

240°C Air Core Inductors AT392RAS



- Excellent Q factors – up to 130
- Current handling as high as 4.0 Amps!
- 5 inductance values from 8.1 to 27.3 nH
- Flat top and bottom for reliable pick and place and mechanical stability
- Special materials allow operation in ambient temperatures as low as –60°C and up to 240°C.
- Passes NASA low outgassing specifications
- Constructed with materials that are fungal inert (rating of 0 per MIL-STD-810F)

Terminations Tin-lead (63/37) over copper

Ambient temperature –60°C to +185°C with I_{max} current

Maximum part temperature +240°C (ambient + temp rise)

Storage temperature Component: –60°C to +240°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)

Part number ¹	Inductance ² (nH)	% tol	Q ³ min	SRF min ⁴ (GHz)	DCR max (mOhm)	I _{max} (A)
AT392RAS8N1_SZ	8.1	5,2	100	4.0	6.0	4.0
AT392RAS12N_SZ	12.1	5,2	100	3.4	7.0	4.0
AT392RAS17N_SZ	16.6	5,2	100	2.9	8.0	4.0
AT392RAS22N_SZ	21.5	5,2	100	2.6	9.0	4.0
AT392RAS27N_SZ	27.3	5,2	100	2.3	10.0	4.0

1. Please specify **tolerance**, **termination** and **screening** codes:

AT392RAS27NGSZ

Tolerance: G = 2% J = 5%

Termination: S = Tin-lead (63/37) over copper.

Special order: T = RoHS tin-silver-copper (95.5/4/0.5)
or L = RoHS compliant tin-silver over copper.

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 400 MHz, 0.1 V_{rms}, 0 A using an Agilent/HP 4287A LCR meter or equivalent with a Coilcraft SMD-A test fixture and Coilcraft-provided correlation pieces.

3. Q measured at 400 MHz using an Agilent/HP 4291A impedance analyzer or equivalent.

4. SRF measured using an Agilent/HP 8753 network analyzer or equivalent and a Coilcraft CCF1295 test fixture.

5. Electrical specifications at 25°C.

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

COILCRAFT ACCURATE
REPEATABLE
PRECISION MEASUREMENTS
TEST FIXTURES

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Coilcraft CPS

CRITICAL PRODUCTS & SERVICES

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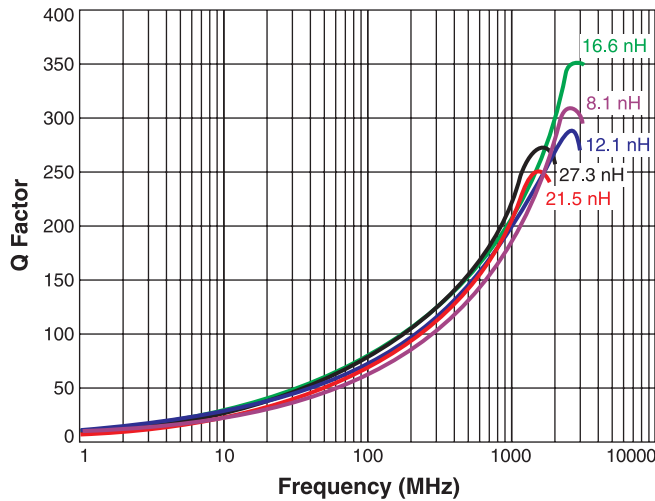
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Document AT617-1 Revised 05/26/20

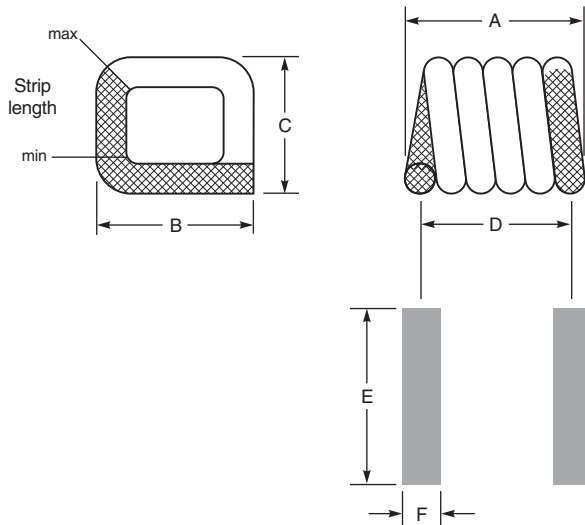
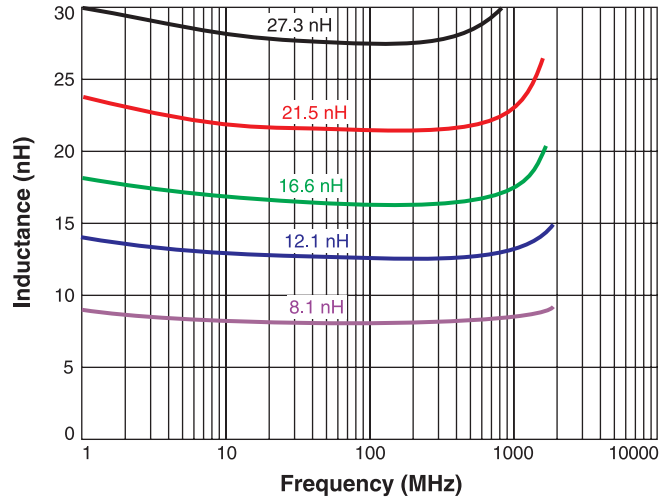
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AT392RAS Series Air Core Inductors

Q vs Frequency



L vs Frequency



Recommended Land Pattern

Packaging 2000/7" reel; 7500/13" reel
 Plastic tape: 12 mm wide, 0.254 mm thick, 4 mm pocket spacing

Part number	A	B	C	D	E	F	Weight (mg)	Tape pocket depth (mm)
AT392RAS8N1	1,473 ±0,152	2,134 ±0,152	1,829 ±0,203	1,12	2,8	0,64	12,8	2,01
AT392RAS12N	1,854 ±0,152	2,134 ±0,152	1,829 ±0,203	1,45	2,8	0,64	16,9	1,96
AT392RAS17N	2,210 ±0,152	2,134 ±0,152	1,829 ±0,203	1,83	2,8	0,64	21,1	2,01
AT392RAS22N	2,565 ±0,152	2,134 ±0,152	1,829 ±0,203	2,18	2,8	0,64	24,7	1,98
AT392RAS27N	2,972 ±0,152	2,134 ±0,152	1,829 ±0,203	2,57	2,8	0,64	28,7	1,01

All dimensions are in mm.



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Document AT617-2 Revised 05/26/20

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