

# Chip Inductors for Critical Applications ST376RAA

- High SRF and excellent Q values
- Tight tolerances, many values at 1%
- 31 inductance values from 3.3 to 1200 nH

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent tolerance	Q min <sup>3</sup>	SRF min <sup>4</sup> (MHz)	DCR max <sup>5</sup> (Ohms)	I <sub>max</sub> (mA)
ST376RAA030JLZ	3.3 @ 100 MHz	5	29 @ 300 MHz	>5000	0.050	1000
ST376RAA060JLZ	6.8 @ 100 MHz	5	24 @ 300 MHz	4380	0.070	1000
ST376RAA100JLZ	10 @ 100 MHz	5	31 @ 300 MHz	3440	0.080	1000
ST376RAA120_LZ	12 @ 100 MHz	5,2	40 @ 300 MHz	2560	0.100	1000
ST376RAA150_LZ	15 @ 100 MHz	5,2	38 @ 300 MHz	2520	0.100	1000
ST376RAA180_LZ	18 @ 100 MHz	5,2	50 @ 300 MHz	2260	0.100	1000
ST376RAA220_LZ	22 @ 100 MHz	5,2	50 @ 300 MHz	2120	0.100	1000
ST376RAA270_LZ	27 @ 100 MHz	5,2	50 @ 300 MHz	1800	0.110	1000
ST376RAA330_LZ	33 @ 100 MHz	5,2	55 @ 300 MHz	1800	0.110	1000
ST376RAA390_LZ	39 @ 100 MHz	5,2	55 @ 300 MHz	1800	0.120	1000
ST376RAA470_LZ	47 @ 100 MHz	5,2	55 @ 300 MHz	1500	0.130	1000
ST376RAA560_LZ	56 @ 100 MHz	5,2,1	55 @ 300 MHz	1400	0.140	1000
ST376RAA680_LZ	68 @ 100 MHz	5,2,1	48 @ 150 MHz	1180	0.260	900
ST376RAA820_LZ	82 @ 100 MHz	5,2,1	52 @ 150 MHz	1120	0.210	900
ST376RAA101_LZ	100 @ 100 MHz	5,2,1	55 @ 150 MHz	1040	0.260	850
ST376RAA121_LZ	120 @ 100 MHz	5,2,1	53 @ 150 MHz	1040	0.260	800
ST376RAA151_LZ	150 @ 100 MHz	5,2,1	53 @ 150 MHz	920	0.310	750
ST376RAA181_LZ	180 @ 50 MHz	5,2,1	53 @ 150 MHz	780	0.430	700
ST376RAA221_LZ	220 @ 50 MHz	5,2,1	51 @ 150 MHz	700	0.500	670
ST376RAA271_LZ	270 @ 50 MHz	5,2,1	53 @ 150 MHz	630	0.560	630
ST376RAA331_LZ	330 @ 50 MHz	5,2,1	30 @ 35 MHz	570	0.620	590
ST376RAA391_LZ	390 @ 50 MHz	5,2,1	31 @ 35 MHz	540	0.750	530
ST376RAA471_LZ	470 @ 50 MHz	5,2,1	31 @ 35 MHz	500	1.30	490
ST376RAA561_LZ	560 @ 35 MHz	5,2,1	31 @ 35 MHz	440	1.34	460
ST376RAA621_LZ	620 @ 35 MHz	5,2,1	32 @ 35 MHz	440	1.60	400
ST376RAA681_LZ	680 @ 35 MHz	5,2,1	32 @ 35 MHz	410	1.58	430
ST376RAA751_LZ	750 @ 35 MHz	5,2,1	32 @ 35 MHz	400	2.20	350
ST376RAA821_LZ	820 @ 35 MHz	5,2,1	31 @ 35 MHz	370	1.82	400
ST376RAA911_LZ	910 @ 35 MHz	5,2,1	31 @ 35 MHz	350	2.85	330
ST376RAA102_LZ	1000 @ 35 MHz	5,2,1	32 @ 35 MHz	360	2.80	320
ST376RAA122_LZ	1200 @ 35 MHz	5,2,1	32 @ 35 MHz	320	3.20	300

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

ST376RAA122J LZ

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

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

Special order: T = RoHS tin-silver-copper (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 4286A impedance analyzer or equivalent with Coilcraft-provided correlation pieces.

