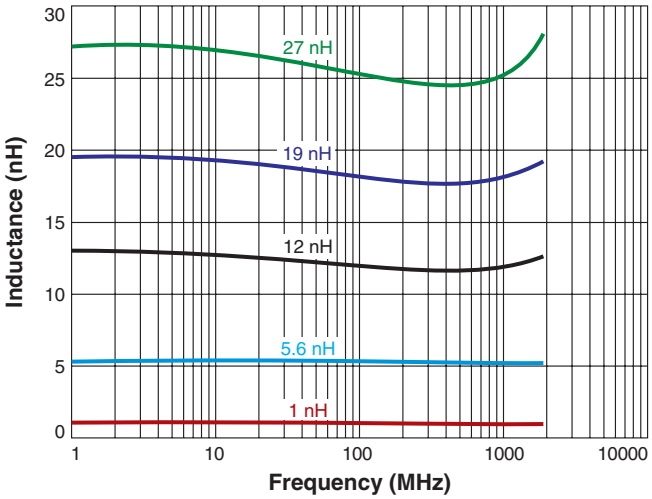
PRELIMINARY

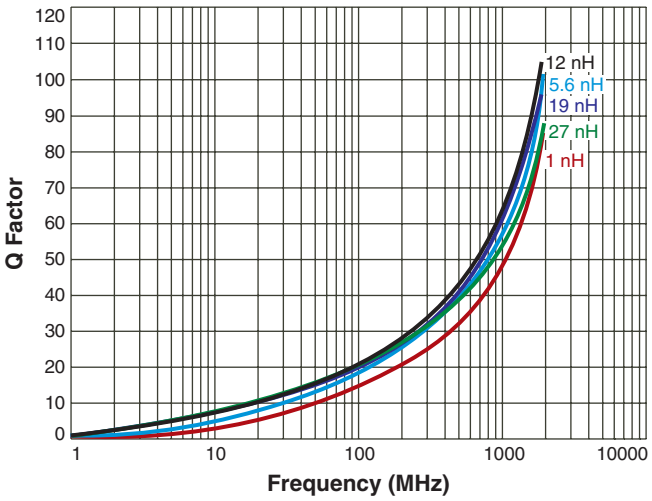
Outgassing Compliant Chip Inductors AE235RAA

- Exceptionally high Q factors
- Outstanding self-resonant frequency
- Tight inductance tolerance
- High temperature materials allow operation in ambient temperatures up to 155°C.
- Passes NASA low outgassing specifications
- Leach-resistant base metalization with tin-lead (Sn-Pb) terminations ensures the best possible board adhesion

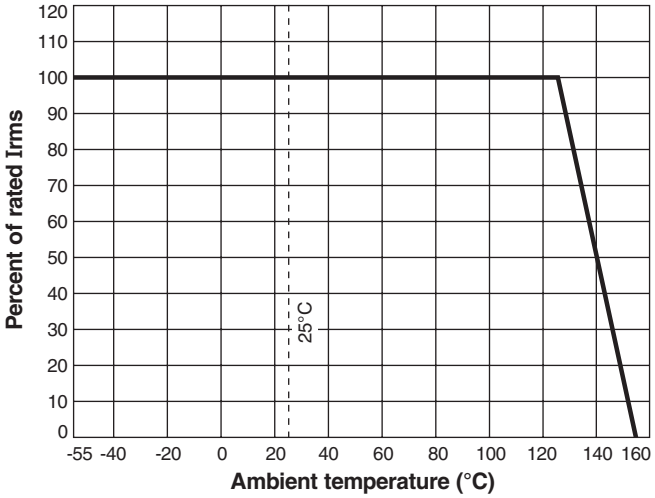
Typical L vs Frequency

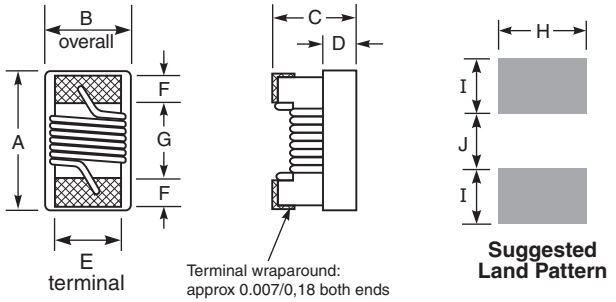


Typical Q vs Frequency



Current Derating





A max	B max	C max	D ref	E	F	G	H	I	J
0.047	0.025	0.026	0.010	0.020	0.009	0.022	0.026	0.014	0.018
1,19	0,64	0,66	0,25	0,51	0,23	0,56	0,66	0,36	0,46

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 Imax current, +125°C to +155°C with derated current

Storage temperature Component: –55°C to +155°C. 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
Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

These parts are preproduction products for electrical evaluation only.
Specification subject to change without notice.

