

**NEW!**

# High-Reliability Chip Inductors AR235RAR

- Higher inductance values than other 0402 inductors
- Ferrite construction for high current handling
- Passes NASA low outgassing specifications
- High temperature materials allow operation in ambient temperatures up to 140°C.
- Standard tin-lead (Sn-Pb) terminations ensure the best possible board adhesion. Note: Nickel barrier termination (tin-lead over tin over nickel over silver-platinum-glass frit, termination code P) is recommended for hand soldering applications.

Part number <sup>1</sup>	Inductance <sup>2</sup> ±5% (nH)	Impedance typ (Ohms)		SRF min <sup>3</sup> (MHz)	DCR max <sup>4</sup> (Ohms)	Imax (mA)
		900 MHz	1.7 GHz			
AR235RAR200JPZ	20	90	150	2500	0.049	700
AR235RAR360JPZ	36	150	250	2040	0.055	700
AR235RAR560JPZ	56	250	480	1870	0.061	650
AR235RAR770JPZ	77	350	580	1740	0.072	590
AR235RAR900JPZ	90	400	600	1950	0.079	490
AR235RAR101JPZ	105	530	1000	1410	0.104	490
AR235RAR121JPZ	120	515	900	1700	0.090	520
AR235RAR141JPZ	140	650	1075	1230	0.141	420
AR235RAR151JPZ	150	700	1170	1530	0.130	440
AR235RAR181JPZ	180	850	1460	1430	0.172	380
AR235RAR221JPZ	220	1100	2050	1320	0.240	320
AR235RAR271JPZ	270	1300	2150	1260	0.265	310
AR235RAR301JPZ	300	1725	2630	1190	0.340	270
AR235RAR331JPZ	330	2100	2750	1140	0.435	240
AR235RAR361JPZ	360	2150	3100	1020	0.475	230
AR235RAR421JPZ	420	2175	3350	935	0.510	220
AR235RAR471JPZ	470	2550	3670	910	0.670	190
AR235RAR531JPZ	530	3950	3050	850	0.715	190
AR235RAR591JPZ	590	4770	3090	810	0.780	180
AR235RAR102JPZ	1000	280	180	200	1.05	150
AR235RAR222JPZ	2200	200	120	105	1.80	120
AR235RAR332JPZ	3300	160	80	68	2.20	110

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

**AR235RAR332JPZ**

**Screening:**

Z = Unscreened

H = Coilcraft CP-SA-10001 Group A

1 = EEE-INST-002 (Family 3) Level 1

2 = EEE-INST-002 (Family 3) Level 2

3 = EEE-INST-002 (Family 3) Level 3

4 = MIL-STD-981 (Family 50) Class B

5 = MIL-STD-981 (Family 50) Class S

F = ESCC3201 (F4 operational life performed at 90°C)

• Screening performed to the document's latest revision.

• Lot qualification (Group B) available.

• Custom testing also available.

• Country of origin restrictions available; prefix options G or F.

2. 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.

3. SRF measured using Agilent/HP 8753D network analyzer and Coilcraft CCF1232 test fixture.

4. DCR measured on Cambridge Technology micro-ohmmeter and a Coilcraft CCF1010 test fixture.

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

**Core material** Ferrite

**Terminations** Tin-lead (63/37) over tin over nickel over silver-platinum-glass frit.

**Weight** 0.7 – 1.3 mg

**Ambient temperature** -40°C to +125°C with Irms current

**Maximum part temperature** +140°C (Ambient + temperature rise)

**Storage temperature** Component: -55°C to +140°C.

Tape and reel packaging: -40°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 +150 ppm/°C

