

High-Reliability Chip Inductors MS450RAA

- 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 μH

This robust version of Coilcraft's standard 1812CS series features high temperature materials that allow operation in ambient temperatures up to 155°C. The leach-resistant base metalization with tin-lead (Sn-Pb) terminations ensures the best possible board adhesion.

Part number ¹	Inductance ² (μH)	Percent tolerance	Q min ³	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	I _{max} (mA)
MS450RAA102JSZ	1.0 @ 7.9 MHz	5,2,1	59 @ 50 MHz	260	1.1	530
MS450RAA122JSZ	1.2 @ 7.9 MHz	5,2,1	54 @ 50 MHz	230	1.2	480
MS450RAA152_SZ	1.5 @ 7.9 MHz	5,2,1	57 @ 50 MHz	210	1.6	430
MS450RAA182JSZ	1.8 @ 7.9 MHz	5,2,1	57 @ 50 MHz	190	2.0	380
MS450RAA222JSZ	2.2 @ 7.9 MHz	5,2,1	52 @ 50 MHz	170	2.2	340
MS450RAA272JSZ	2.7 @ 7.9 MHz	5,2,1	53 @ 50 MHz	160	3.2	300
MS450RAA332JSZ	3.3 @ 7.9 MHz	5,2,1	53 @ 50 MHz	145	3.8	270
MS450RAA392_SZ	3.9 @ 7.9 MHz	5,2,1	53 @ 50 MHz	130	5.0	240
MS450RAA472JSZ	4.7 @ 7.9 MHz	5,2,1	32 @ 10 MHz	115	5.4	230

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

MS450RAA333JSZ

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

Testing: Z = COTS

H = Screening per Coilcraft CP-SA-10001

N = Screening per Coilcraft CP-SA-10003

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

Ambient temperature -55°C to +125°C with I_{max} current, +125°C to +155°C with derated current

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

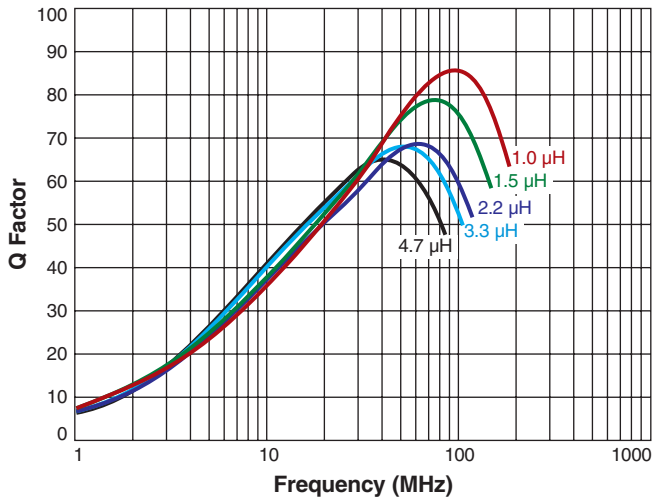
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

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

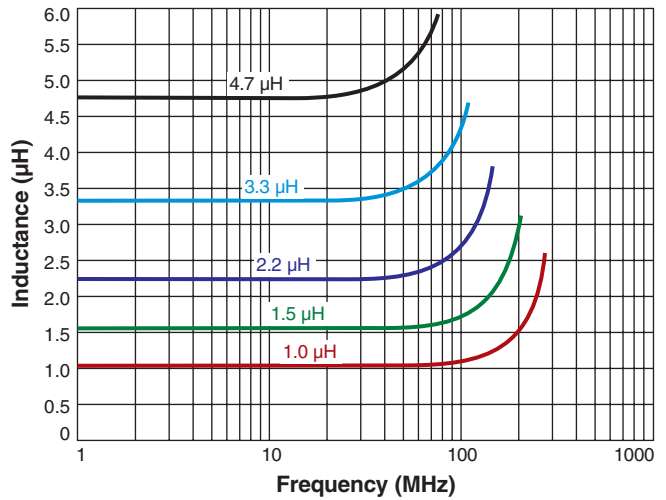


MS450RAA Series (1812)

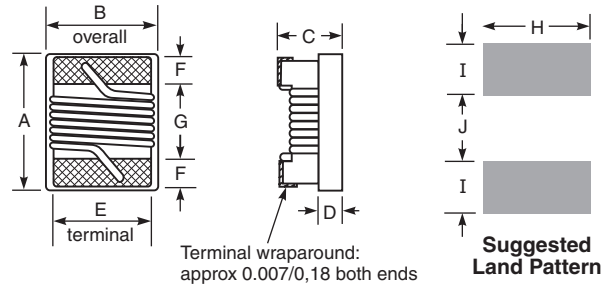
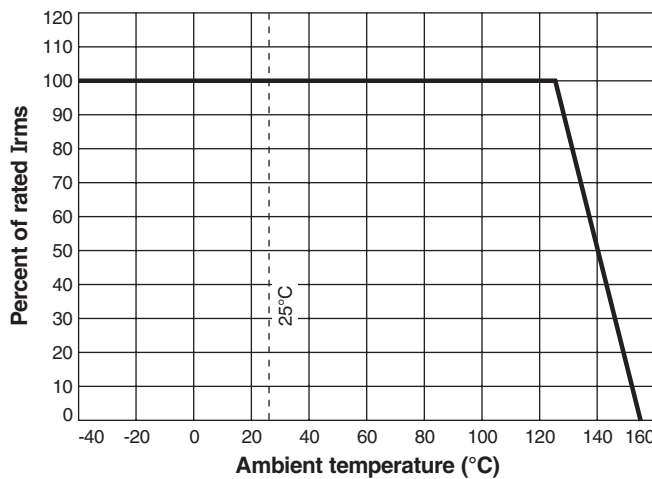
Typical Q vs Frequency



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 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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