High-Reliability Chip Inductors MS376RAA

The MS376RAA inductors feature high SRF and excellent Q values. Their ceramic cores make 1% tolerances practical and economical and ensure the utmost in thermal stability, predictability and consistency.

This robust version of Coilcraft's standard 1206CS series features a high temperature encapsulant that allows operation in ambient temperatures up to 155°C and a leach-resistant base metalization with 63/37 tin-lead terminations that ensures the best possible board adhesion.

Part number[1]	Inductance[2] (nH)	Percent tolerance	Q min[3]	SRF min[4] (MHz)	DCR max[5] (Ohms)	Imax (mA)
MS376RAA030JSZ	3.3 @ 100 MHz	5	29 @ 300 MHz	>5000	0.050	900
MS376RAA060JSZ	6.8 @ 100 MHz	5	24 @ 300 MHz	4380	0.070	900
MS376RAA100JSZ	10 @ 100 MHz	5,2,1	31 @ 300 MHz	3440	0.080	900
MS376RAA120_SZ	12 @ 100 MHz	5,2,1	40 @ 300 MHz	2560	0.100	900
MS376RAA150_SZ	15 @ 100 MHz	5,2,1	38 @ 300 MHz	2520	0.100	900
MS376RAA180_SZ	18 @ 100 MHz	5,2,1	50 @ 300 MHz	2260	0.100	900
MS376RAA220_SZ	22 @ 100 MHz	5,2,1	50 @ 300 MHz	2120	0.100	900
MS376RAA270_SZ	27 @ 100 MHz	5,2,1	50 @ 300 MHz	1800	0.110	900
MS376RAA330_SZ	33 @ 100 MHz	5,2,1	55 @ 300 MHz	1800	0.110	900
MS376RAA390_SZ	39 @ 100 MHz	5,2,1	55 @ 300 MHz	1800	0.120	900
MS376RAA470_SZ	47 @ 100 MHz	5,2,1	55 @ 300 MHz	1500	0.130	900
MS376RAA560_SZ	56 @ 100 MHz	5,2,1	55 @ 300 MHz	1400	0.140	900
MS376RAA680_SZ	68 @ 100 MHz	5,2,1	48 @ 150 MHz	1180	0.260	600
MS376RAA820_SZ	82 @ 100 MHz	5,2,1	52 @ 150 MHz	1120	0.210	700
MS376RAA101_SZ	100 @ 100 MHz	5,2,1	55 @ 150 MHz	1040	0.260	650
MS376RAA121_SZ	120 @ 100 MHz	5,2,1	53 @ 150 MHz	1040	0.260	620
MS376RAA151_SZ	150 @ 100 MHz	5,2,1	53 @ 150 MHz	920	0.310	720
MS376RAA181_SZ	180 @ 50 MHz	5,2,1	53 @ 150 MHz	780	0.430	580
MS376RAA221_SZ	220 @ 50 MHz	5,2,1	51 @ 150 MHz	700	0.500	550
MS376RAA271_SZ	270 @ 50 MHz	5,2,1	53 @ 150 MHz	630	0.560	470
MS376RAA331_SZ	330 @ 50 MHz	5,2,1	30 @ 35 MHz	570	0.620	370
MS376RAA391_SZ	390 @ 50 MHz	5,2,1	31 @ 35 MHz	540	0.750	370
MS376RAA471_SZ	470 @ 50 MHz	5,2,1	31 @ 35 MHz	500	1.30	320
MS376RAA561_SZ	560 @ 35 MHz	5,2,1	31 @ 35 MHz	440	1.34	300
MS376RAA621_SZ	620 @ 35 MHz	5,2,1	32 @ 35 MHz	440	1.60	270
MS376RAA681_SZ	680 @ 35 MHz	5,2,1	32 @ 35 MHz	410	1.58	260
MS376RAA751_SZ	750 @ 35 MHz	5,2,1	32 @ 35 MHz	400	2.20	220
MS376RAA821_SZ	820 @ 35 MHz	5,2,1	31 @ 35 MHz	370	1.82	240
MS376RAA911_SZ	910 @ 35 MHz	5,2,1	31 @ 35 MHz	350	2.85	190
MS376RAA102_SZ	1000 @ 35 MHz	5,2,1	32 @ 35 MHz	360	2.80	190
MS376RAA122_SZ	1200 @ 35 MHz	5,2,1	32 @ 35 MHz	320	3.20	170

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

MS376RAA122JSZ

Tolerance: **F** = 1% **G** = 2% **J** = 5%
Testing: **Z** = COTS
H = Screening per Coilcraft CP-SA-10001
N = Screening per Coilcraft CP-SA-10003
C = Custom screening (please specify when ordering)

2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
3. Q measured using an Agilent/HP 4291A with an Agilent/HP 16197A test fixture.
4. SRF measured using an Agilent/HP 8753ES network analyzer or equivalent and a Coilcraft CCF1297 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.

