

PRELIMINARY

Outgassing Compliant Chip Inductors AE376RAA

The AE376RAA 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 high temperature materials that pass NASA low outgassing specifications and allow operation in ambient temperatures up to 155°C. The standard tin-lead (Sn-Pb) terminations over leach-resistant base metalization 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)	I _{max} (mA)
AE376RAA030JSZ	3.3 @ 100 MHz	5	29 @ 300 MHz	>5000	0.050	900
AE376RAA060JSZ	6.8 @ 100 MHz	5	24 @ 300 MHz	4380	0.070	900
AE376RAA100JSZ	10 @ 100 MHz	5,2,1	31 @ 300 MHz	3440	0.080	900
AE376RAA120_SZ	12 @ 100 MHz	5,2,1	40 @ 300 MHz	2560	0.100	900
AE376RAA150_SZ	15 @ 100 MHz	5,2,1	38 @ 300 MHz	2520	0.100	900
AE376RAA180_SZ	18 @ 100 MHz	5,2,1	50 @ 300 MHz	2260	0.100	900
AE376RAA220_SZ	22 @ 100 MHz	5,2,1	50 @ 300 MHz	2120	0.100	900
AE376RAA270_SZ	27 @ 100 MHz	5,2,1	50 @ 300 MHz	1800	0.110	900
AE376RAA330_SZ	33 @ 100 MHz	5,2,1	55 @ 300 MHz	1800	0.110	900
AE376RAA390_SZ	39 @ 100 MHz	5,2,1	55 @ 300 MHz	1800	0.120	900
AE376RAA470_SZ	47 @ 100 MHz	5,2,1	55 @ 300 MHz	1500	0.130	900
AE376RAA560_SZ	56 @ 100 MHz	5,2,1	55 @ 300 MHz	1400	0.140	900
AE376RAA680_SZ	68 @ 100 MHz	5,2,1	48 @ 150 MHz	1180	0.260	600
AE376RAA820_SZ	82 @ 100 MHz	5,2,1	52 @ 150 MHz	1120	0.210	700
AE376RAA101_SZ	100 @ 100 MHz	5,2,1	55 @ 150 MHz	1040	0.260	650
AE376RAA121_SZ	120 @ 100 MHz	5,2,1	53 @ 150 MHz	1040	0.260	620
AE376RAA151_SZ	150 @ 100 MHz	5,2,1	53 @ 150 MHz	920	0.310	720
AE376RAA181_SZ	180 @ 50 MHz	5,2,1	53 @ 150 MHz	780	0.430	580
AE376RAA221_SZ	220 @ 50 MHz	5,2,1	51 @ 150 MHz	700	0.500	550
AE376RAA271_SZ	270 @ 50 MHz	5,2,1	53 @ 150 MHz	630	0.560	470
AE376RAA331_SZ	330 @ 50 MHz	5,2,1	30 @ 35 MHz	570	0.620	370
AE376RAA391_SZ	390 @ 50 MHz	5,2,1	31 @ 35 MHz	540	0.750	370
AE376RAA471_SZ	470 @ 50 MHz	5,2,1	31 @ 35 MHz	500	1.30	320
AE376RAA561_SZ	560 @ 35 MHz	5,2,1	31 @ 35 MHz	440	1.34	300
AE376RAA621_SZ	620 @ 35 MHz	5,2,1	32 @ 35 MHz	440	1.60	270
AE376RAA681_SZ	680 @ 35 MHz	5,2,1	32 @ 35 MHz	410	1.58	260
AE376RAA751_SZ ⁶	750 @ 35 MHz	5,2,1	32 @ 35 MHz	400	2.20	220
AE376RAA821_SZ	820 @ 35 MHz	5,2,1	31 @ 35 MHz	370	1.82	240
AE376RAA911_SZ ⁶	910 @ 35 MHz	5,2,1	31 @ 35 MHz	350	2.85	190
AE376RAA102_SZ ⁶	1000 @ 35 MHz	5,2,1	32 @ 35 MHz	360	2.80	190
AE376RAA122_SZ ⁶	1200 @ 35 MHz	5,2,1	32 @ 35 MHz	320	3.20	170

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

AE376RAA122JSZ

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

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

Special order:

