

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 ensures the best possible board adhesion

Terminations Tin-lead (63/37) over copper

Ambient temperature -55°C to +125°C with I_{max} current, +125°C to +155°C with derated current

Storage temperature Component: -55°C to +155°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) +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 typ	Q ³ min	SRF min ⁴ (GHz)	DCR max ⁵ (mOhm)	I _{max} (A)
MS536RAT90N_SZ	9	90	5,2	114	95	1.140	15	3.5
MS536RATR11_SZ	10	111	5,2	104	87	1.020	15	3.5
MS536RATR13_SZ	11	130	5,2	104	87	0.900	20	3.0
MS536RATR17_SZ	12	169	5,2	114	95	0.875	25	3.0
MS536RATR21_SZ	13	206	5,2	114	95	0.800	30	3.0
MS536RATR22_SZ	14	222	5,2	110	92	0.730	35	3.0
MS536RATR25_SZ	15	246	5,2	114	95	0.685	35	3.0
MS536RATR31_SZ	16	307	5,2	114	95	0.660	35	3.0
MS536RATR38_SZ	17	380	5,2	114	95	0.590	50	2.5
MS536RATR42_SZ	18	422	5,2	114	95	0.540	60	2.5
MS536RATR49_SZ	19	491	5,2	114	95	0.535	65	2.0
MS536RATR54_SZ	20	538	5,2	104	87	0.490	90	2.0

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

MS536RATR54 G SZ

Tolerance: G = 2% J = 5%

Testing: Z = COTS

H = Screening per Coilcraft CP-SA-10001

N = Screening per Coilcraft CP-SA-10003

C = Custom screening (please specify when ordering)

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 16193-A test fixture or equivalent.

4. SRF measured on an Agilent/HP 8753D or equivalent with a Coilcraft SMD-D 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
CRITICAL PRODUCTS & SERVICES

Specifications subject to change without notice.

Please check our website for latest information. Document MS185-1 Revised 06/15/10

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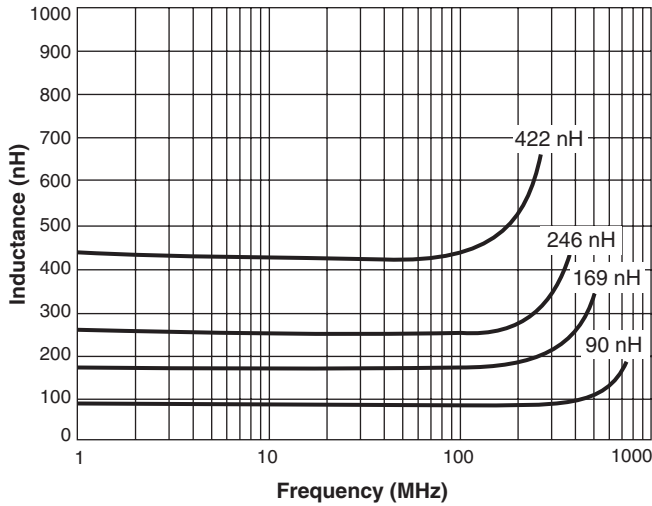
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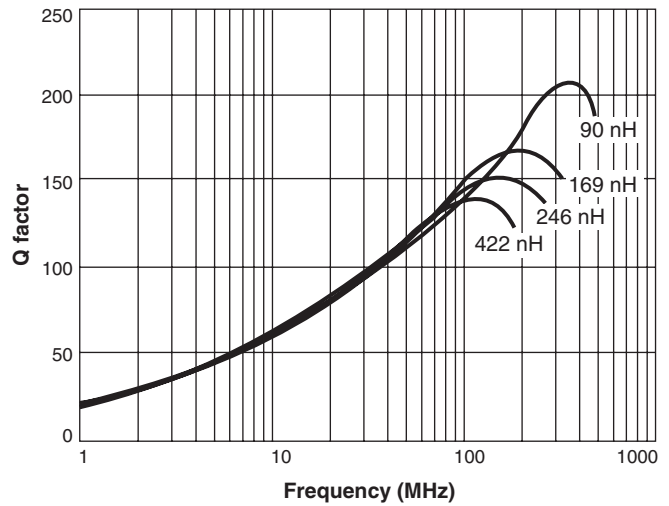
MS536RAT Series Air Core Inductors

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

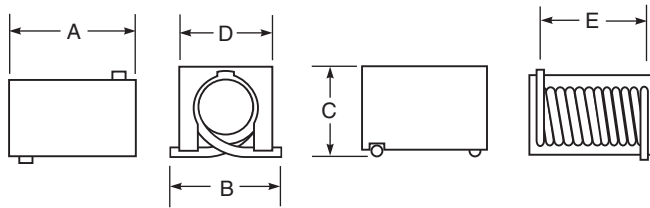
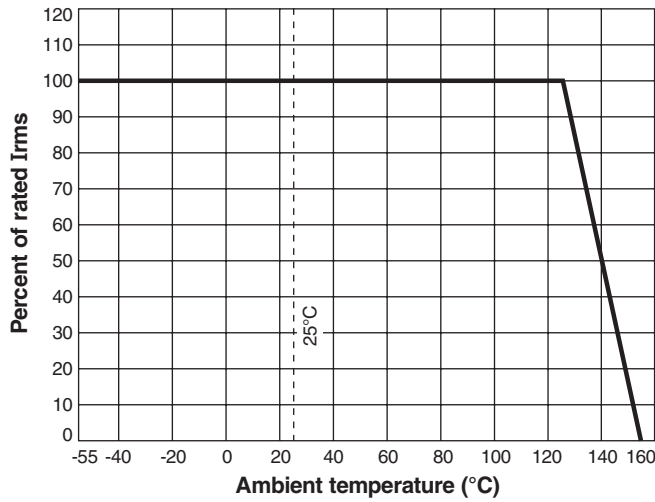
Typical L vs Frequency



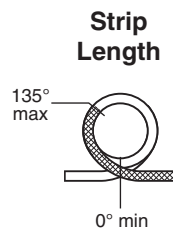
Typical Q vs Frequency



Typical Current Derating



A max	B max	C max	D	E
0.415	0.260	0.235	0.226 ±0.003	0.314 ±0.020
10,55	6,60	5,97	5,74 ±0,08	7,98 ±0,51



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

Suggested Land Pattern

