PRELIMINARY

Outgassing Compliant Chip Inductors AE336RAD

The AE336RAD inductors provide exceptional Q values, even at high frequencies. They have a ceramic body and wire wound construction to provide the highest SRFs, tight inductance tolerance and batch consistency.

This robust version of Coilcraft's standard 0805HQ series features high temperature materials that pass NASA low outgassing specifications and allow operation in ambient temperatures up to 155°C. The leach-resistant base metalization with tin-lead (Sn-Pb) terminations ensures the best possible board adhesion.

Part number[1]	Inductance[2] (nH)	Percent tolerance	Q min[3]	SRF min[4] (GHz)	DCR max[5] (Ohms)	Imax (A)
AE336RAD2N5JSZ	2.5 @ 250 MHz	5	56 @ 1000 MHz	>5.00	0.020	2.0
AE336RAD5N6JSZ	5.6 @ 250 MHz	5	83 @ 1000 MHz	4.88	0.035	1.9
AE336RAD6N2JSZ	6.2 @ 250 MHz	5	80 @ 1000 MHz	4.55	0.035	1.8
AE336RAD12NJSZ	12 @ 250 MHz	5	52 @ 500 MHz	2.80	0.045	1.6
AE336RAD16N_SZ	16 @ 250 MHz	5,2	72 @ 500 MHz	2.40	0.060	1.4
AE336RAD18N_SZ	18 @ 250 MHz	5,2	70 @ 500 MHz	2.20	0.060	1.4
AE336RAD20N_SZ	20 @ 250 MHz	5,2	54 @ 250 MHz	2.05	0.060	1.4
AE336RAD27N_SZ	27 @ 250 MHz	5,2,1	58 @ 250 MHz	2.00	0.070	1.3
AE336RAD30N_SZ	30 @ 250 MHz	5,2,1	50 @ 250 MHz	1.74	0.095	1.1
AE336RAD39N_SZ	39 @ 250 MHz	5,2,1	53 @ 250 MHz	1.60	0.110	1.0
AE336RAD48N_SZ	48 @ 200 MHz	5,2,1	44 @ 150 MHz	1.40	0.095	1.1
AE336RAD51N_SZ	51 @ 200 MHz	5,2,1	36 @ 150 MHz	1.28	0.120	0.9

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

   AE336RAD51NGSZ

   Tolerance: **F** = 1% **G** = 2% **J** = 5%
   Testing: **Z** = COTS
   H = Screening per Coilcraft CP-SA-10001
   N = Screening per Coilcraft CP-SA-10003
2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286 impedance analyzer or equivalent with Coilcraft-provided correlation pieces.
3. Q measured at the same frequency as inductance using an Agilent/HP 4291A with an Agilent/HP 16197 test fixture or equivalents.
4. SRF measured using an Agilent/HP 8753ES network analyzer or equivalent and a Coilcraft SMD-D test fixture.
5. DCR measured on a Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF858 test fixture.
6. Electrical specifications at 25°C.

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

Core material Ceramic

Terminations Tin-lead (63/37) over silver-platinum-glass frit

Ambient temperature –55°C to +125°C with Imax 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) +25 to +155 ppm/°C

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

Enhanced crush-resistant packaging 2000 per 7″ reel
Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.65 mm pocket depth

COILCRAFT PRECISION TEST FIXTURES
ACCURATE REPEATABLE MEASUREMENTS
SEE WEB SITE

Parts shown are preproduction products available for evaluation only. Document AE197-1 Revised 11/06/12