Document AE198-1 Revised 07/13/12

1102 Silver Lake Road
Cary IL 60013
Phone 800-981-0363
Fax 847-639-1508
E-mail cps@coilcraft.com
Web www.coilcraft-cps.com

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PRELIMINARY

AE235RAA Series (0402)

Part number[1]	Inductance[2] (nH)	Percent tolerance	Q min[3]	900 MHz L typ	900 MHz Q typ[4]	1.7 GHz L typ	1.7 GHz Q typ[4]	SRF min[5] (GHz)	DCR max[6] (Ohms)	Imax (mA)
AE235RAA1N0JSZ	1.0	5	20	1.02	77	1.02	69	>5.00	0.045	600
AE235RAA1N8JSZ	1.8	5	20	1.78	54	1.78	75	>5.00	0.070	600
AE235RAA1N9JSZ	1.9	5	20	1.72	68	1.74	82	>5.00	0.070	600
AE235RAA2N0_SZ	2.0	5,2	20	1.93	54	1.93	75	>5.00	0.070	600
AE235RAA2N2_SZ	2.2	5,2	20	2.19	59	2.23	100	>5.00	0.070	600
AE235RAA2N4_SZ	2.4	5,2	20	2.24	51	2.27	68	>5.00	0.068	600
AE235RAA3N3_SZ	3.3	5,2	20	3.10	65	3.12	87	>5.00	0.066	600
AE235RAA3N6_SZ	3.6	5,2	20	3.56	45	3.62	71	>5.00	0.066	600
AE235RAA3N9_SZ	3.9	5,2	20	3.89	50	4.00	75	>5.00	0.066	600
AE235RAA4N3_SZ	4.3	5,2	20	4.19	47	4.30	71	>5.00	0.091	600
AE235RAA4N7_SZ	4.7	5,2	20	4.55	48	4.68	68	4.77	0.130	600
AE235RAA5N1_SZ	5.1	5,2	20	5.15	56	5.25	82	4.80	0.083	600
AE235RAA5N6_SZ	5.6	5,2	20	5.16	54	5.28	81	4.80	0.083	600
AE235RAA6N2_SZ	6.2	5,2	20	6.16	52	6.37	76	4.80	0.083	600
AE235RAA6N8_SZ	6.8	5,2	20	6.56	63	6.93	78	4.80	0.083	600
AE235RAA7N5_SZ	7.5	5,2	22	7.91	60	8.22	88	4.80	0.104	600
AE235RAA8N2_SZ	8.2	5,2	22	8.50	57	8.85	84	4.40	0.104	600
AE235RAA8N7_SZ	8.7	5,2	20	8.78	54	9.21	73	3.80	0.195	480
AE235RAA9N0_SZ	9.0	5,2	22	9.07	62	9.53	78	4.66	0.100	680
AE235RAA9N5_SZ	9.5	5,2	20	9.42	54	9.98	69	3.48	0.195	480
AE235RAA10N_SZ	10.0	5,2	21	9.8	50	10.10	67	3.68	0.195	480
AE235RAA11N_SZ	11.0	5,2	24	10.7	52	11.20	78	3.48	0.120	580
AE235RAA12N_SZ	12.0	5,2	24	11.9	53	12.70	71	3.60	0.120	580
AE235RAA13N_SZ	13.0	5,2	20	13.4	51	14.63	57	3.28	0.210	440
AE235RAA15N_SZ	15.0	5,2	22	14.6	55	15.50	77	3.10	0.172	500
AE235RAA16N_SZ	16.0	5,2	23	16.6	46	18.86	47	3.05	0.220	480
AE235RAA18N_SZ	18.0	5,2	24	18.3	57	20.28	62	2.68	0.230	420
AE235RAA19N_SZ	19.0	5,2	24	19.1	50	21.10	67	3.00	0.202	460
AE235RAA20N_SZ	20.0	5,2	24	20.7	52	23.66	53	2.90	0.250	400
AE235RAA22N_SZ	22.0	5,2	24	23.2	53	26.75	53	2.80	0.300	380
AE235RAA23N_SZ	23.0	5,2	24	23.8	49	26.90	64	2.72	0.300	400
AE235RAA24N_SZ	24.0	5,2	24	25.1	51	29.50	50	2.60	0.300	390
AE235RAA27N_SZ	27.0	5,2	24	28.7	49	33.50	63	2.48	0.298	380
AE235RAA30N_SZ	30.0	5,2	24	31.1	46	38.50	39	2.35	0.410	340
AE235RAA33N_SZ	33.0	5,2	20	34.9	31	41.74	32	2.30	0.300	340
AE235RAA36N_SZ	36.0	5,2	24	39.5	44	48.40	53	2.20	0.440	310
AE235RAA40N_SZ	40.0	5,2	24	39.0	44	47.40	33	2.24	0.440	290

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

AE235RAAR10GSZ

Tolerance: **G** = 2% **J** = 5%
Testing: **Z** = COTS
H = Screening per Coilcraft CP-SA-10001
N = Screening per Coilcraft CP-SA-10003

2. Inductance measured at 250 MHz using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286A impedance analyzer or equivalent.
3. Q measured at 250 MHz using an Agilent/HP 4291A with an Agilent/HP 16197A test fixture or equivalents.
4. Q measured using an Agilent/HP 4291A with an Agilent/HP 16197A test fixture or equivalents.
5. SRF measured using an Agilent/HP 8753ES network analyzer and a Coilcraft CCF1192 test fixture.
6. DCR measured on a Keithley 580 micro-ohmmeter and a Coilcraft CCF1192 test fixture.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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Document AE198-2 Revised 07/13/12

1102 Silver Lake Road
Cary IL 60013
Phone 800-981-0363
Fax 847-639-1508
E-mail cps@coilcraft.com
Web www.coilcraft-cps.com

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