

PRELIMINARY

Aerospace Grade Chip Inductors AE235RAM

- Higher inductance values than other 0402 inductors
- Ferrite construction for high current handling
- 23 inductance values from 20 nH to 560 nH

This robust version of Coilcraft's standard 0402AF 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.

Core material Ferrite

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

Ambient temperature -55°C to +125°C with I_{max} current, +125°C to +155°C with derated current

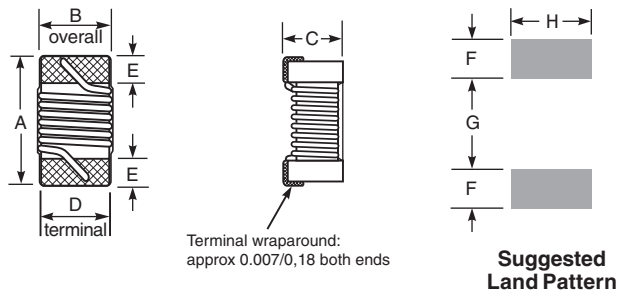
Storage temperature Component: -55°C to +155°C.
Packaging: -55°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) +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. Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing



A max	B max	C max	D	E	F	G	H
0.044	0.026	0.026	0.020	0.009	0.017	0.018	0.026
1,12	0,66	0,66	0,51	0,23	0,43	0,46	0,66

All dimensions are without solder applied to the terminations. For maximum dimensions with solder, add 0.006 inches / 0,152 mm.

Part number ¹	Inductance ² ±5% (nH)	SRF typ ³ (MHz)	DCR max ⁴ (Ohms)	I _{max} (mA)
AE235RAM200JSZ	20	2600	0.050	1600
AE235RAM220JSZ	22	2500	0.065	1300
AE235RAM330JSZ	33	2300	0.060	1400
AE235RAM360JSZ	36	2300	0.075	1300
AE235RAM390JSZ	39	2200	0.115	830
AE235RAM510JSZ	51	1930	0.070	1100
AE235RAM560JSZ	56	1900	0.095	1000
AE235RAM720JSZ	72	1650	0.100	1000
AE235RAM780JSZ	78	1600	0.130	970
AE235RAM101JSZ	100	1400	0.160	900
AE235RAM141JSZ	140	1220	0.260	630
AE235RAM181JSZ	180	1150	0.280	560
AE235RAM201JSZ	200	1000	0.440	400
AE235RAM221JSZ	220	1150	0.530	380
AE235RAM251JSZ	250	900	0.360	520
AE235RAM271JSZ	270	860	0.550	360
AE235RAM301JSZ	300	860	0.410	420
AE235RAM331JSZ	330	820	0.560	350
AE235RAM361JSZ	360	810	0.575	360
AE235RAM391JSZ	390	760	0.750	300
AE235RAM421JSZ	420	700	0.700	340
AE235RAM471JSZ	470	650	0.730	310
AE235RAM561JSZ	560	600	0.920	200

1. When ordering, please specify **testing** code:

AE235RAH56NGS \bar{Z}

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

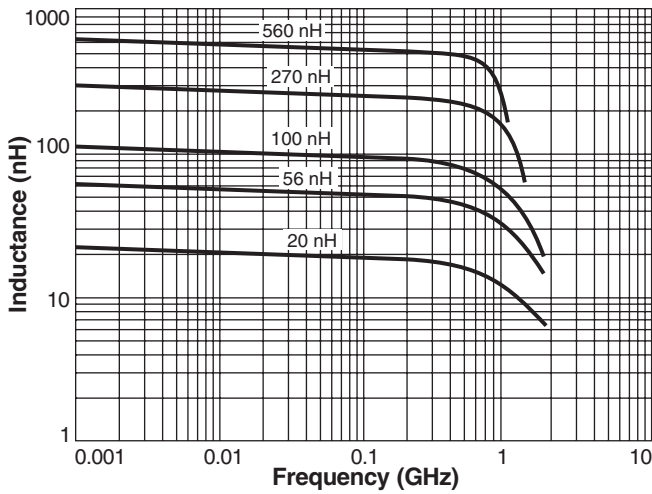
- Inductance measured at 7.9 MHz using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286 impedance analyzer.
 - SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.
 - DCR measured on Cambridge Technology micro-ohmmeter and a Coilcraft CCF858 test fixture.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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

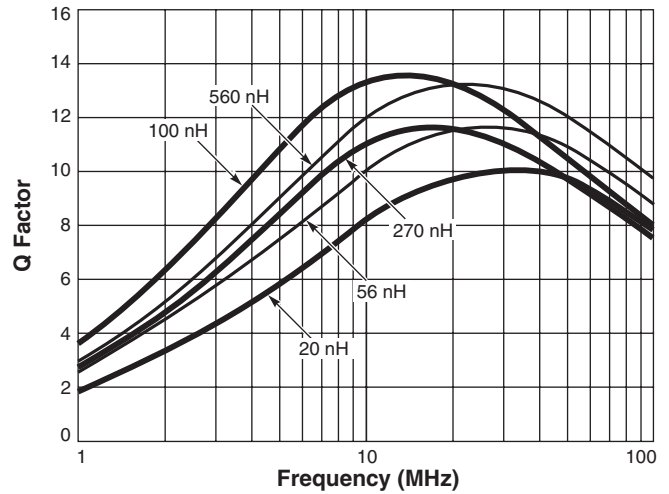
PRELIMINARY

AE235RAM Series (0402)

Typical L vs Frequency



Typical Q vs Frequency



Irms Derating

