

NEW!

Chip Inductors for Critical Applications ST214RAA

- 29 inductance values from 0.75 nH to 75 nH
- Very high SRF values – as high as 34 GHz

- Optimized 0201 size (0.76 × 0.33 × 0.56 mm)

Part number	Inductance ¹ ±5% (nH)	Q ² min	900 MHz		1.7 GHz		2.4 GHz		SRF ³ (GHz)		DCR max ⁴ (mOhms)	I _{max} (mA)	B dim max (in/mm)
			L typ	Q typ ²	L typ	Q typ ²	L typ	Q typ ²	min	typ			
ST214RAAN75JRZ	0.75	13	0.73	35	0.73	54	0.73	69	>5.00	34.0	60	500	0.015/0,38
ST214RAA1N7JRZ	1.7	12	1.65	40	1.67	60	1.68	77	>5.00	34.0	60	500	0.015/0,38
ST214RAA3N0JRZ	3.0	17	2.94	44	2.95	66	2.96	85	>5.00	13.7	83	500	0.015/0,38
ST214RAA4N7JRZ	4.7	18	4.62	46	4.63	69	4.67	91	>5.00	11.6	110	435	0.015/0,38
ST214RAA5N1JRZ	5.1	20	5.01	46	5.04	72	5.10	93	>5.00	10.3	120	450	0.015/0,38
ST214RAA5N6JRZ	5.6	17	5.52	45	5.57	65	5.65	81	>5.00	9.60	130	395	0.015/0,38
ST214RAA6N2JRZ	6.2	18	6.10	45	6.14	66	6.23	86	>5.00	9.90	130	395	0.015/0,38
ST214RAA6N8JRZ	6.8	19	6.70	47	6.77	68	6.90	86	>5.00	8.70	135	385	0.015/0,38
ST214RAA7N5JRZ	7.5	18	7.40	45	7.48	66	7.62	82	>5.00	8.55	155	360	0.015/0,38
ST214RAA8N2JRZ	8.2	18	8.09	44	8.18	67	8.33	84	>5.00	7.75	240	300	0.015/0,38
ST214RAA9N0JRZ	9.0	18	8.88	47	8.97	68	9.15	86	>5.00	8.00	155	370	0.015/0,38
ST214RAA10NJRZ	10	19	9.88	47	10.0	67	10.3	85	>5.00	7.50	190	325	0.015/0,38
ST214RAA11NJRZ	11	18	10.9	43	11.1	61	11.5	69	>5.00	6.60	280	270	0.015/0,38
ST214RAA12NJRZ	12	16	11.9	41	11.2	58	11.7	67	>5.00	6.25	370	215	0.013/0,33
ST214RAA15NJRZ	15	17	14.9	42	15.4	57	16.3	62	>5.00	5.15	415	215	0.013/0,33
ST214RAA16NJRZ	16	18	15.9	44	16.5	58	17.5	62	>5.00	5.45	315	250	0.015/0,38
ST214RAA18NJRZ	18	18	17.9	44	18.7	58	20.0	60	4.04	4.75	460	210	0.013/0,33
ST214RAA20NJRZ	20	19	19.9	44	20.7	57	22.2	59	4.34	5.10	420	215	0.015/0,38
ST214RAA22NJRZ	22	19	21.9	43	22.8	59	24.3	56	3.97	4.67	540	200	0.013/0,33
ST214RAA24NJRZ	24	20	23.9	45	24.9	64	26.5	58	3.83	4.50	460	210	0.015/0,38
ST214RAA27NJRZ	27	20	26.8	45	27.9	64	29.6	58	3.66	4.30	505	200	0.015/0,38
ST214RAA30NJRZ	30	20	30.0	44	31.7	56	34.6	54	3.70	4.35	800	160	0.013/0,33
ST214RAA33NJRZ	33	19	33.2	43	35.7	52	40.1	52	3.40	4.00	710	165	0.013/0,33
ST214RAA36NJRZ	36	18	36.2	42	39.0	51	44.2	46	3.31	3.89	1080	135	0.013/0,33
ST214RAA39NJRZ	39	20	39.2	42	42.0	51	47.3	55	3.19	3.75	1000	145	0.013/0,33
ST214RAA43NJRZ	43	20	43.5	41	47.4	48	54.7	46	3.02	3.55	1000	140	0.013/0,33
ST214RAA56NJRZ	56	20	56.8	47	60.6	63	—	—	2.72	3.20	1460	115	0.013/0,33
ST214RAA68NJRZ	68	20	70.1	40	81.5	42	—	—	2.42	2.85	1920	100	0.013/0,33
ST214RAA75NJRZ	75	19	76.2	47	—	—	—	—	2.34	2.75	2600	70	0.013/0,33

1. When ordering, specify **termination** and **screening** codes:

ST214RAA75NJRZ

Termination: R = Matte tin over nickel over copper over silver

P = Tin-lead (63/37) over tin over copper over nickel over silver.

