 600 per 7" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 3.7 mm pocket depth



CRITICAL PRODUCTS & SERVICES

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

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

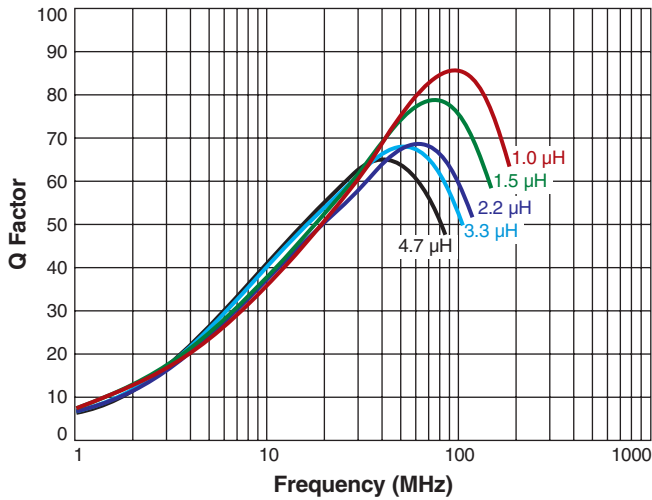
COILCRAFT ACCURATE
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MEASUREMENTS
SEE WEB SITE **TEST FIXTURES**

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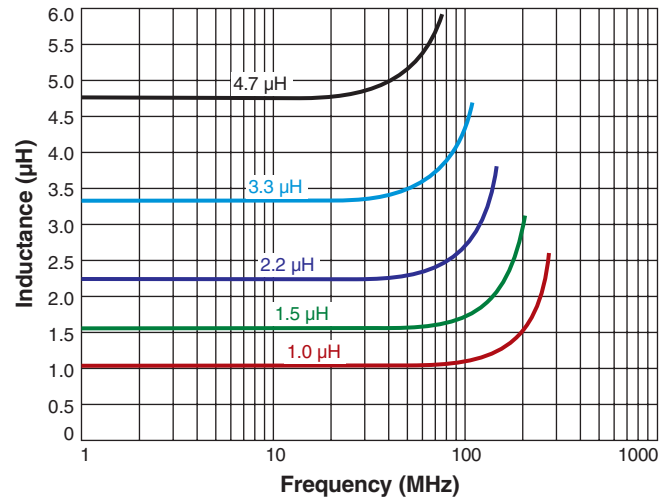
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ST450RAA Series (1812)

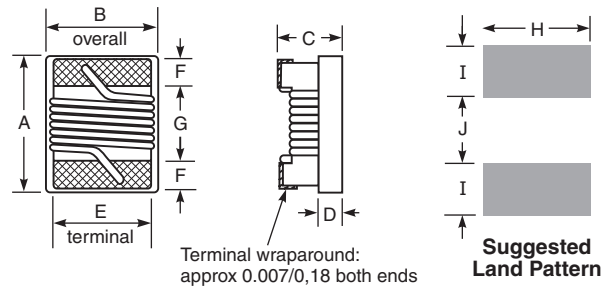
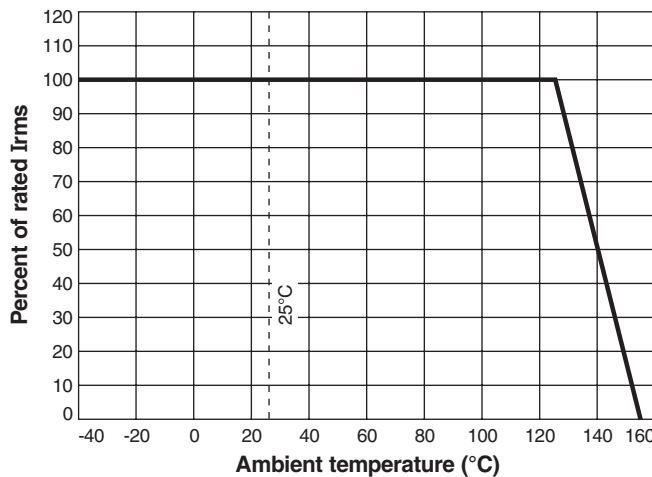
Typical Q vs Frequency



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

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.



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

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

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