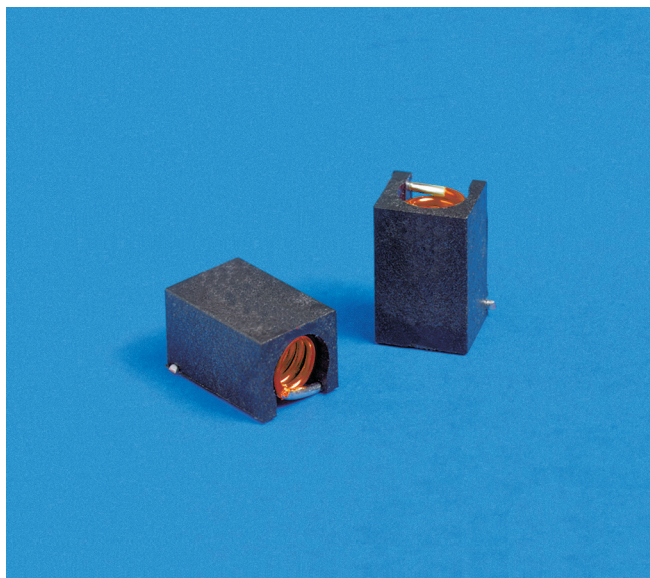


High-Reliability Air Core Inductors MS536RAT



- High Q over a wide range of frequencies
- High temperature materials allow operation in ambient temperatures up to 155°C.
- Tin-lead (63/37) terminations ensure the best possible board adhesion

Terminations Tin-lead (63/37) over copper

Ambient temperature –55°C to +125°C with I_{max} current

Maximum part temperature +155°C (ambient + temp rise).

Storage temperature Component: –55°C to +155°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) +5 to +70 ppm/°C

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

Enhanced crush-resistant packaging 800 per 13" reel
Plastic tape: 24 mm wide, 0.3 mm thick, 12 mm pocket spacing, 6.1 mm pocket depth

Part number ¹	Turns	Inductance ² (nH)	Percent tolerance	Q ³ min	SRF min ⁴ (GHz)	DCR max ⁵ (mOhm)	I _{max} (A)
MS536RAT90N_S_	9	90	5,2	95	1.140	15	3.5
MS536RATR11_S_	10	111	5,2	87	1.020	15	3.5
MS536RATR13_S_	11	130	5,2	87	0.900	20	3.0
MS536RATR17_S_	12	169	5,2	95	0.875	25	3.0
MS536RATR21_S_	13	206	5,2	95	0.800	30	3.0
MS536RATR22_S_	14	222	5,2	92	0.730	35	3.0
MS536RATR25_S_	15	246	5,2	95	0.685	35	3.0
MS536RATR31_S_	16	307	5,2	95	0.660	35	3.0
MS536RATR38_S_	17	380	5,2	95	0.590	50	2.5
MS536RATR42_S_	18	422	5,2	95	0.540	60	2.5
MS536RATR49_S_	19	491	5,2	95	0.535	65	2.0
MS536RATR54_S_	20	538	5,2	87	0.490	90	2.0

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

MS536RATR54GSZ

Tolerance: G = 2% J = 5%

Screening: Z = Unscreened

H = Coilcraft CP-SA-10001 Group A

F = ESCC3201 (F4 operational life performed at 90°C)

1 = EEE-INST-002 (Family 3) Level 1

2 = EEE-INST-002 (Family 3) Level 2

3 = EEE-INST-002 (Family 3) Level 3

4 = MIL-STD-981 (Family 50) Class B

5 = MIL-STD-981 (Family 50) Class S

• Screening performed to the document's latest revision.

• Screening not available for parts with 2% tolerance.

• Lot qualification (Group B) available.

• Testing T and U have been replaced with more detailed codes 4, 5, and 1, 2, 3, respectively. Codes T and U can still be used, if necessary. Custom testing also available.

• Country of origin restrictions available; prefix option G.

2. Inductance measured at 50 MHz on an Agilent/HP 4286A or equivalent with a Coilcraft SMD-A test fixture and correlation.