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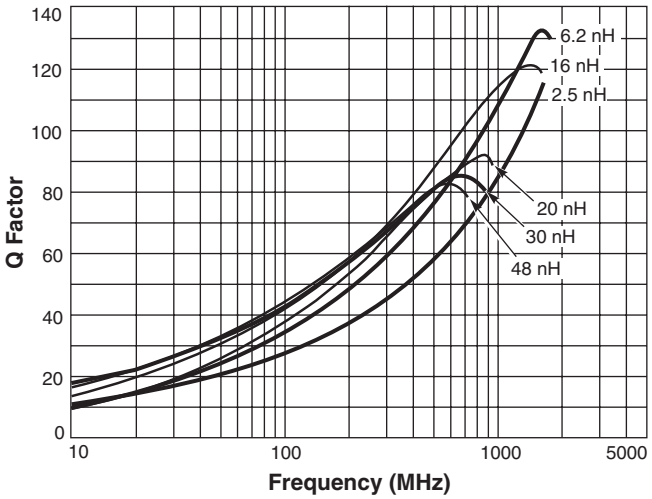
This product may not be used in medical or high risk applications without prior Coilcraft approval.
Specifications subject to change without notice.
Please check our web site for latest information.

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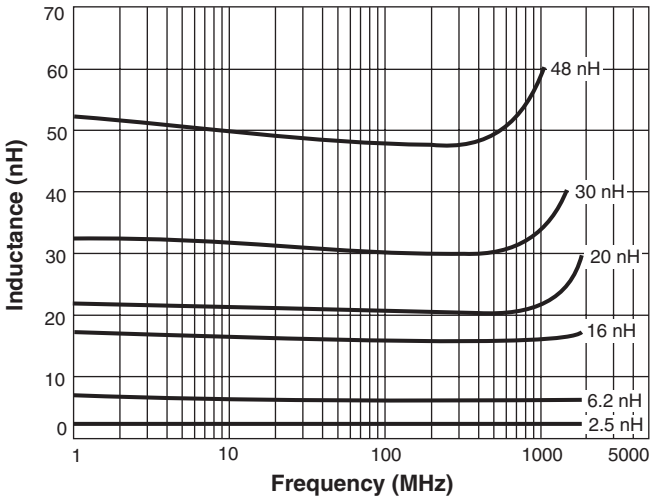
PRELIMINARY

AE336RAD Series (0805)

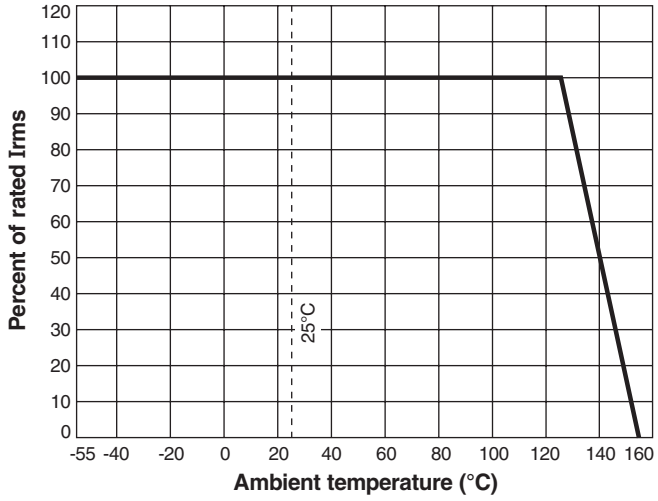
Typical Q vs Frequency

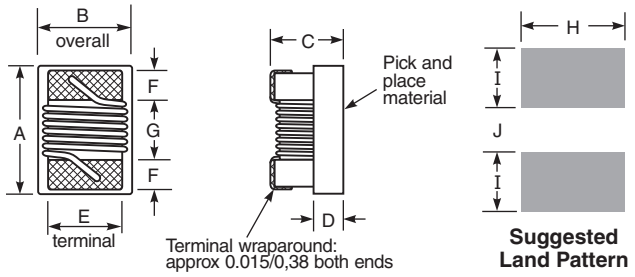


Typical L vs Frequency



Irms Derating





A max	B max	C max	D ref	E	F	G	H	I	J	
0.090	0.068	0.060	0.020	0.050	0.020	0.040	0.070	0.040	0.030	inches
2,29	1,73	1,52	0,51	1,27	0,51	1,02	1,78	1,02	0,76	mm

Note: Dimensions are before solder application. For maximum overall dimensions including solder, add 0.0025 in / 0,064 mm to **B** and 0.006 in / 0,15 mm to **A** and **C**.

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