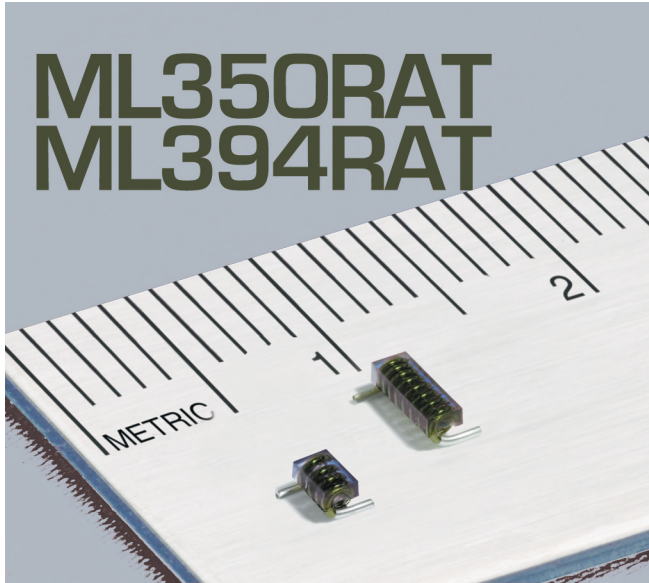


High-Reliability Air Core Inductors ML350RAT ML394RAT



- High Q over a wide range of frequencies
- High temperature materials allow operation in ambient temperatures up to 155°C.

Terminations Tin-silver over copper

Weight ML350RAT: 6 mg – 18 mg; ML394RAT: 14 mg – 30 mg

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

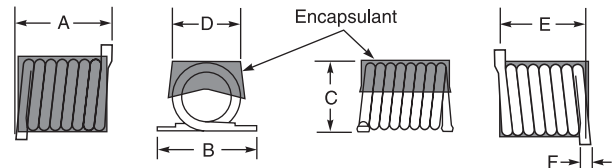
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Enhanced crush-resistant packaging

ML350RAT: 500 per 7" reel Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.5 mm pocket depth

ML394RAT: 500 per 7" reel Plastic tape: 12 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

| Part number ¹ | Turns | L ² (nH) | Percent tol | Q ³ min | SRF min ⁴ (GHz) | DCR max ⁵ (mOhm) | I _{max} (A) |
|--------------------------|-------|------------------------|----------------|-----------------------|----------------------------------|-----------------------------------|-------------------------|
| ML350RAT1N7KLZ | 2 | 1.65 | 10 | 100 | 10.0 | 4.0 | 1.6 |
| ML350RAT2N6JLZ | 3 | 2.55 | 5 | 100 | 8.2 | 5.0 | 1.6 |
| ML350RAT3N9_LZ | 4 | 3.85 | 5,2 | 100 | 7.5 | 6.0 | 1.6 |
| ML350RAT5N4_LZ | 5 | 5.40 | 5,2 | 100 | 7.0 | 8.0 | 1.6 |
| ML394RAT5N6_LZ | 6 | 5.60 | 5,2 | 100 | 6.5 | 9.0 | 1.6 |
| ML394RAT7N2_LZ | 7 | 7.15 | 5,2 | 100 | 6.0 | 10 | 1.6 |
| ML394RAT8N8_LZ | 8 | 8.80 | 5,2 | 100 | 6.0 | 12 | 1.6 |
| ML394RAT9N9_LZ | 9 | 9.85 | 5,2 | 100 | 5.2 | 13 | 1.6 |
| ML394RAT13N_LZ | 10 | 12.55 | 5,2 | 100 | 4.6 | 14 | 1.6 |



| Size | A max | B max | C max | D | E | F max |
|------|-------|-------|-------|--------------|--------------|-------|
| 350 | 0.095 | 0.135 | 0.060 | 0.055 ±0.010 | 0.072 ±0.010 | 0.020 |
| | 2,41 | 3,43 | 1,52 | 1,40 ±0,25 | 1,83 ±0,25 | 0,51 |
| 394 | 0.165 | 0.135 | 0.062 | 0.055 ±0.010 | 0.144 ±0.012 | 0.020 |
| | 4,19 | 3,43 | 1,58 | 1,40 ±0,25 | 3,66 ±0,30 | 0,51 |

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

ML394RAT10GLZ

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 800 MHz on an Agilent/HP 4286A or equivalent with a Coilcraft SMD-A test fixture and correlation.

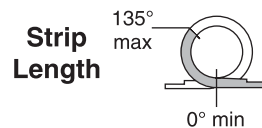
3. Q measured at 800 MHz on an Agilent/HP 4291A or equivalent with a 16193A test fixture or equivalent.

4. SRF measured on an Agilent/HP 8753ES or equivalent with a Coilcraft CCF1268 test fixture. Parts with SRF >5 GHz are verified to >5 GHz in screening.

