



PRELIMINARY

Aerospace Grade Air Core Inductors

AE360RAS
AE372RAS
AE392RAS



- Excellent Q factors – up to 130
- Current handling as high as 4.4 Amps!
- 15 inductance values from 6.0 to 27 nH at 5% and 2%
- Designed to operate in ambient temperatures up to 155°C.
- Passes NASA low outgassing specifications
- Tin-lead (Sn-Pb) 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)

Part number ¹	Inductance ² (nH)	% tol	Q ³ typ	SRF typ ⁴ (GHz)	DCR max ⁵ (mOhm)	I _{max} (A)
AE360RAS6N0_SZ	6.0	5,2	64	5.2	6.0	2.9
AE360RAS8N9_SZ	8.9	5,2	90	4.3	7.0	2.9
AE360RAS12N_SZ	12.3	5,2	90	4.8	8.0	2.9
AE360RAS16N_SZ	15.7	5,2	90	4.4	9.0	2.9
AE360RAS19N_SZ	19.4	5,2	90	4.0	10.0	2.9
AE372RAS6N9_SZ	6.9	5,2	100	4.6	6.0	2.7
AE372RAS10N_SZ	10.2	5,2	100	4.0	7.0	2.7
AE372RAS14N_SZ	13.7	5,2	100	4.3	8.0	2.7
AE372RAS17N_SZ	17.0	5,2	100	4.0	9.0	2.7
AE372RAS22N_SZ	22.0	5,2	100	3.5	10.0	2.7
AE392RAS8N1_SZ	8.1	5,2	130	5.2	6.0	4.4
AE392RAS12N_SZ	12.1	5,2	130	4.3	7.0	4.4
AE392RAS17N_SZ	16.6	5,2	130	3.4	8.0	4.4
AE392RAS22N_SZ	21.5	5,2	130	3.7	9.0	4.4
AE392RAS27N_SZ	27.3	5,2	130	3.2	10.0	4.4

1. Please specify **tolerance** and **testing** codes:

AE392RAS27N G SZ

Tolerance: G = 2% J = 5%

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

H = Coilcraft Qual + Coilcraft Hi-Rel Burn-in

P = Coilcraft Qual + MIL-STD-981 Class S Group A screening

N = Coilcraft Qual + MIL-STD-981 Class B Group A screening

C = Coilcraft Qual + MIL-STD-981 Class S Group A screening + MIL-STD-981 Class S Group B qualification

W = Coilcraft Qual + MIL-STD-981 Class B Group A screening + MIL-STD-981 Class S Group B qualification

- Inductance measured at 400 MHz on an Agilent/HP 4286A or equivalent with a Coilcraft SMD-A test fixture and correlation.
- Q measured at 400 MHz on an Agilent/HP 4291A or equivalent with a 16193-A test fixture or equivalent.
- SRF measured on an Agilent/HP 8753D or equivalent with a Coilcraft SMD-D test fixture.
- DCR measured on a Keithley 580 Micro-Ohmmeter or equivalent.
- Electrical specifications at 25°C.

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

COILCRAFT ACCURATE
PRECISION REPEATABLE
MEASUREMENTS
SEE INDEX **TEST FIXTURES**

Coilcraft **CPS**
CRITICAL PRODUCTS & SERVICES

These parts are preproduction products for electrical evaluation only.
Specification subject to change without notice.

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1102 Silver Lake Road
Cary IL 60013