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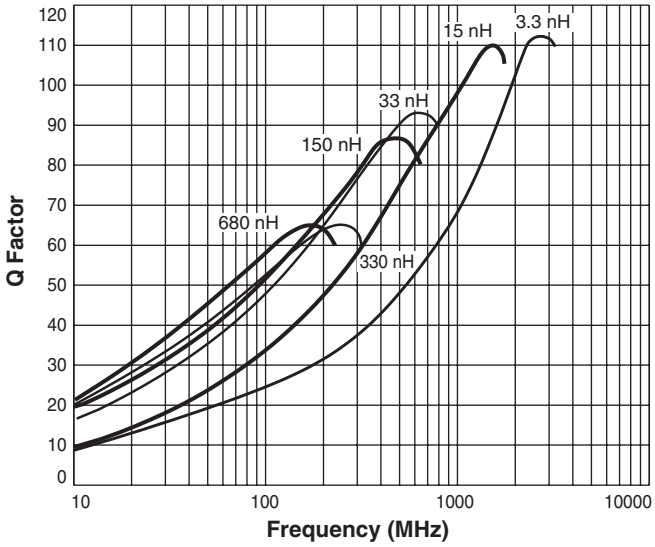
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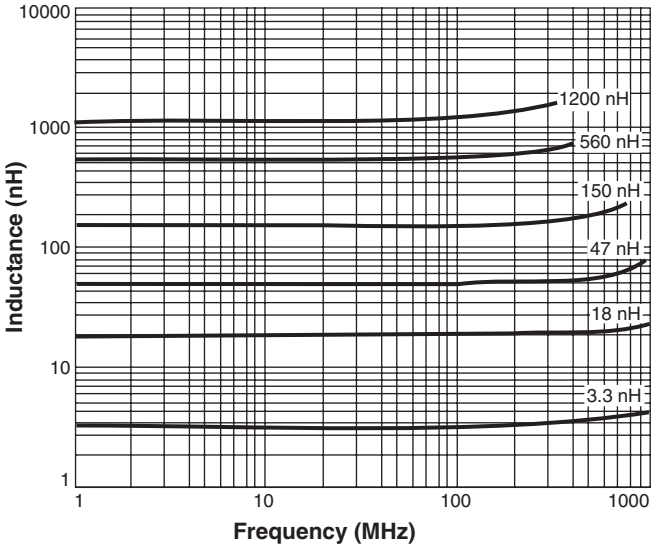
This product may not be used in medical or high risk applications without prior Coilcraft approval.
Specifications subject to change without notice.
Please check our web site for latest information.

MS376RAA Series (1206)

Typical Q vs Frequency



Typical L vs Frequency



Core material Ceramic

Terminations Tin-lead (63/37) over silver-platinum-glass frit

Ambient temperature –55°C to +125°C with Imax 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

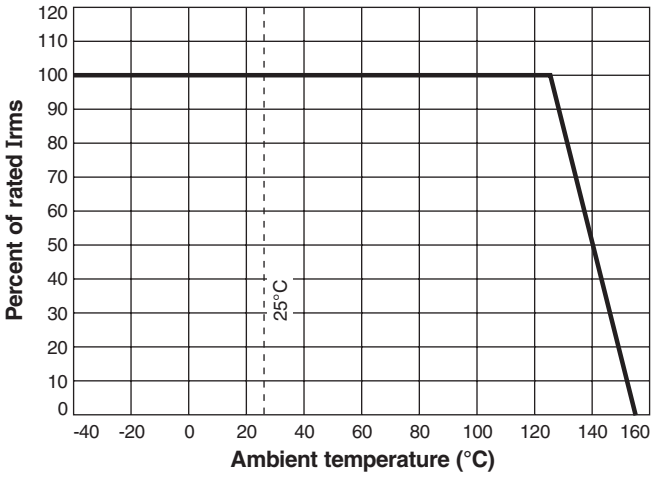
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

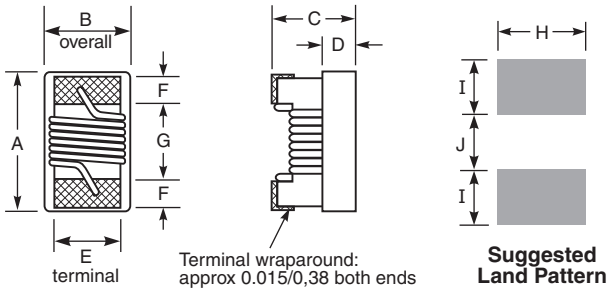
Temperature Coefficient of Inductance (TCL) +25 to +155 ppm/°C

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

Enhanced crush-resistant packaging 2000 per 7″ reel
Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

Current Derating





Amax	Bmax	Cmax	Dref	E	F	G	H	I	J
0.140	0.085	0.060	0.020	0.056	0.020	0.080	0.076	0.040	0.070
3,56	2,16	1,52	0,51	1,42	0,51	2,03	1,93	1,02	1,78

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**.

Coilcraft CPS
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Specifications subject to change without notice.
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