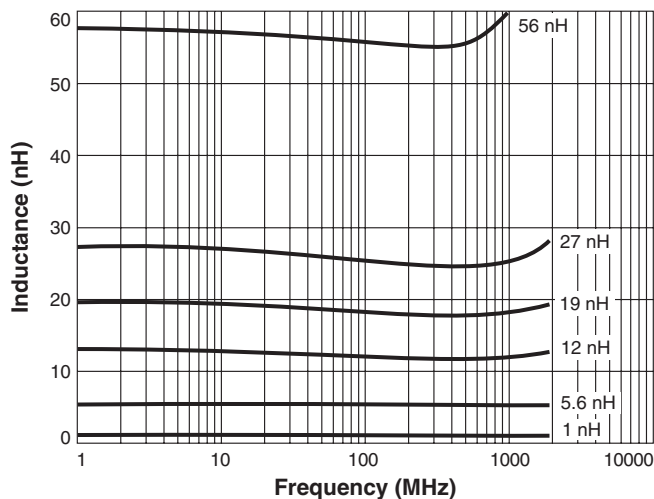


PRELIMINARY

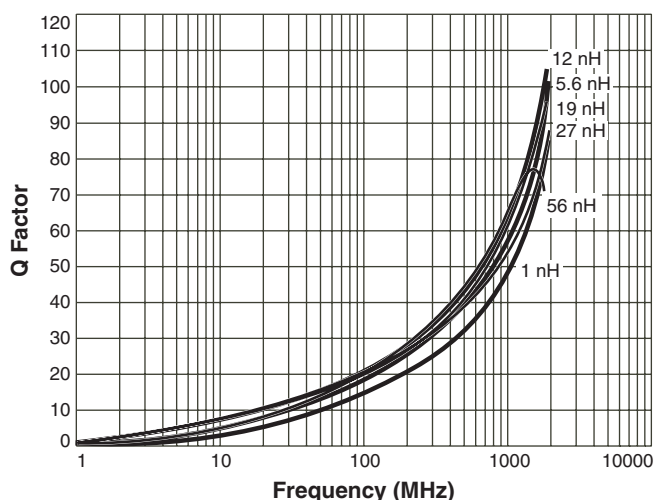
Outgassing Compliant Chip Inductors AE235RAA

- 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

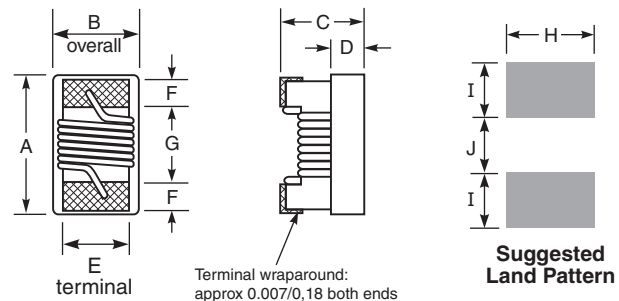
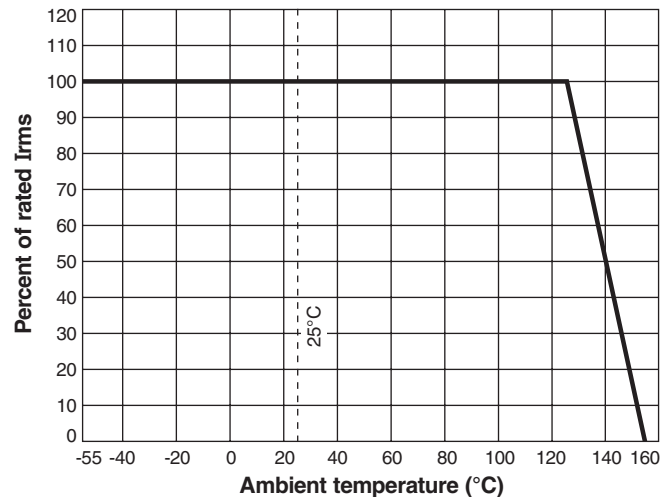
Typical L vs Frequency



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

All dimensions are without solder applied to the terminations. For maximum dimensions with solder, add 0.006 inches / 0,152 mm.

