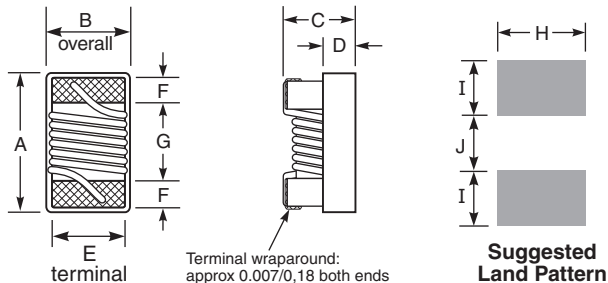


# Chip Inductors for Critical Applications ST235RAG

- Higher Q and lower DCR than other 0402 inductors
- Very high SRF values – as high as 16 GHz
- Excellent current handling capability – up to 2300 mA
- 39 inductance values from 1.0 to 40 nH



A max		B		C max		
0.045		0.020 – 0.028		0.024		inches
1,14		0,51 – 0,71		0,61		mm
D	E	F	G	H	I	J
0.010	0.020	0.008	0.024	0.026	0.014	0.020
0,25	0,51	0,20	0,61	0,66	0,36	0,51

Note: Dimensions are before optional 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** RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

**Weight** 0.7 – 1.0 mg

**Ambient temperature** –40°C to +125°C with I<sub>max</sub> current, +125°C to +140°C with derated current

**Storage temperature** Component: –55°C to +140°C. Tape and reel packaging: –55°C to +80°C

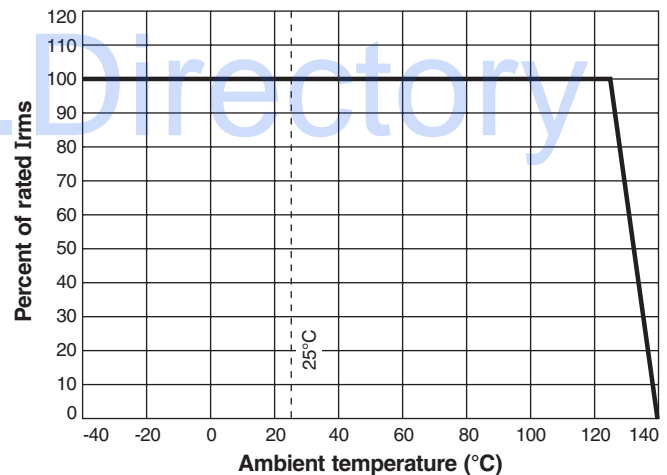
**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)** +25 to +125 ppm/°C

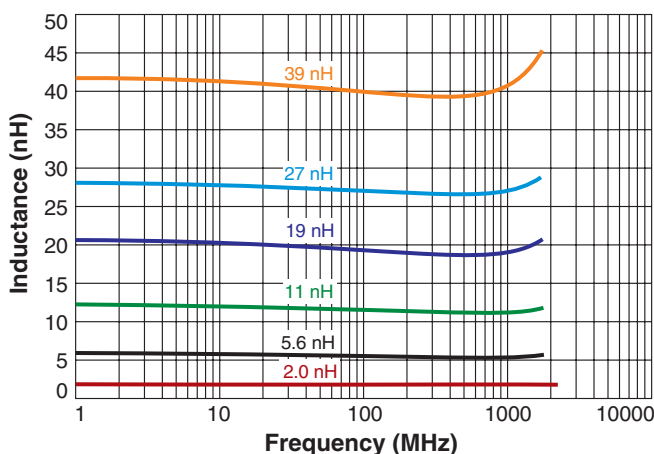
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Packaging** 2000 per 7" reel Paper tape: 8 mm wide, 0.66 mm thick, 2 mm pocket spacing

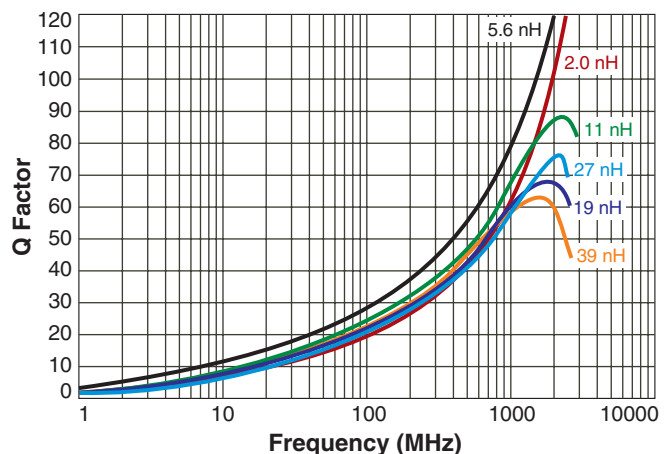
## Current Derating



## Typical L vs Frequency



## Typical Q vs Frequency



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www.coilcraft-cps.com

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.

