

Chip Inductors for Critical Applications ST336RAD

These inductors provide exceptional Q values, even at high frequencies. They have a ceramic body and wire wound construction to provide the highest SRFs, tight inductance tolerance and batch consistency.

This robust version of Coilcraft's standard 0805HQ series features high temperature materials that allow operation in ambient temperatures up to 155°C.

Part number ¹	Inductance ² (nH)	Percent tolerance	Q min ³	SRF min ⁴ (GHz)	DCR max ⁵ (Ohms)	I _{max} (A)
ST336RAD2N5JLZ	2.5 @ 250 MHz	5	56 @ 1000 MHz	>5.00	0.020	2.0
ST336RAD5N6JLZ	5.6 @ 250 MHz	5	83 @ 1000 MHz	4.88	0.035	1.9
ST336RAD6N2JLZ	6.2 @ 250 MHz	5	80 @ 1000 MHz	4.55	0.035	1.8
ST336RAD12NJLZ	12 @ 250 MHz	5	52 @ 500 MHz	2.80	0.045	1.6
ST336RAD16N_LZ	16 @ 250 MHz	5,2	72 @ 500 MHz	2.40	0.060	1.4
ST336RAD18N_LZ	18 @ 250 MHz	5,2	70 @ 500 MHz	2.20	0.060	1.4
ST336RAD20N_LZ	20 @ 250 MHz	5,2	54 @ 250 MHz	2.05	0.060	1.4
ST336RAD27N_LZ	27 @ 250 MHz	5,2,1	58 @ 250 MHz	2.00	0.070	1.3
ST336RAD30N_LZ	30 @ 250 MHz	5,2,1	50 @ 250 MHz	1.74	0.095	1.1
ST336RAD39N_LZ	39 @ 250 MHz	5,2,1	53 @ 250 MHz	1.60	0.110	1.0
ST336RAD48N_LZ	48 @ 200 MHz	5,2,1	44 @ 150 MHz	1.40	0.095	1.1
ST336RAD51N_LZ	51 @ 200 MHz	5,2,1	36 @ 150 MHz	1.28	0.120	0.9

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

ST336RAD51NGLZ

Tolerance: F = 1% G = 2% J = 5%

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

Special order:

S = Tin-lead (63/37) over silver-platinum-glass frit.

T = Tin-silver-copper (95.5/4/0.5) over silver-platinum-glass frit.

Testing: Z = COTS

H = Screening per Coilcraft CP-SA-10001

- Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286 impedance analyzer or equivalent with Coilcraft-provided correlation pieces.
- Q measured at the same frequency as inductance using an Agilent/HP 4291A with an Agilent/HP 16197 test fixture or equivalents.
- SRF measured using an Agilent/HP 8753ES network analyzer or equivalent and a Coilcraft SMD-D test fixture.
- DCR measured on a Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF858 test fixture.
- Electrical specifications at 25°C.

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

Core material Ceramic

Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Ambient temperature -40°C to +125°C with I_{max} current, +125°C to +140°C with derated current

Storage temperature Component: -55°C to +140°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)

Packaging 2000 per 7" reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.65 mm pocket depth

COILCRAFT ACCURATE
PRECISION REPEATABLE
MEASUREMENTS
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CRITICAL PRODUCTS & SERVICES

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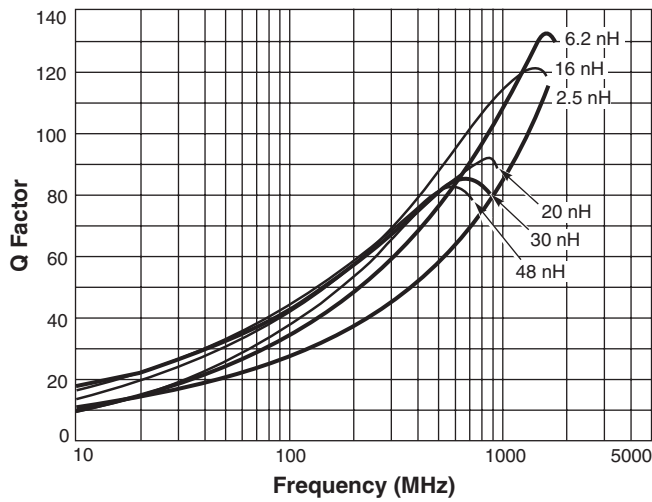
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Document ST197-1 Revised 11/06/12

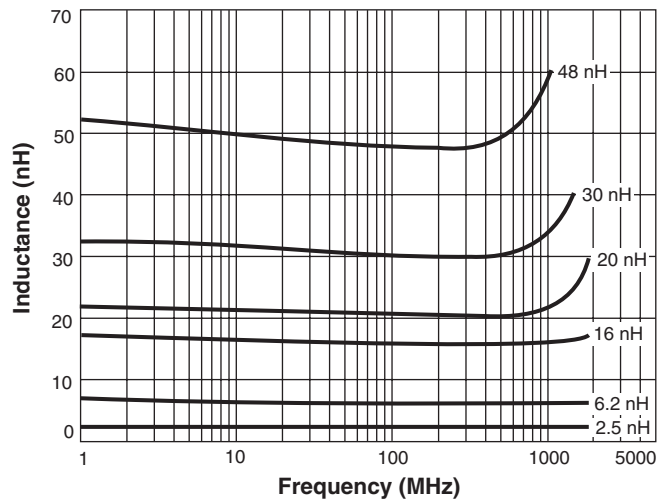
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ST336RAD Series (0805)

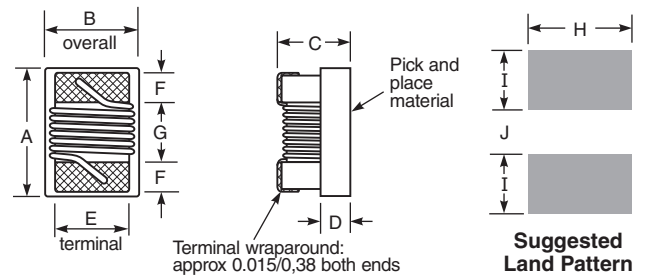
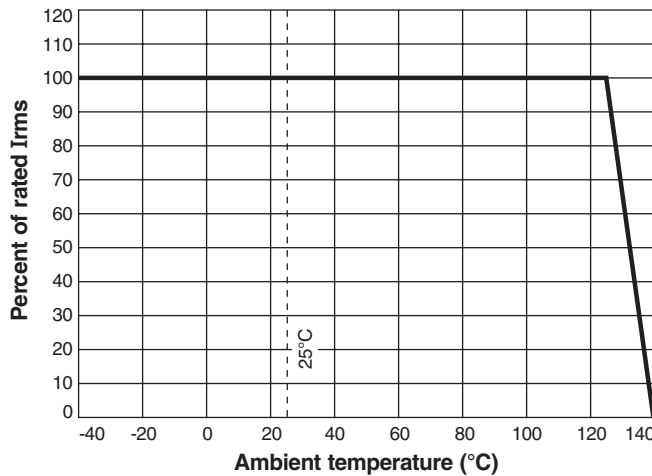
Typical Q vs Frequency



Typical L vs Frequency



Irms Derating



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.090	0.068	0.060	0.020	0.050	0.020	0.040	0.070	0.040	0.030
2,29	1,73	1,52	0,51	1,27	0,51	1,02	1,78	1,02	0,76

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.



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Document ST197-2 Revised 11/16/121

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