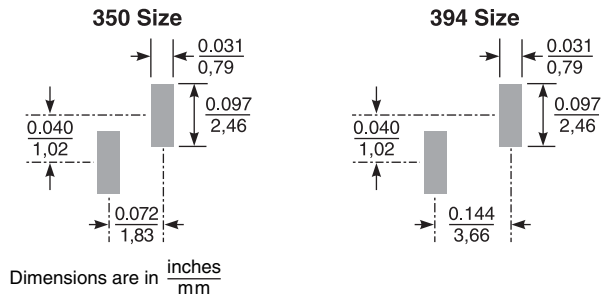
5. DCR measured on a Keithley 580 Micro-Ohmmeter or equivalent.

6. Electrical specifications at 25°C.

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



Suggested Land Patterns



CRITICAL PRODUCTS & SERVICES

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Document ML163-1 Revised 07/05/17

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.

S-Parameter files

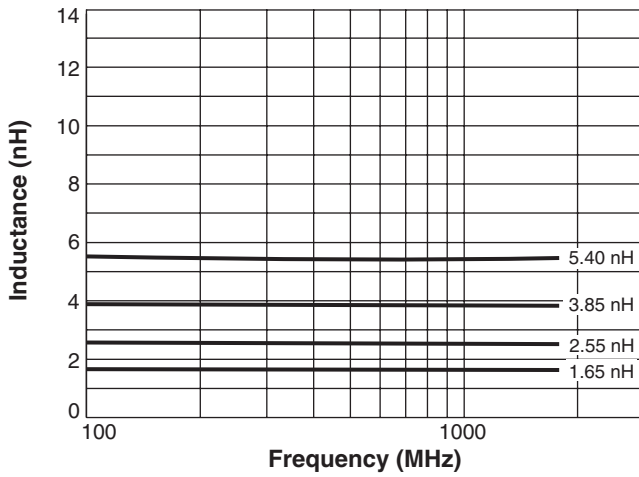
ON OUR WEB SITE

SPICE models

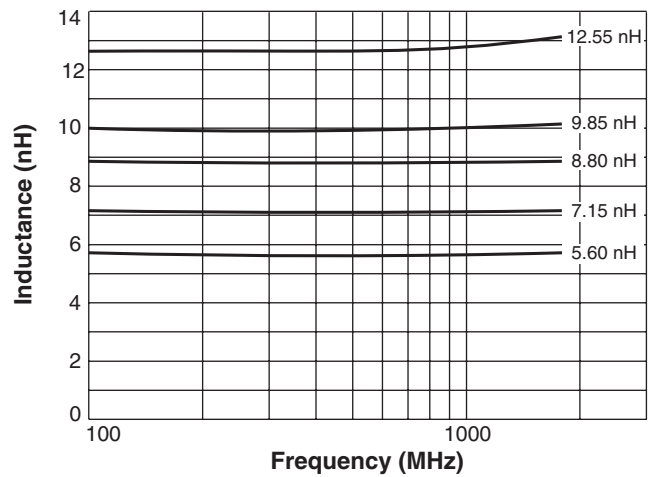
ON OUR WEB SITE

ML350RAT/ML394RAT Air Core Inductors

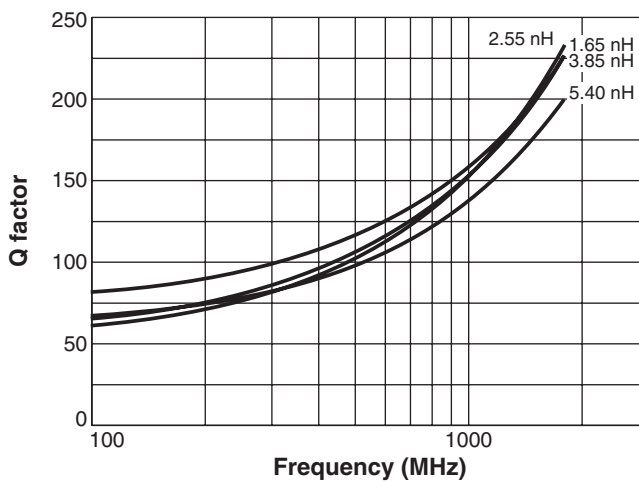
L vs Frequency – ML350RAT Series



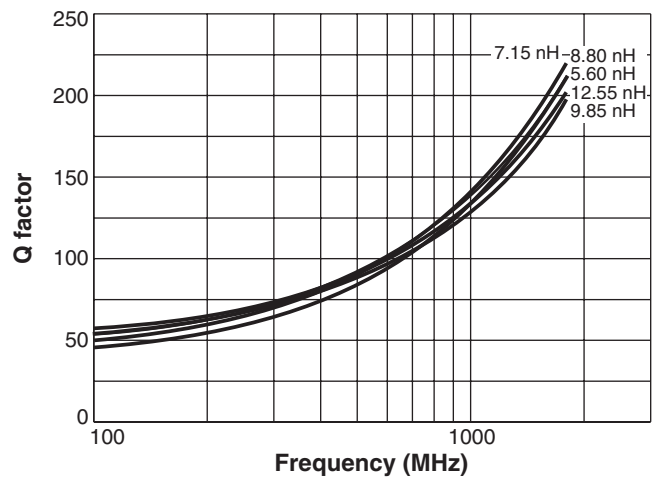
L vs Frequency – ML394RAT Series



Q vs Frequency – ML350RAT Series



Q vs Frequency – ML394RAT Series



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