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.
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 06/15/10

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PRELIMINARY**AE235RAA Series (0402)**

Part number ¹	Inductance ² (nH)	Percent tolerance	Q min ³	900 MHz		1.7 GHz		SRF min ⁵ (GHz)	DCR max ⁶ (Ohms)	I _{max} (mA)
				L typ	Q typ ⁴	L typ	Q typ ⁴			
AE235RAA1N0JSZ	1.0	5	20	1.02	77	1.02	69	>5.00	0.045	1360
AE235RAA1N2JSZ	1.2	5	12	1.17	28	1.17	38	>5.00	0.090	740
AE235RAA1N8JSZ	1.8	5	20	1.78	54	1.78	75	>5.00	0.070	1040
AE235RAA1N9JSZ	1.9	5	20	1.72	68	1.74	82	>5.00	0.070	1040
AE235RAA2N0_SZ	2.0	5,2	20	1.93	54	1.93	75	>5.00	0.070	1040
AE235RAA2N2_SZ	2.2	5,2	20	2.19	59	2.23	100	>5.00	0.070	960
AE235RAA2N4_SZ	2.4	5,2	20	2.24	51	2.27	68	>5.00	0.068	790
AE235RAA2N7_SZ	2.7	5,2	16	2.58	42	2.60	61	>5.00	0.120	640
AE235RAA3N3_SZ	3.3	5,2	20	3.10	65	3.12	87	>5.00	0.066	840
AE235RAA3N6_SZ	3.6	5,2	20	3.56	45	3.62	71	>5.00	0.066	840
AE235RAA3N9_SZ	3.9	5,2	20	3.89	50	4.00	75	>5.00	0.066	840
AE235RAA4N3_SZ	4.3	5,2	20	4.19	47	4.30	71	>5.00	0.091	700
AE235RAA4N7_SZ	4.7	5,2	20	4.55	48	4.68	68	4.77	0.130	640
AE235RAA5N1_SZ	5.1	5,2	20	5.15	56	5.25	82	4.80	0.083	800
AE235RAA5N6_SZ	5.6	5,2	20	5.16	54	5.28	81	4.80	0.083	760
AE235RAA6N2_SZ	6.2	5,2	20	6.16	52	6.37	76	4.80	0.083	760
AE235RAA6N8_SZ	6.8	5,2	20	6.56	63	6.93	78	4.80	0.083	680
AE235RAA7N5_SZ	7.5	5,2	22	7.91	60	8.22	88	4.80	0.104	680
AE235RAA8N2_SZ	8.2	5,2	22	8.50	57	8.85	84	4.40	0.104	680
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	640
AE235RAA12N_SZ	12.0	5,2	24	11.9	53	12.70	71	3.60	0.120	640
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	560
AE235RAA16N_SZ	16.0	5,2	23	16.6	46	18.86	47	3.05	0.220	560
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	480
AE235RAA20N_SZ	20.0	5,2	24	20.7	52	23.66	53	2.90	0.250	420
AE235RAA22N_SZ	22.0	5,2	24	23.2	53	26.75	53	2.80	0.300	400
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	400
AE235RAA27N_SZ	27.0	5,2	24	28.7	49	33.50	63	2.48	0.298	400
AE235RAA30N_SZ	30.0	5,2	24	31.1	46	38.50	39	2.35	0.410	400
AE235RAA33N_SZ	33.0	5,2	20	34.9	31	41.74	32	2.30	0.300	400
AE235RAA36N_SZ	36.0	5,2	24	39.5	44	48.40	53	2.20	0.440	320
AE235RAA39N_SZ	39.0	5,2	24	41.7	47	50.23	45	2.10	0.550	200
AE235RAA40N_SZ	40.0	5,2	24	39.0	44	47.40	33	2.24	0.440	320
AE235RAA43N_SZ	43.0	5,2	22	45.8	46	61.55	34	2.03	0.810	100
AE235RAA47N_SZ	47.0	5,2	20	50.0	38	—	—	2.10	0.830	150
AE235RAA51N_SZ	51.0	5,2	19	56.6	40	—	—	1.75	0.820	100
AE235RAA56N_SZ	56.0	5,2	22	62.8	42	—	—	1.76	0.966	100
AE235RAA68N_SZ	68.0	5,2	22	78.2	36	—	—	1.62	1.120	100
AE235RAA82N_SZ	82.0	5,2	25	—	—	—	—	1.26	1.550	100
AE235RAAR10_SZ	100	5,2	25	—	—	—	—	1.16	2.000	50
AE235RAAR12_SZ	120	5,2	22	—	—	—	—	1.20	1.780	50

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

C = Custom screening (please specify when ordering)

2. Inductance measured at 250 MHz using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286 impedance analyzer.

3. Q measured at 250 MHz using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture

4. Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.

5. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

6. DCR measured on a micro-ohmmeter.

7. Electrical specifications at 25°C.

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

Coilcraft CPS
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