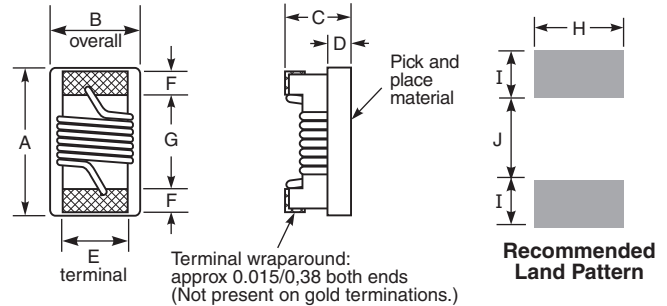
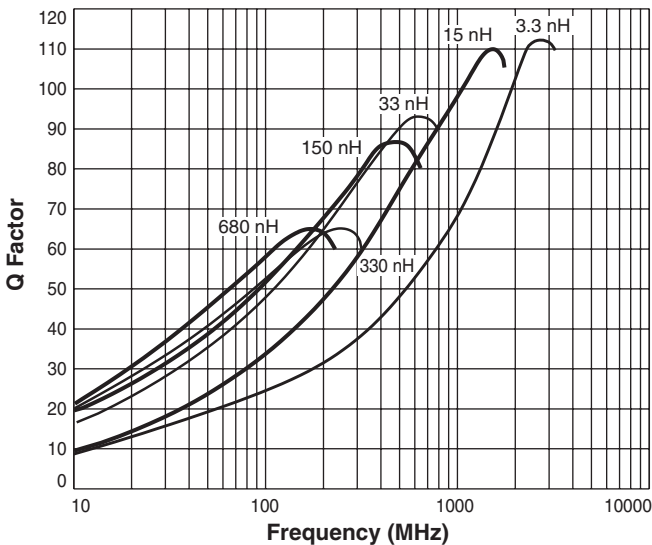


# Outgassing Compliant Chip Inductors AE376RAA

- Standard tin-lead (Sn-Pb) terminations ensures the best possible board adhesion. Note: Nickel barrier termination (tin-lead over tin over nickel over silver-platinum-glass frit, termination code P) is recommended for hand soldering applications.
- Passes NASA low outgassing specifications
- Exceptionally high Q factors
- Outstanding self-resonant frequency
- Tight inductance tolerance
- High temperature materials allow operation in ambient temperatures up to 155°C.
- Qualified per Group B MIL-STD-981



## Typical Q vs Frequency



**Core material** Ceramic

**Terminations** Tin-lead (63/37) over tin over nickel over silver-platinum-glass frit. Other terminations are also available.

**Ambient temperature** -55°C to +125°C with I<sub>max</sub> current

**Maximum part temperature** +155°C (ambient + temp rise).

**Storage temperature** Component: -65°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)

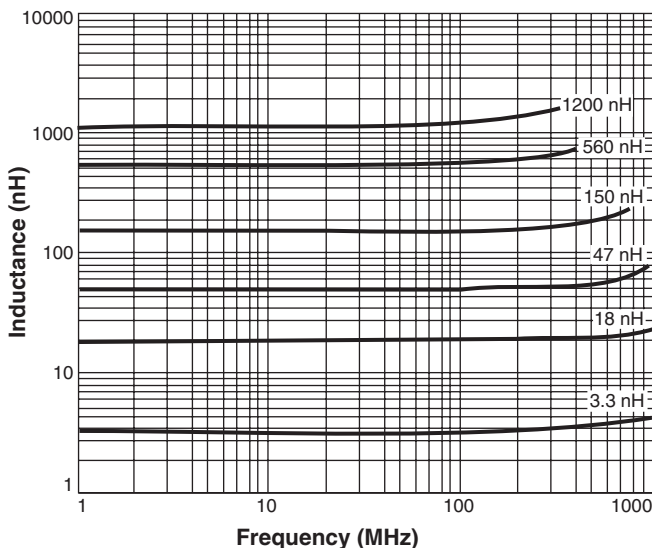
**Enhanced crush-resistant packaging** 2000 per 7" reel

Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

A <sub>max</sub>	B <sub>max</sub>	C <sub>max</sub>	D <sub>ref</sub>	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 inches
3,56	2,16	1,52	0,51	1,42	0,51	2,03	1,93	1,02	1,78 mm

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.