Q = Tin-silver-copper (95.5/4/0.5) over tin over copper over nickel over silver.

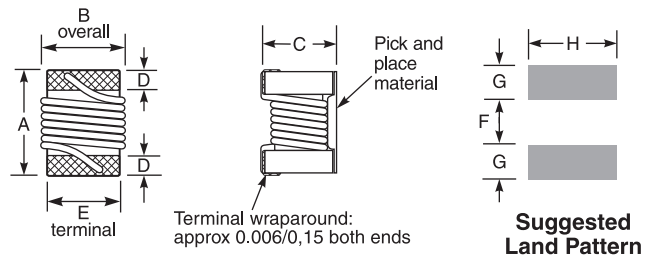
Screening: Z = Unscreened

H = Coilcraft CP-SA-10001 Group A

- Screening performed to the document's latest revision.
- Custom testing also available.
- Country of origin restrictions available; prefix option G.

1. Inductance measured at 250 MHz using a Coilcraft SMD-F fixture in an Agilent/HP 4287 impedance analyzer with Coilcraft-provided correlation pieces.
2. Q measured using an Agilent/HP 4991 with an Agilent/HP 16197 test fixture. Q min measured at 250 MHz.
3. SRF measured using an Agilent/HP 8722ES network analyzer and a Coilcraft CCF1235 test fixture.
4. DCR measured on a micro-ohmmeter and a Coilcraft CCF1099 test fixture.
5. Electrical specifications at 25°C.

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



A _{max}	B _{max}	C _{max}	D	E	F	G	H	
0.030	See table	0.022	0.004	0.011	0.016	0.010	0.014	inches
0,76		0,56	0,10	0,28	0,41	0,25	0,36	mm

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Document ST1366-1 Revised 08/20/24

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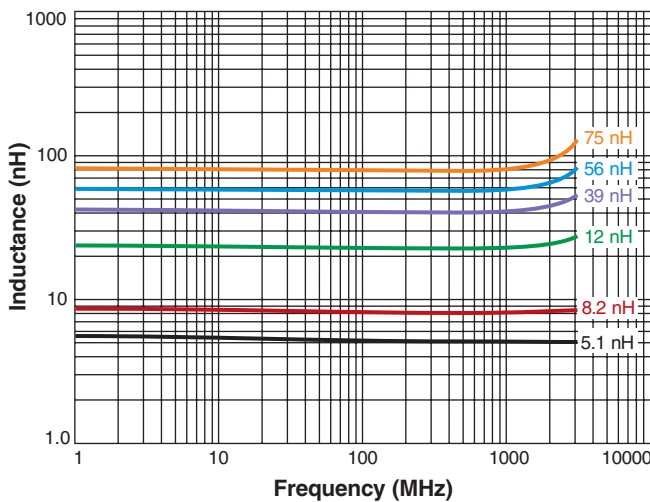
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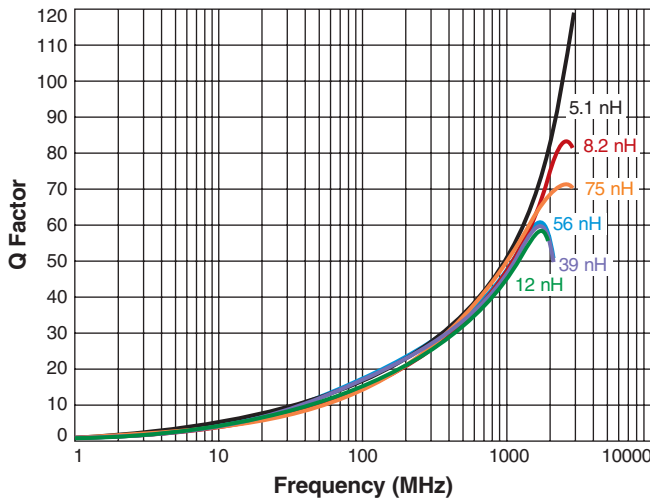
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

Chip Inductors – ST214RAA

Typical L vs Frequency



Typical Q vs Frequency



Core material Ceramic

Terminations Matte tin over nickel over copper over silver

Weight 0.12–0.27 mg

Ambient temperature –40°C to +125°C with Irms current

Maximum part temperature +140°C (ambient + temp rise)

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 +150 ppm/°C

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

Packaging 2000 per 7" reel. Papertape: 8mm wide, 0.68mm thick, 2mm pocket spacing

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).