3. Q measured using an Agilent/HP 4291A impedance Analyzer 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.

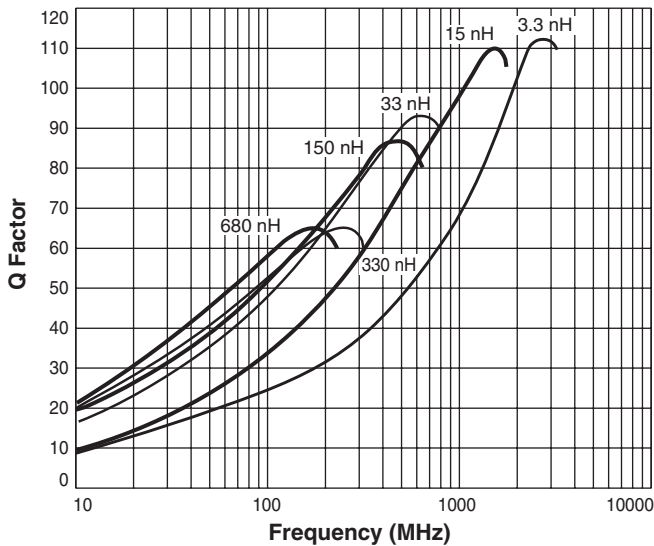
5. DCR measured on a Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF858 fixture.

6. Electrical specifications at 25°C.

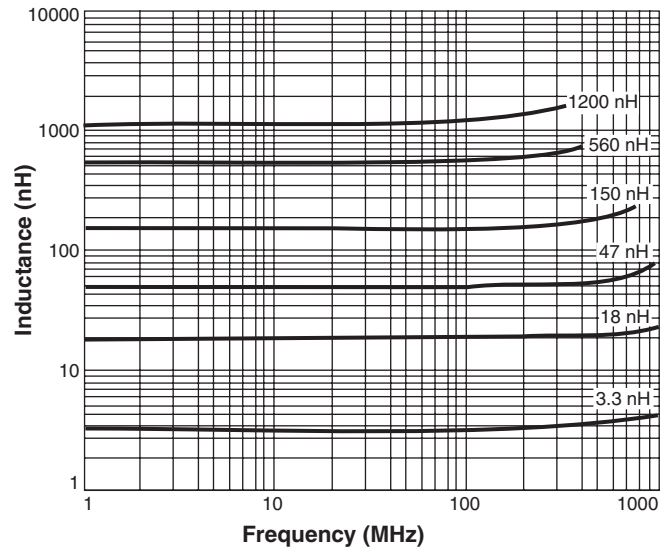
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

# ST376RAA Series (1206)

## Typical Q vs Frequency



## Typical L vs Frequency



**Core material** Ceramic

**Terminations** RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

**Weight:** 19.5 – 23.0 mg

**Ambient temperature** -40°C to +125°C with I<sub>max</sub> current, +125°C to +140°C with derated current

**Storage temperature** Component: -40°C to +1405°C. Packaging: -40°C to +80°C

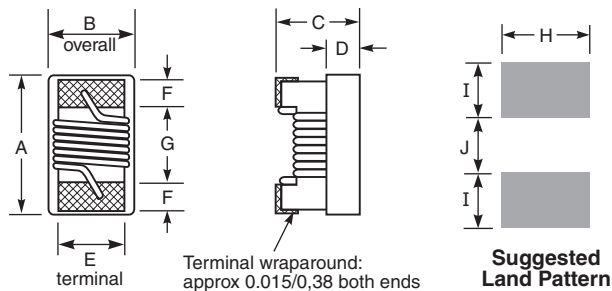
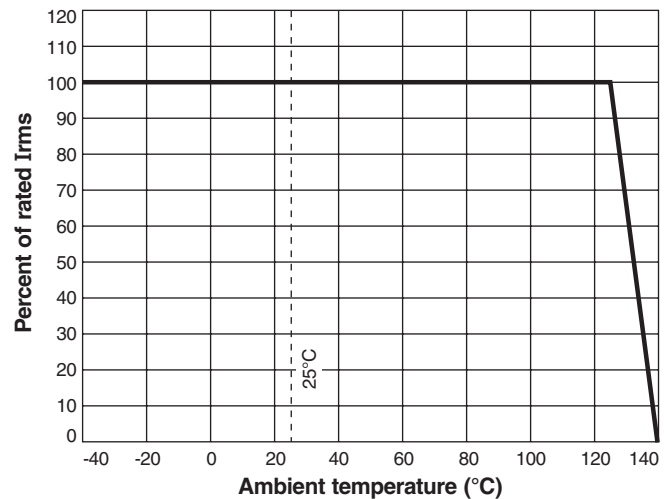
**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

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

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

**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



A max	B max	C max	D ref	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