

Ceramic Chip Inductors ST145RAP

- Higher L than other 0201 inductors
- Twice the Q of thin-film multilayer technology

- Optimized for LTE Antenna matching

Part number ¹	Inductance ² ±5% (nH)	250 MHz Q min ³	900 MHz		1.7 GHz		2.4 GHz		SRF min ⁴ (GHz)	DCR max ⁵ (Ohms)	I _{max} (mA)
			L typ	Q typ ³	L typ	Q typ ³	L typ	Q typ ³			
ST145RAP22NJRZ	22	14	21.8	36	22.7	52	24.2	62	3.50	0.75	140
ST145RAP24NJRZ	24	14	23.8	36	24.9	53	27.1	56	3.50	0.93	130
ST145RAP27NJRZ	27	14	26.9	35	28.2	47	30.5	55	3.20	1.03	125
ST145RAP33NJRZ	33	14	33.0	35	35.4	45	39.6	49	3.00	1.14	120
ST145RAP39NJRZ	39	14	39.4	35	42.7	43	49.5	45	2.75	1.55	100
ST145RAP47NJRZ	47	14	47.6	35	52.8	43	64.3	41	2.60	1.70	95
ST145RAP51NJRZ	51	14	51.9	35	58.3	44	71.5	44	2.75	1.85	90

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

ST145RAP51NJRZ

Termination: R= Tin over nickel over moly-mag.

P= Tin-lead (63/37) over tin over nickel over moly-mag.

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

Screening: Z= Unscreened

H= Coilcraft CP-SA-10001 Group A

- Screening performed to the document's latest revision.
- Lot qualification (Group B) available.
- Custom testing also available.
- Country of origin restrictions available; prefix options G or F.

2. Inductance measured at 250 MHz using a Coilcraft SMD-F fixture in an Agilent/HP 4982 impedance analyzer with Coilcraft-provided correlation pieces.

3. Q measured using an Agilent/HP 4991A with an Agilent/HP 16197 test fixture.

4. SRF measured using an Agilent/HP 8722ES network analyzer and a Coilcraft CCF1235 test fixture.

5. DCR measured on a micro-ohmmeter and a Coilcraft CCF1099 test fixture.

6. Electrical specifications at 25°C.

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

Core material Ceramic

Terminations Tin over nickel over moly-mag

Weight 0.14 – 0.23 mg

Ambient temperature –40°C to +85°C with I_{rms} current,

Maximum part temperature +125°C (ambient + temp rise)

Storage temperature Component: –55°C to +125°C.

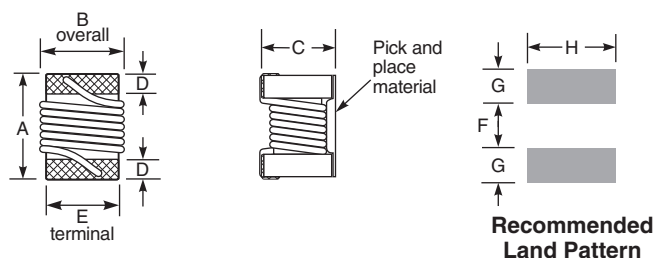
Tape and reel packaging: –55°C to +80°C

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. Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing



A _{max}	B _{max}	C _{max}	D	E	F	G	H	
0.023	0.018	0.018	0.004	0.015	0.009	0.007	0.018	inches
0,58	0,46	0,46	0,10	0,38	0,23	0,18	0,46	mm

COILCRAFT ACCURATE
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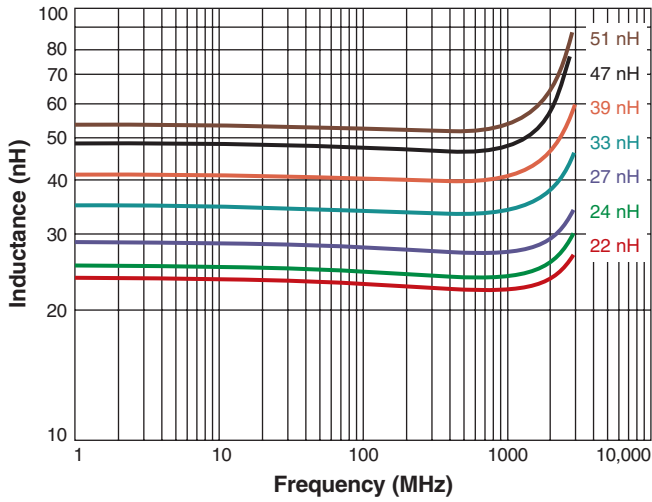
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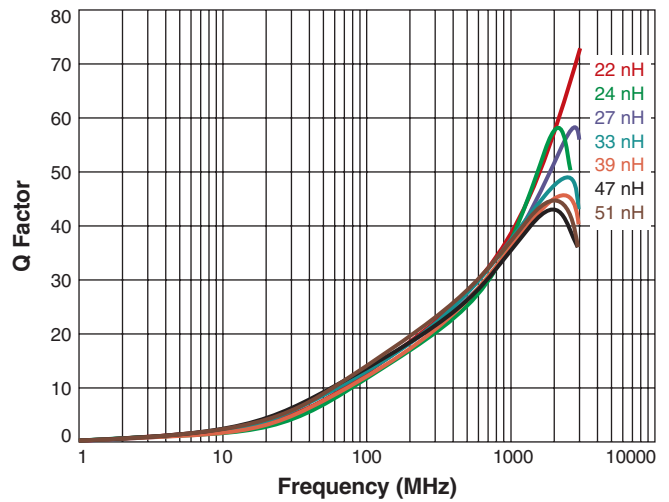
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Chip Inductors – ST145RAP Series

L vs Frequency



Q vs Frequency



Impedance vs Frequency