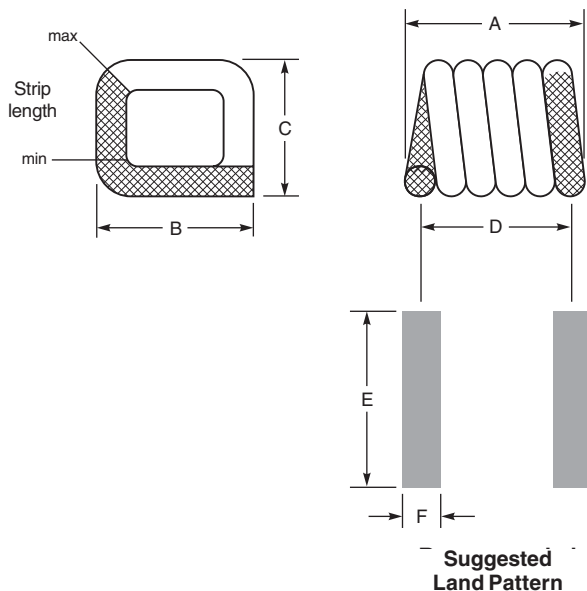
Phone 800-981-0363
Fax 847-639-1508

E-mail cp@coilcraft.com
Web www.coilcraft-cps.com

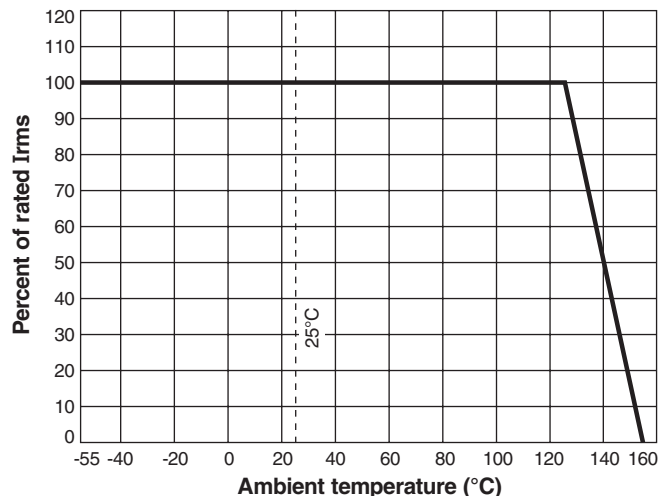
PRELIMINARY



Square Air Coil Inductors



Irms Derating



Enhanced crush-resistant packaging 2000 per 7" reel
 Pastic 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)
AE360RAS-6N0	1,295 ±0,102	1,829 ±0,254	1,397 ±0,102	0,99	2,6	0,51	8,5	1,42
AE360RAS-8N9	1,626 ±0,152	1,829 ±0,254	1,397 ±0,102	1,27	2,6	0,51	10,8	1,55
AE360RAS-12N	1,930 ±0,152	1,829 ±0,254	1,397 ±0,102	1,63	2,6	0,51	13,6	1,52
AE360RAS-16N	2,286 ±0,152	1,829 ±0,254	1,397 ±0,102	1,96	2,6	0,51	16,1	1,50
AE360RAS-19N	2,591 ±0,152	1,829 ±0,254	1,397 ±0,102	2,29	2,6	0,51	18,7	1,55
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AE372RAS-6N9	1,295 ±0,102	1,829 ±0,254	1,524 ±0,254	1,02	2,6	0,51	9,1	1,60
AE372RAS-10N	1,626 ±0,152	1,829 ±0,254	1,524 ±0,254	1,32	2,6	0,51	11,5	1,57
AE372RAS-14N	1,930 ±0,152	1,829 ±0,254	1,524 ±0,254	1,57	2,6	0,51	14,0	1,60
AE372RAS-17N	2,286 ±0,152	1,829 ±0,254	1,524 ±0,254	1,93	2,6	0,51	16,8	1,68
AE372RAS-22N	2,591 ±0,152	1,829 ±0,254	1,524 ±0,254	2,29	2,6	0,51	19,4	1,68
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AE392RAS-8N1	1,473 ±0,152	2,134 ±0,152	1,829 ±0,152	1,12	2,8	0,64	12,8	2,01
AE392RAS-12N	1,854 ±0,152	2,134 ±0,152	1,829 ±0,152	1,45	2,8	0,64	16,9	1,96
AE392RAS-17N	2,210 ±0,152	2,134 ±0,152	1,829 ±0,152	1,83	2,8	0,64	21,1	2,01
AE392RAS-22N	2,565 ±0,152	2,134 ±0,152	1,829 ±0,152	2,18	2,8	0,64	24,7	1,98
AE392RAS-27N	2,972 ±0,152	2,134 ±0,152	1,829 ±0,152	2,57	2,8	0,64	28,7	1,01

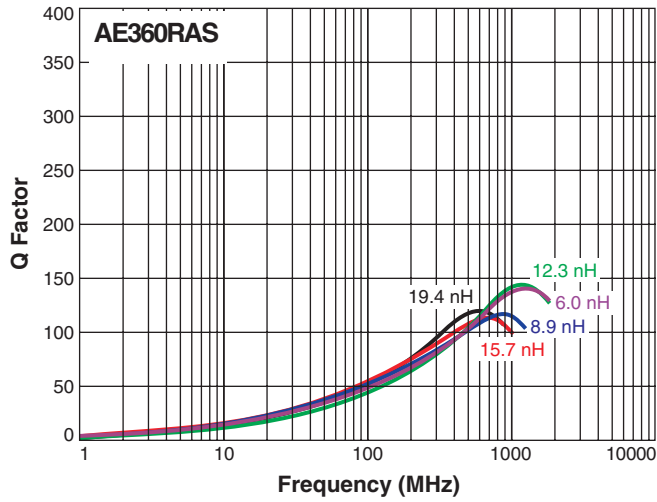
All dimensions are in mm.

PRELIMINARY



Square Air Coil Inductors

Q vs Frequency



L vs Frequency