L = RoHS compliant silver-palladium-platinum-glass frit

A = RoHS compliant gold over nickel over moly-mag

Testing: Z = Unscreened

H = Group A screening per Coilcraft CP-SA-10001

T = Screening per MIL-STD-981

U = Screening per EEE-INST-002

F = Screening per ESCC 3201

All screening performed to the document's latest revision

Custom screening also available

- Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer or equivalent with Coilcraft-provided correlation pieces.
- Q measured using an Agilent/HP 4291A impedance Analyzer with an Agilent/HP 16197A test fixture or equivalents.
- SRF measured using an Agilent/HP 8753ES network analyzer or equivalent and a Coilcraft CCF1297 test fixture.
- DCR measured on a micro-ohmmeter.
- Part is not compliant with MIL-STD-981 Family 50, Class S due to wire gauge.
- Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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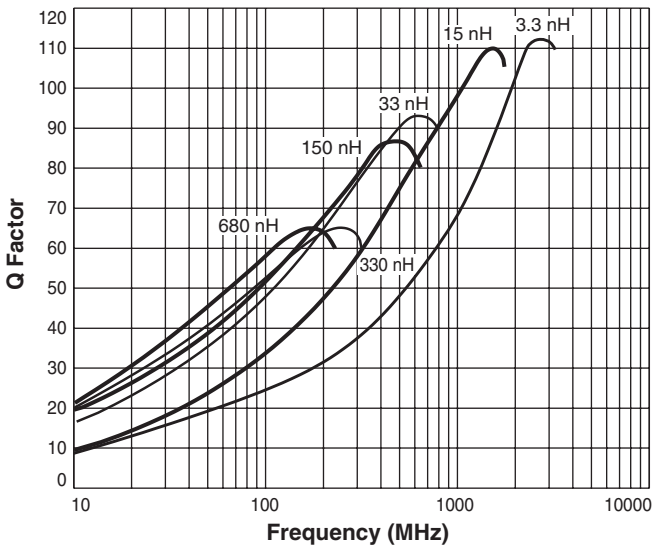
Document AE104-1 Revised 07/24/17

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.

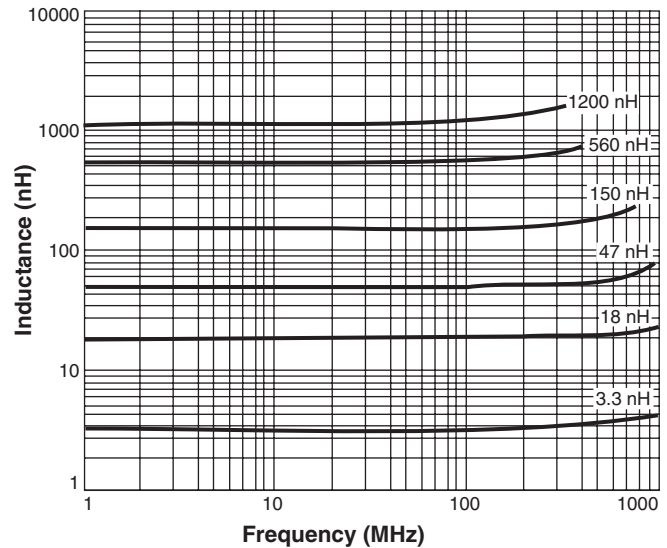
PRELIMINARY

AE376RAA Series (1206)

Typical Q vs Frequency



Typical L vs Frequency



Core material Ceramic

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

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

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

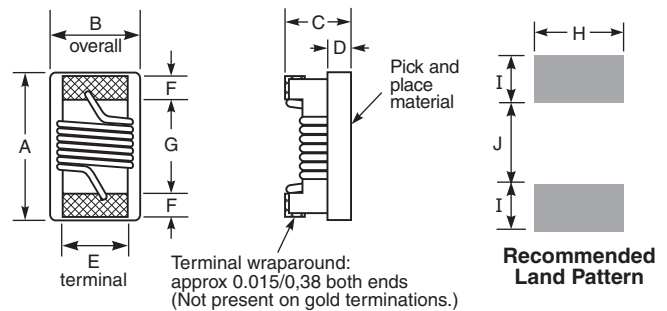
Storage temperature Component: -65°C to +155°C.
Tape and reel packaging: -55°C to +80°C

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



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 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.



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Document AE104-2 Revised 07/24/17

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