

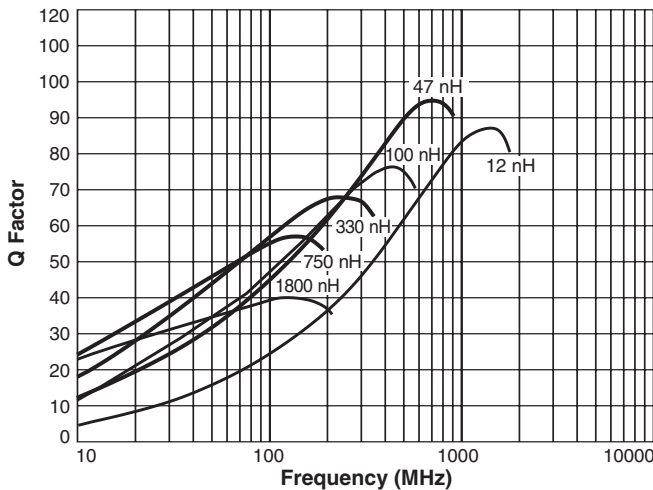
PRELIMINARY

Outgassing Compliant Chip Inductors AE413RAA

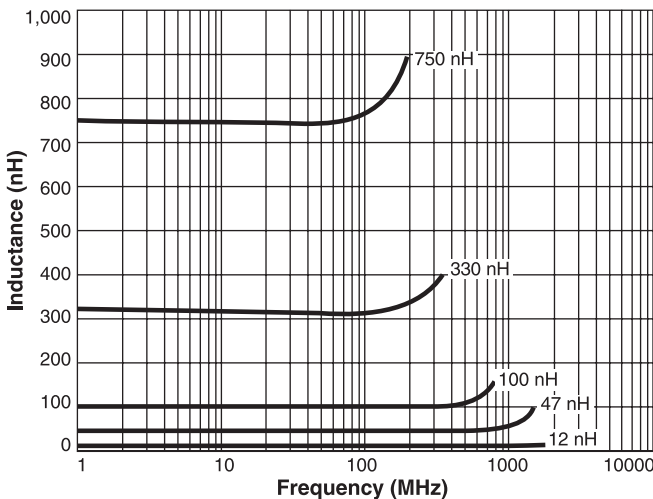
- High SRF and excellent Q values
- Tight tolerances, many values at 1%
- 28 inductance values from 10 nH to 1 μ H

Features high temperature materials that pass NASA low outgassing specifications and 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.

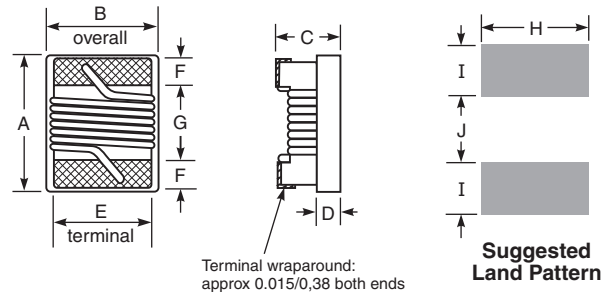
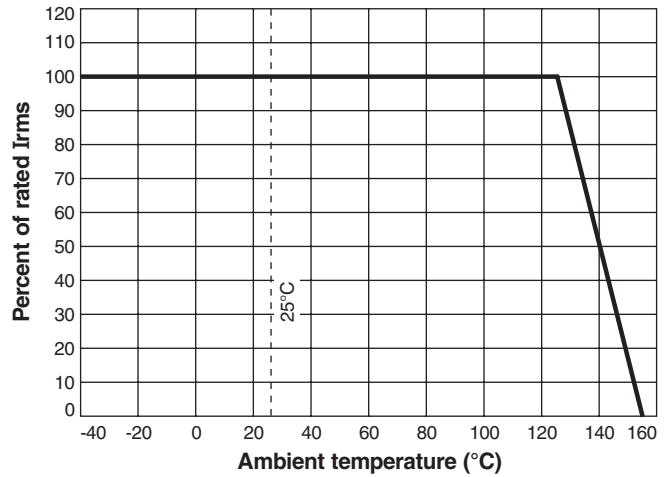
Typical Q vs Frequency



Typical L vs Frequency



Current Derating



Terminal wraparound:
approx 0.015/0,38 both ends

A max	B max	C max	D ref	E	F	G	H	I	J
0.115	0.110	0.080	0.020	0.080	0.020	0.060	0.100	0.040	0.050
2,92	2,79	2,03	0,51	2,03	0,51	1,52	2,54	1,02	1,27

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**.

