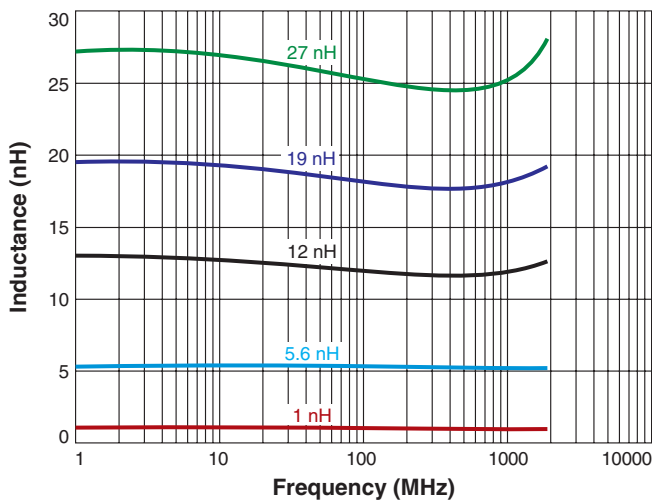


High-Reliability Chip Inductors ML235RAA

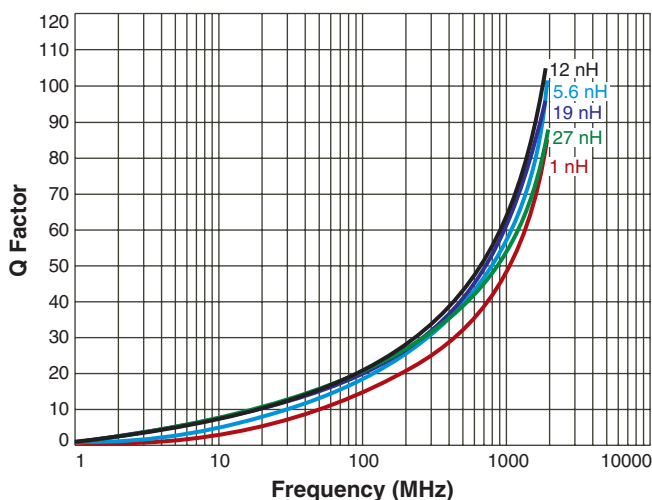
This 0402 size chip inductor series shares all of the characteristics of Coilcraft's other ceramic inductors: exceptionally high Q factors, especially at use frequencies; outstanding self-resonant frequency; tight inductance tolerance; and excellent batch-to-batch consistency.

This robust version of Coilcraft's standard 0402CS series features high temperature materials that allow operation in ambient temperatures up to 155°C.

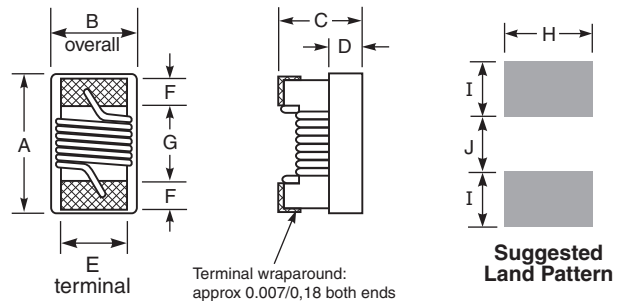
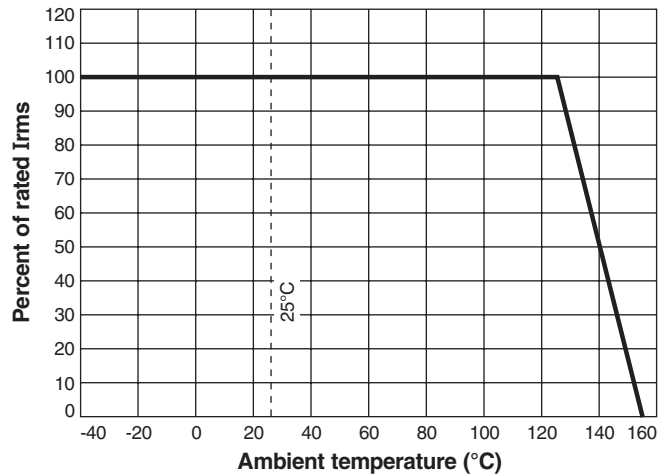
Typical L vs Frequency



Typical Q vs Frequency



Current Derating



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
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

Core material Ceramic

Terminations Silver-palladium-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



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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.