3. Q measured at 50 MHz on an Agilent/HP 4291A or equivalent with a 16193A test fixture or equivalent.

4. SRF measured on an Agilent/HP 8753ES or equivalent with a Coilcraft CCF1268 test fixture.

5. DCR measured on a Keithley 580 Micro-Ohmmeter or equivalent.

6. Electrical specifications at 25°C.

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

Coilcraft CPS
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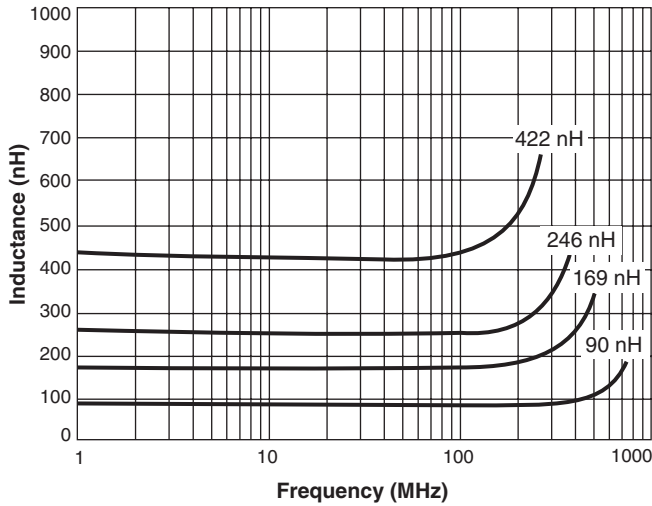
Document MS185-1 Revised 03/15/21

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.

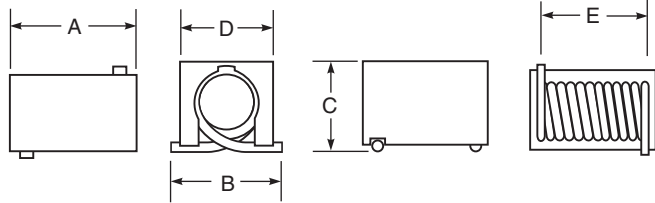
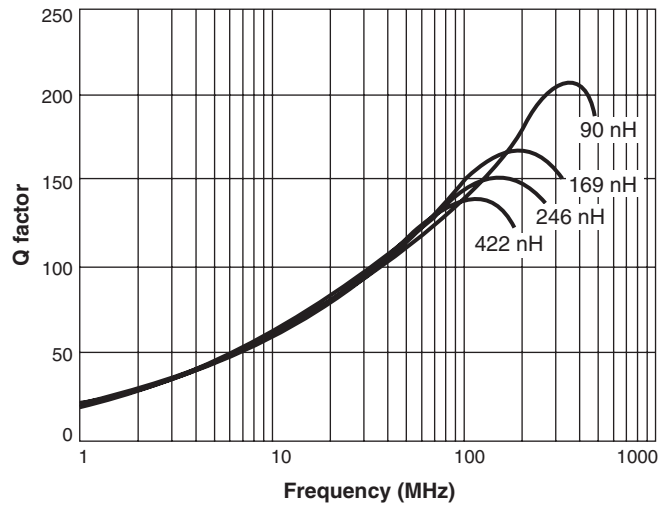
MS536RAT Series Air Core Inductors

S-Parameter files
ON OUR WEB SITE
SPICE models
ON OUR WEB SITE

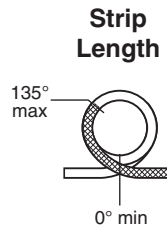
Typical L vs Frequency



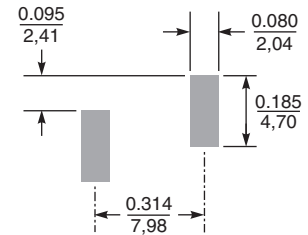
Typical Q vs Frequency



A max	B max	C max	D	E	
0.415	0.260	0.235	0.240 ±0.015	0.314 ±0.020	inches
10,55	6,60	5,97	6,10 ±0,38	7,98 ±0,51	mm



Suggested Land Pattern



Dimensions are in $\frac{\text{inches}}{\text{mm}}$



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