# ST235RAG Series (0402)

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent tolerance	Test freq (MHz)	Q min at test freq	900 MHz		1.7 GHz		SRF min <sup>4</sup> (GHz)	DCR max <sup>5</sup> (Ohms)	Imax (mA)
					L typ	Q typ <sup>3</sup>	L typ	Q typ <sup>3</sup>			
ST235RAG1N0JLZ	1.0	5	250	18	0.97	46	0.99	72	>5.00	0.030	700
ST235RAG2N0JLZ	2.0	5	250	21	1.96	58	1.98	85	>5.00	0.038	700
ST235RAG2N2JLZ	2.2	5	250	24	2.17	60	2.17	86	>5.00	0.038	700
ST235RAG2N4_LZ	2.4	5,2	250	26	2.37	60	2.38	83	>5.00	0.042	700
ST235RAG2N7_LZ	2.7	5,2	250	18	2.66	62	2.68	85	>5.00	0.090	510
ST235RAG3N3_LZ	3.3	5,2	250	26	3.26	66	3.28	95	>5.00	0.045	700
ST235RAG3N6_LZ	3.6	5,2	250	31	3.56	65	3.58	94	>5.00	0.045	700
ST235RAG3N9_LZ	3.9	5,2	250	31	3.87	64	3.91	98	>5.00	0.045	700
ST235RAG4N3_LZ	4.3	5,2	250	25	4.26	63	4.33	90	>5.00	0.055	700
ST235RAG4N7_LZ	4.7	5,2	250	24	4.67	58	4.74	83	>5.00	0.085	700
ST235RAG5N1_LZ	5.1	5,2	250	18	5.07	54	5.16	76	>5.00	0.125	510
ST235RAG5N6_LZ	5.6	5,2	250	29	5.56	73	5.66	105	4.70	0.055	700
ST235RAG6N2_LZ	6.2	5,2	250	27	6.18	73	6.25	100	4.20	0.055	700
ST235RAG6N8_LZ	6.8	5,2	250	27	6.78	68	6.97	94	4.00	0.070	700
ST235RAG7N5_LZ	7.5	5,2	250	23	7.49	60	7.77	82	3.80	0.100	690
ST235RAG8N2_LZ	8.2	5,2	250	27	8.10	68	8.40	95	3.80	0.065	700
ST235RAG8N7_LZ	8.7	5,2	250	26	8.73	66	9.04	95	3.40	0.070	700
ST235RAG9N0_LZ	9.0	5,2	250	30	8.99	67	9.21	92	3.60	0.080	700
ST235RAG9N5_LZ	9.5	5,2	250	25	9.52	64	9.97	90	3.40	0.090	700
ST235RAG10N_LZ	10	5,2	250	24	9.98	62	10.4	90	3.20	0.110	700
ST235RAG11N_LZ	11	5,2	250	27	11.0	68	11.6	98	3.20	0.065	700
ST235RAG12N_LZ	12	5,2	250	27	12.0	66	12.6	100	3.00	0.100	700
ST235RAG13N_LZ	13	5,2	250	23	13.1	62	13.9	82	2.95	0.155	600
ST235RAG15N_LZ	15	5,2	250	25	15.1	62	16.0	85	2.70	0.115	700
ST235RAG16N_LZ	16	5,2	250	26	16.2	57	17.3	77	2.55	0.150	580
ST235RAG18N_LZ	18	5,2	250	25	18.2	58	19.5	74	2.40	0.125	650
ST235RAG19N_LZ	19	5,2	250	25	19.2	61	20.7	88	2.20	0.150	600
ST235RAG20N_LZ	20	5,2	250	24	20.3	58	22.0	76	2.15	0.185	520
ST235RAG22N_LZ	22	5,2	250	26	22.3	60	24.4	74	1.80	0.165	570
ST235RAG23N_LZ	23	5,2	250	25	23.3	60	25.5	77	1.75	0.165	520
ST235RAG24N_LZ	24	5,2	250	25	24.5	55	27.1	71	1.75	0.210	480
ST235RAG25N_LZ	25	5,2	250	24	25.5	57	28.3	73	1.75	0.260	440
ST235RAG26N_LZ	26	5,2	250	24	26.6	56	29.3	74	1.75	0.290	440
ST235RAG27N_LZ	27	5,2	250	24	27.3	62	29.5	86	1.75	0.350	340
ST235RAG30N_LZ	30	5,2	250	25	30.8	61	35.0	87	1.75	0.350	340
ST235RAG33N_LZ	33	5,2	250	25	34.0	61	38.3	80	1.65	0.310	340
ST235RAG36N_LZ	36	5,2	250	25	37.1	59	42.2	76	1.65	0.390	320
ST235RAG39N_LZ	39	5,2	250	25	40.5	56	47.0	84	1.65	0.420	320
ST235RAG40N_LZ	40	5,2	250	24	41.3	56	47.4	75	1.65	0.420	320

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

**ST235RAGR10GLZ**

**Tolerance:** G = 2% J = 5%

**Termination:** L = RoHS compliant silver-palladium-platinum-glass frit.

**Special order:**

**T** = RoHS tin-silver-copper (95.5/4/0.5) over silver-palladium-platinum-glass frit

**S** = non-RoHS tin-lead (63/37) over silver-palladium-platinum-glass frit.

**R** = Tin over nickel over silver-platinum-glass frit.

**Q** = RoHS tin-silver-copper (95.5/4/0.5) over tin over nickel over silver-platinum-glass frit.

**P** = non-RoHS tin-lead (63/37) over tin over nickel over silver-platinum-glass frit.

**Testing:** Z = COTS

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

2. Inductance measured at 250 MHz using a Coilcraft SMD-F 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 16197 test fixture or equivalents.

4. SRF measured using an Agilent/HP 8753ES network analyzer or equivalent and a Coilcraft CCF1232 test fixture.

5. DCR measured on a Keithley 580 micro-ohmmeter and a Coilcraft CCF1192 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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