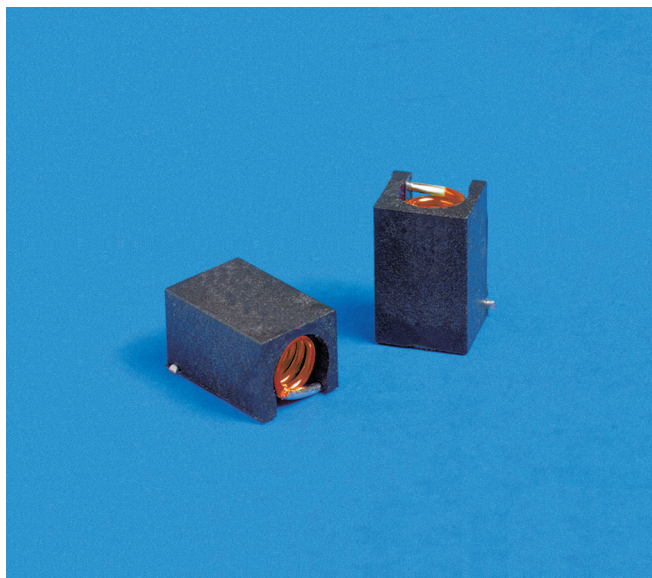


Outgassing Compliant Air Core Inductors AE536RAT



- High Q over a wide range of frequencies
- High temperature materials allow operation in ambient temperatures up to 155°C.
- Passes NASA low outgassing specifications
- 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)
AE536RAT90N_SZ	9	90	5,2	95	1.140	15	3.5
AE536RATR11_SZ	10	111	5,2	87	1.020	15	3.5
AE536RATR13_SZ	11	130	5,2	87	0.900	20	3.0
AE536RATR17_SZ	12	169	5,2	95	0.875	25	3.0
AE536RATR21_SZ	13	206	5,2	95	0.800	30	3.0
AE536RATR22_SZ	14	222	5,2	92	0.730	35	3.0
AE536RATR25_SZ	15	246	5,2	95	0.685	35	3.0
AE536RATR31_SZ	16	307	5,2	95	0.660	35	3.0
AE536RATR38_SZ	17	380	5,2	95	0.590	50	2.5
AE536RATR42_SZ	18	422	5,2	95	0.540	60	2.5
AE536RATR49_SZ	19	491	5,2	95	0.535	65	2.0
AE536RATR54_SZ	20	538	5,2	87	0.490	90	2.0

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

AE536RATR54GSZ

Tolerance: G = 2% J = 5%

Testing: Z = Unscreened

H = Group A screening per Coilcraft CP-SA-10001

T = Screening per MIL-STD-981

U = Screening per EEE-INST-002

F = Screening per ESCC 3201

All screening performed to the document's latest revision

Custom screening also available

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
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

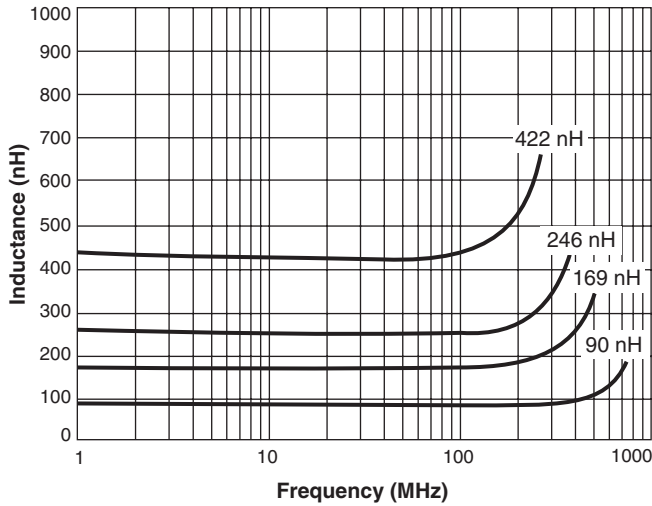
Document AE185-1 Revised 05/18/17

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.

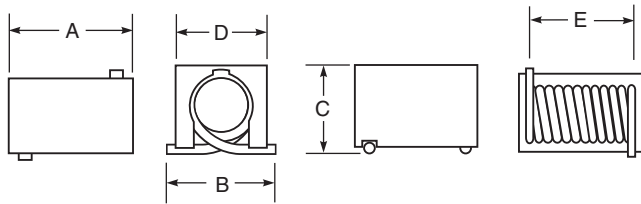
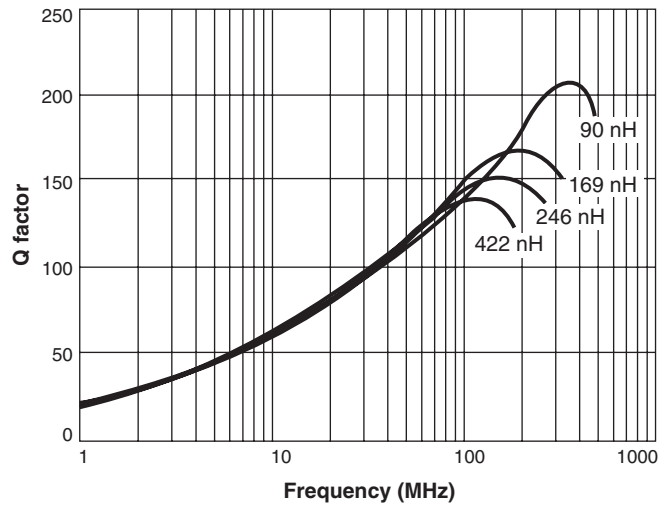
AE536RAT Series Air Core Inductors

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

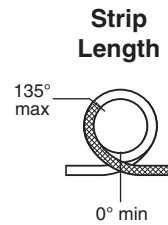
Typical L vs Frequency



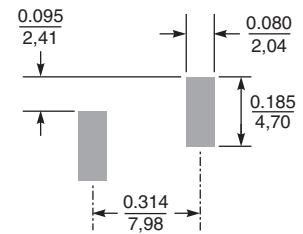
Typical Q vs Frequency



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 $\frac{\text{inches}}{\text{mm}}$



CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

Document AE185-2 Revised 05/18/17

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.