## Typical L vs Frequency



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# AE376RAA Series (1206)

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)
AE376RAA030JPZ	3.3 @ 100 MHz	5	29 @ 300 MHz	>5000	0.050	900
AE376RAA060JPZ	6.8 @ 100 MHz	5	24 @ 300 MHz	4380	0.070	900
AE376RAA100JPZ	10 @ 100 MHz	5,2,1	31 @ 300 MHz	3440	0.080	900
AE376RAA120_PZ	12 @ 100 MHz	5,2,1	40 @ 300 MHz	2560	0.100	900
AE376RAA150_PZ	15 @ 100 MHz	5,2,1	38 @ 300 MHz	2520	0.100	900
AE376RAA180_PZ	18 @ 100 MHz	5,2,1	50 @ 300 MHz	2260	0.100	900
AE376RAA220_PZ	22 @ 100 MHz	5,2,1	50 @ 300 MHz	2120	0.100	900
AE376RAA270_PZ	27 @ 100 MHz	5,2,1	50 @ 300 MHz	1800	0.110	900
AE376RAA330_PZ	33 @ 100 MHz	5,2,1	55 @ 300 MHz	1800	0.110	900
AE376RAA390_PZ	39 @ 100 MHz	5,2,1	55 @ 300 MHz	1800	0.120	900
AE376RAA470_PZ	47 @ 100 MHz	5,2,1	55 @ 300 MHz	1500	0.130	900
AE376RAA560_PZ	56 @ 100 MHz	5,2,1	55 @ 300 MHz	1400	0.140	900
AE376RAA680_PZ	68 @ 100 MHz	5,2,1	48 @ 150 MHz	1180	0.260	600
AE376RAA820_PZ	82 @ 100 MHz	5,2,1	52 @ 150 MHz	1120	0.210	700
AE376RAA101_PZ	100 @ 100 MHz	5,2,1	55 @ 150 MHz	1040	0.260	650
AE376RAA121_PZ	120 @ 100 MHz	5,2,1	53 @ 150 MHz	1040	0.260	620
AE376RAA151_PZ	150 @ 100 MHz	5,2,1	53 @ 150 MHz	920	0.310	720
AE376RAA181_PZ	180 @ 50 MHz	5,2,1	53 @ 150 MHz	780	0.430	580
AE376RAA221_PZ	220 @ 50 MHz	5,2,1	51 @ 150 MHz	700	0.500	550
AE376RAA271_PZ	270 @ 50 MHz	5,2,1	53 @ 150 MHz	630	0.560	470
AE376RAA331_PZ	330 @ 50 MHz	5,2,1	30 @ 35 MHz	570	0.620	370
AE376RAA391_PZ	390 @ 50 MHz	5,2,1	31 @ 35 MHz	540	0.750	370
AE376RAA471_PZ	470 @ 50 MHz	5,2,1	31 @ 35 MHz	500	1.30	320
AE376RAA561_PZ	560 @ 35 MHz	5,2,1	31 @ 35 MHz	440	1.34	300
AE376RAA621_PZ	620 @ 35 MHz	5,2,1	32 @ 35 MHz	440	1.60	270
AE376RAA681_PZ	680 @ 35 MHz	5,2,1	32 @ 35 MHz	410	1.58	260
AE376RAA751_PZ <sup>6</sup>	750 @ 35 MHz	5,2,1	32 @ 35 MHz	400	2.20	220
AE376RAA821_PZ	820 @ 35 MHz	5,2,1	31 @ 35 MHz	370	1.82	240
AE376RAA911_PZ <sup>6</sup>	910 @ 35 MHz	5,2,1	31 @ 35 MHz	350	2.85	190
AE376RAA102_PZ <sup>6</sup>	1000 @ 35 MHz	5,2,1	32 @ 35 MHz	360	2.80	190
AE376RAA122_PZ <sup>6</sup>	1200 @ 35 MHz	5,2,1	32 @ 35 MHz	320	3.20	170

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

**AE376RAA122JPZ**

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

**Termination:** See **Notes about terminations**

**P** = Tin-lead (63/37) over tin over nickel over silver-platinum-glass frit

**C** = Tin-lead (63/37) over gold over nickel over moly-mag

**S** = Tin-lead (63/37) over leach-resistant silver-platinum-glass frit

**A** = Gold over nickel over moly-mag

**L** = Silver-palladium-platinum-glass frit

**Screening:** Z = Unscreened

**H** = Coilcraft CP-SA-10001 Group A

**1** = EEE-INST-002 (Family 3) Level 1

**2** = EEE-INST-002 (Family 3) Level 2

**3** = EEE-INST-002 (Family 3) Level 3

**4** = MIL-STD-981 (Family 50) Class B

**5** = MIL-STD-981 (Family 50) Class S

• Screening performed to the document's latest revision.

• Lot qualification (Group B) available.

• Testing T and U have been replaced with more detailed codes 4, 5, and 1, 2, 3, respectively. Codes T and U can still be used, if necessary. Custom testing also available.

• Country of origin restrictions available; prefix option G or F.

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 16197A test fixture or equivalents.

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. Part is not compliant with MIL-STD-981 Family 50, Class S due to wire gauge.

7. Electrical specifications at 25°C.

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

#### Notes about terminations

For hand soldering applications, the nickel barrier termination (tin-lead over tin over nickel over silver-platinum-glass frit, termination code P) is recommended. Exposed gold or tin in the terminations migrates into the solder.



CRITICAL PRODUCTS & SERVICES

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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.