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 2000 per 7" reel
Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 2.0 mm pocket depth



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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.

PRELIMINARY**AE413RAA Series (1008)**

Part number ¹	Inductance ² (nH)	Percent tolerance	Q min ³	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	Imax (mA)
AE413RAA100_SZ	10 @ 50 MHz	5,2	44 @ 500 MHz	3060	0.08	900
AE413RAA120_SZ	12 @ 50 MHz	5,2	45 @ 500 MHz	2680	0.09	900
AE413RAA150_SZ	15 @ 50 MHz	5,2	50 @ 500 MHz	2220	0.10	850
AE413RAA180_SZ	18 @ 50 MHz	5,2,1	50 @ 350 MHz	2200	0.11	900
AE413RAA220_SZ	22 @ 50 MHz	5,2,1	55 @ 350 MHz	2100	0.12	900
AE413RAA270_SZ	27 @ 50 MHz	5,2,1	55 @ 350 MHz	1380	0.13	900
AE413RAA330_SZ	33 @ 50 MHz	5,2,1	60 @ 350 MHz	1600	0.14	850
AE413RAA390_SZ	39 @ 50 MHz	5,2,1	60 @ 350 MHz	1420	0.15	850
AE413RAA470_SZ	47 @ 50 MHz	5,2,1	65 @ 350 MHz	1420	0.16	820
AE413RAA560_SZ	56 @ 50 MHz	5,2,1	60 @ 350 MHz	1140	0.18	780
AE413RAA680_SZ	68 @ 50 MHz	5,2,1	46 @ 100 MHz	1140	0.20	710
AE413RAA820_SZ	82 @ 50 MHz	5,2,1	48 @ 100 MHz	940	0.22	710
AE413RAA101_SZ	100 @ 25 MHz	5,2,1	37 @ 100 MHz	900	0.56	440
AE413RAA121_SZ	120 @ 25 MHz	5,2,1	40 @ 100 MHz	840	0.63	410
AE413RAA151_SZ	150 @ 25 MHz	5,2,1	40 @ 100 MHz	740	0.70	400
AE413RAA181_SZ	180 @ 25 MHz	5,2,1	38 @ 100 MHz	680	0.77	390
AE413RAA221_SZ	220 @ 25 MHz	5,2,1	40 @ 100 MHz	580	0.84	370
AE413RAA271_SZ	270 @ 25 MHz	5,2,1	45 @ 100 MHz	540	0.91	330
AE413RAA331_SZ	330 @ 25 MHz	5,2,1	45 @ 100 MHz	500	1.05	330
AE413RAA391_SZ	390 @ 25 MHz	5,2,1	45 @ 100 MHz	480	1.12	310
AE413RAA471_SZ	470 @ 25 MHz	5,2,1	45 @ 100 MHz	400	1.19	280
AE413RAA561_SZ	560 @ 25 MHz	5,2,1	40 @ 100 MHz	360	1.33	280
AE413RAA621_SZ	620 @ 25 MHz	5,2,1	45 @ 100 MHz	360	1.40	270
AE413RAA681_SZ	680 @ 25 MHz	5,2,1	45 @ 100 MHz	345	1.47	270
AE413RAA751_SZ	750 @ 25 MHz	5,2,1	45 @ 100 MHz	335	1.54	270
AE413RAA821_SZ	820 @ 25 MHz	5,2,1	45 @ 100 MHz	310	1.61	250
AE413RAA911_SZ	910 @ 25 MHz	5,2,1	35 @ 50 MHz	280	1.68	250
AE413RAA102_SZ	1000 @ 25 MHz	5,2,1	34 @ 50 MHz	280	1.75	230

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

AE413RAA102GSZ

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

Testing: Z = COTS

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

N = Group A screening per Coilcraft CP-SA-10003

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 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 Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF858 test fixture.

6. Electrical specifications at 25°C.

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



CRITICAL PRODUCTS & SERVICES

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