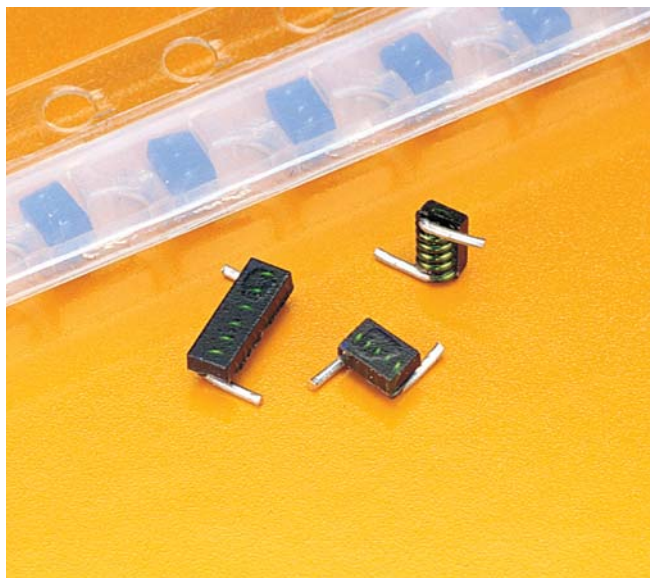


PRELIMINARY

AIR CORE INDUCTORS

Aerospace Grade Air Core Inductors

AE350RAT AE394RAT



- High Q over a wide range of frequencies
- High temperature encapsulant allows operation in ambient temperatures up to 155°C.
- Passes NASA low outgassing specifications
- 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

AE350RAT: 500 per 7" reel Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.5 mm pocket depth

AE394RAT: 500 per 7" reel Plastic tape: 12 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

Partnumber ¹	Turns	L ² (nH)	Percent tol	Q ³ min	SRF min ⁴ (GHz)	DCR max ⁵ (mOhm)	I _{max} (A)
AE350RAT2KSZ	2	1.65	10	100	10.0	4.0	1.6
AE350RAT3JSZ	3	2.55	5	100	8.2	5.0	1.6
AE350RAT4_SZ	4	3.85	5,2	100	7.5	6.0	1.6
AE350RAT5_SZ	5	5.40	5,2	100	7.0	8.0	1.6
AE394RAT6_SZ	6	5.60	5,2	100	6.5	9.0	1.6
AE394RAT7_SZ	7	7.15	5,2	100	6.0	10	1.6
AE394RAT8_SZ	8	8.80	5,2	100	6.0	12	1.6
AE394RAT9_SZ	9	9.85	5,2	100	5.2	13	1.6
AE394RAT10_SZ	10	12.55	5,2	100	4.6	14	1.6

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

AE394RAT10GSZ

Tolerance: G = 2% J = 5%

Testing: Z = Coilcraft Critical Products Environmental Stress Conditions Testing.

H = CP-SA-10001 screening in addition to Critical Products Environmental Stress Conditions Testing.

N = MIL-STD-981 Class B screening in accordance with Coilcraft CP-SA-10003.

C = MIL-STD-981 Class S qualification/screening in accordance with Coilcraft CP-SA-10003.

2. Inductance measured using Agilent/HP 4286 with Coilcraft SMD-A fixture and correlation.

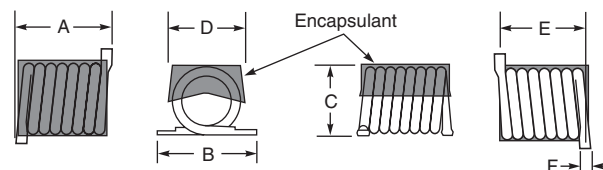
3. Q measured at 800 MHz, using an Agilent/HP 4291A with an Agilent/HP 16193A test fixture.

4. SRF measured using an Agilent/HP 8720D with a Coilcraft SMD-D fixture.

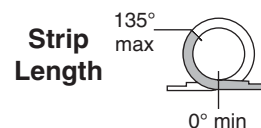
5. DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter.

6. Electrical specifications at 25°C.

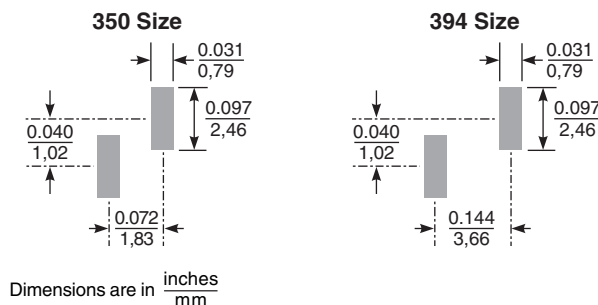
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