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

**Packaging** 2000 per 7" reel. Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE WEB SITE **TEST FIXTURES**

Document AR1069-1 03/30/23

**Coilcraft** **CPS**  
CRITICAL PRODUCTS & SERVICES

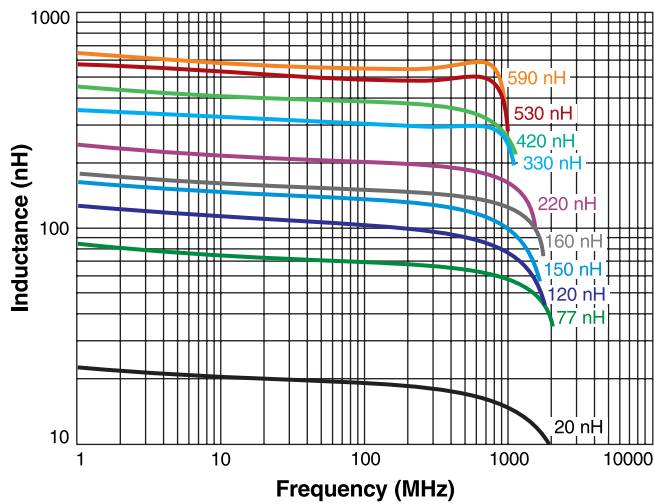
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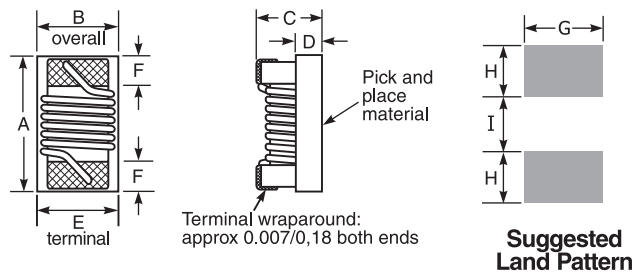
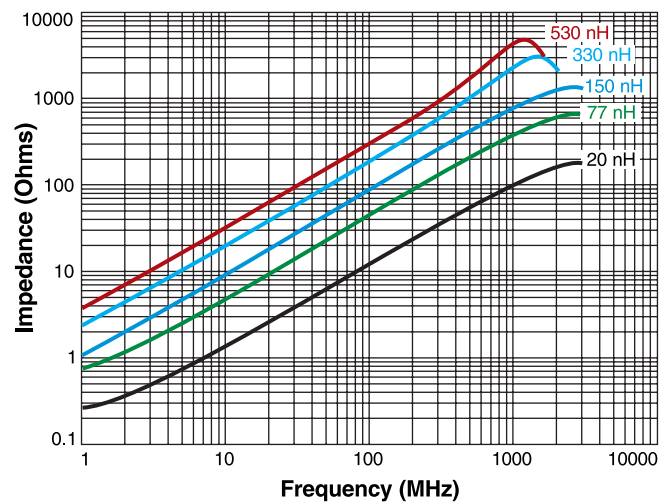
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# High-Reliability Chip Inductors – AR235RAR Series

## Typical L vs Frequency

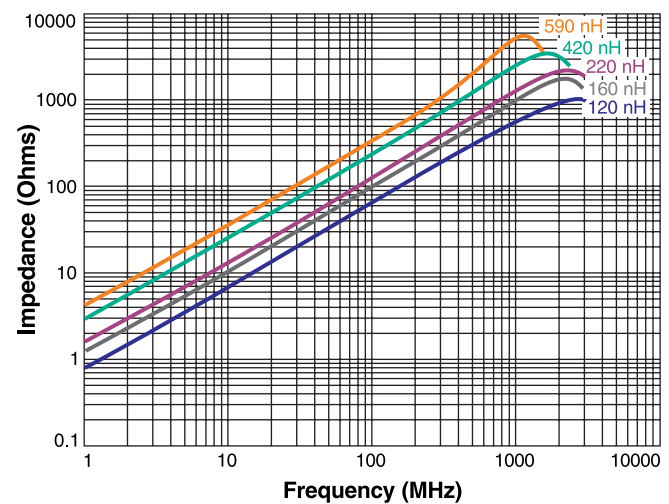


## Typical Z vs Frequency



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.

A	B	C	D	E	F	G	H	I	
max	max	max	ref	ref	ref	ref	ref	ref	
0.044	0.031	0.026	0.010	0.018	0.008	0.026	0.014	0.025	inches
1,11	0,79	0,66	0,25	0,46	0,20	0,66	0,36	0,64	mm



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