ML235RAA 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			
ML235RAA1N0JLZ	1.0	5	20	1.02	77	1.02	69	>5.00	0.045	600
ML235RAA1N8JLZ	1.8	5	20	1.78	54	1.78	75	>5.00	0.070	600
ML235RAA1N9JLZ	1.9	5	20	1.72	68	1.74	82	>5.00	0.070	600
ML235RAA2N0_LZ	2.0	5,2	20	1.93	54	1.93	75	>5.00	0.070	600
ML235RAA2N2_LZ	2.2	5,2	20	2.19	59	2.23	100	>5.00	0.070	600
ML235RAA2N4_LZ	2.4	5,2	20	2.24	51	2.27	68	>5.00	0.068	600
ML235RAA3N3_LZ	3.3	5,2,1	20	3.10	65	3.12	87	>5.00	0.066	600
ML235RAA3N6_LZ	3.6	5,2,1	20	3.56	45	3.62	71	>5.00	0.066	600
ML235RAA3N9_LZ	3.9	5,2,1	20	3.89	50	4.00	75	>5.00	0.066	600
ML235RAA4N3_LZ	4.3	5,2,1	20	4.19	47	4.30	71	>5.00	0.091	600
ML235RAA4N7_LZ	4.7	5,2,1	20	4.55	48	4.68	68	4.77	0.130	600
ML235RAA5N1_LZ	5.1	5,2,1	20	5.15	56	5.25	82	4.80	0.083	600
ML235RAA5N6_LZ	5.6	5,2,1	20	5.16	54	5.28	81	4.80	0.083	600
ML235RAA6N2_LZ	6.2	5,2,1	20	6.16	52	6.37	76	4.80	0.083	600
ML235RAA6N8_LZ	6.8	5,2,1	20	6.56	63	6.93	78	4.80	0.083	600
ML235RAA7N5_LZ	7.5	5,2,1	22	7.91	60	8.22	88	4.80	0.104	600
ML235RAA8N2_LZ	8.2	5,2,1	22	8.50	57	8.85	84	4.40	0.104	600
ML235RAA8N7_LZ	8.7	5,2,1	20	8.78	54	9.21	73	3.80	0.195	480
ML235RAA9N0_LZ	9.0	5,2,1	22	9.07	62	9.53	78	4.66	0.100	680
ML235RAA9N5_LZ	9.5	5,2,1	20	9.42	54	9.98	69	3.48	0.195	480
ML235RAA10N_LZ	10.0	5,2,1	21	9.8	50	10.10	67	3.68	0.195	480
ML235RAA11N_LZ	11.0	5,2,1	24	10.7	52	11.20	78	3.48	0.120	580
ML235RAA12N_LZ	12.0	5,2,1	24	11.9	53	12.70	71	3.60	0.120	580
ML235RAA13N_LZ	13.0	5,2,1	20	13.4	51	14.63	57	3.28	0.210	440
ML235RAA15N_LZ	15.0	5,2,1	22	14.6	55	15.50	77	3.10	0.172	500
ML235RAA16N_LZ	16.0	5,2,1	23	16.6	46	18.86	47	3.05	0.220	480
ML235RAA18N_LZ	18.0	5,2,1	24	18.3	57	20.28	62	2.68	0.230	420
ML235RAA19N_LZ	19.0	5,2,1	24	19.1	50	21.10	67	3.00	0.202	460
ML235RAA20N_LZ	20.0	5,2,1	24	20.7	52	23.66	53	2.90	0.250	400
ML235RAA22N_LZ	22.0	5,2,1	24	23.2	53	26.75	53	2.80	0.300	380
ML235RAA23N_LZ	23.0	5,2,1	24	23.8	49	26.90	64	2.72	0.300	400
ML235RAA24N_LZ	24.0	5,2,1	24	25.1	51	29.50	50	2.60	0.300	390
ML235RAA27N_LZ	27.0	5,2,1	24	28.7	49	33.50	63	2.48	0.298	380
ML235RAA30N_LZ	30.0	5,2,1	24	31.1	46	38.50	39	2.35	0.410	340
ML235RAA33N_LZ	33.0	5,2,1	20	34.9	31	41.74	32	2.30	0.300	340
ML235RAA36N_LZ	36.0	5,2,1	24	39.5	44	48.40	53	2.20	0.440	310
ML235RAA40N_LZ	40.0	5,2,1	24	39.0	44	47.40	33	2.24	0.440	290

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

ML235RAAR10GLZ

Tolerance: F = 1% 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.

COILCRAFT ACCURATE
PRECISION REPEATABLE
MEASUREMENTS
SEE WEB SITE **TEST FIXTURES**

Document ML198-2 Revised 07/13/12

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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.