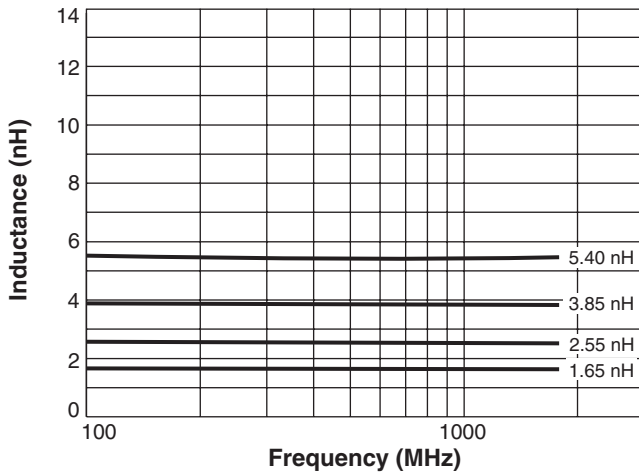
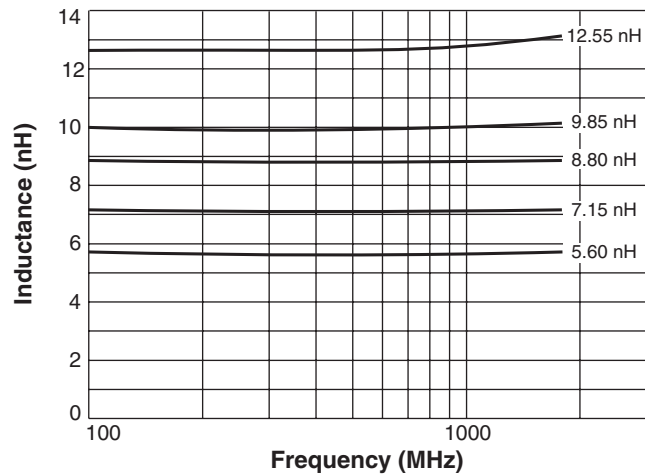
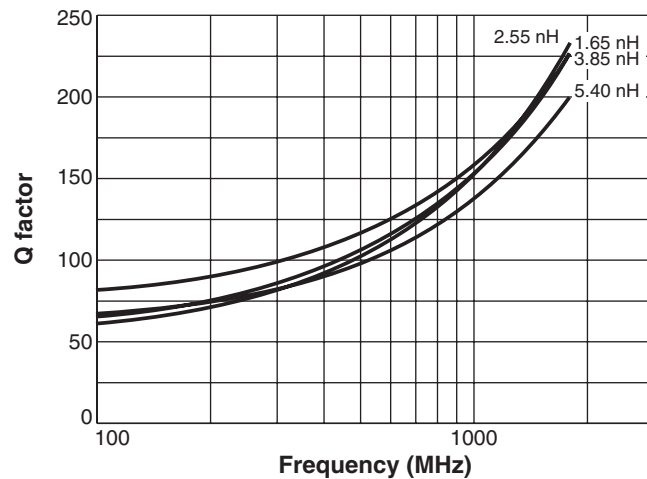
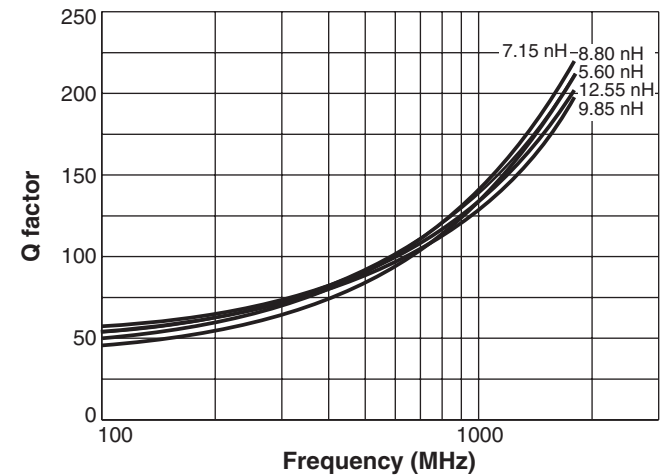


Size	A max	B max	C max	D	E	F max
350	0.095 2,41	0.135 3,43	0.060 1,52	0.055 ±0.010 1,40 ±0,25	0.072 ±0.010 1,83 ±0,25	0.020 0,51
394	0.165 4,19	0.135 3,43	0.062 1,58	0.055 ±0.010 1,40 ±0,25	0.144 ±0.012 3,66 ±0,30	0.020 0,51



Recommended Land Patterns



PRELIMINARY**AE350RAT/AE394RAT Air Core Inductors****Typical L vs Frequency – AE350RAT Series****Typical L vs Frequency – AE394RAT Series****Typical Q vs Frequency – AE350RAT Series****Typical Q vs Frequency – AE394RAT Series****Typical Current Derating**