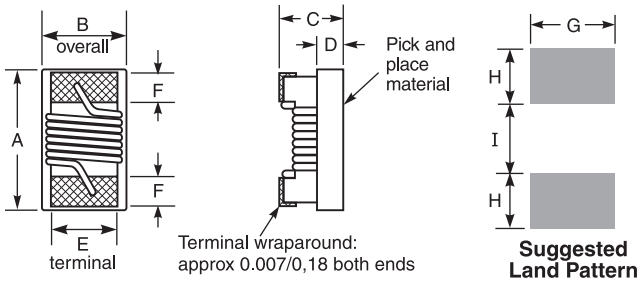
NEW!

Outgassing Compliant Chip Inductors AR235RAP

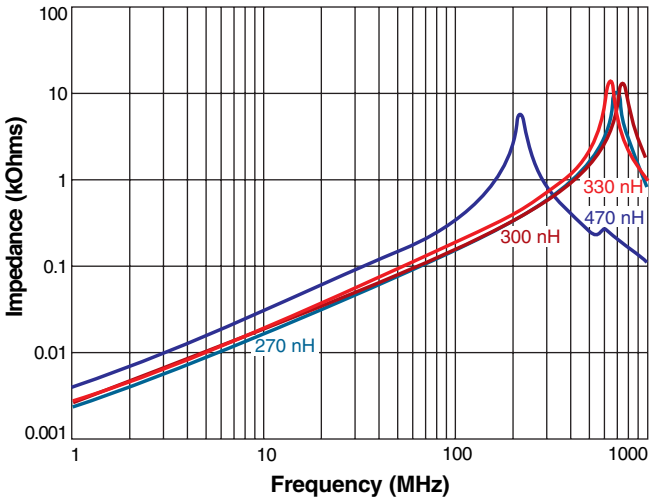
- Exceptionally high Q factors
- Outstanding self-resonant frequency
- Tight inductance tolerance
- High temperature materials allow operation in ambient temperatures up to 155°C.
- Passes NASA low outgassing specifications
- Standard tin-lead (Sn-Pb) terminations ensures the best possible board adhesion. Note: Nickel barrier termination (tin-lead over tin over nickel over silver-platinum-glass frit, termination code P) is recommended for hand soldering applications.



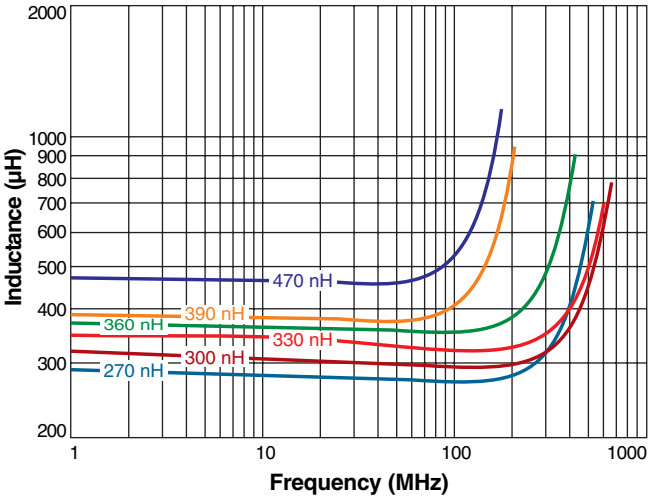
A max	B max	C max	D	E	F	G	H	I	
0.048	0.031	0.022	0.010	0.018	0.008	0.026	0.014	0.025	inches
1,22	0,79	0,56	0,25	0,46	0,20	0,66	0,36	0,64	mm

Note: Dimensions are before optional solder application. For overall height dimension including solder, add 0.0025 in / 0,64 mm to **B** and 0.006 in / 0,15 mm to **A** and **C**.

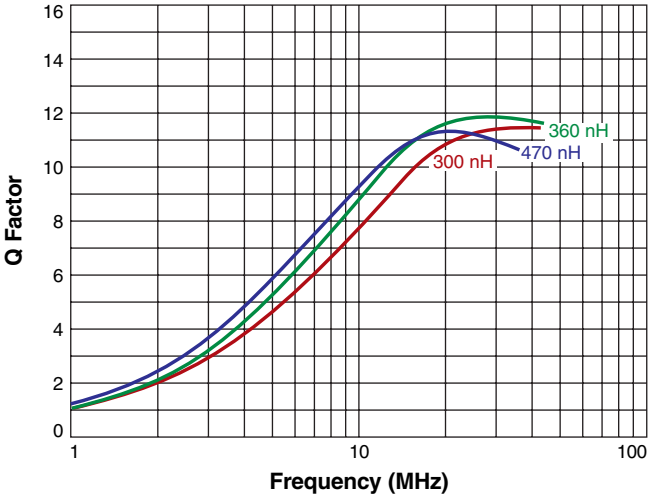
Typical Impedance vs Frequency



Typical L vs Frequency



Typical Q vs Frequency



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Document AR913-2 Revised 04/11/23

NEW!

AR235RAP Series (0402)

Part number[1]	Inductance[2] ±5% (nH)	Q min[3]	SRF min[4] (MHz)	DCR max[5] (Ohms)	Imax (mA)
AR235RAP430JPZ	43 @ 250 MHz	21 @ 250 MHz	2900	0.75	250
AR235RAP510JPZ	51 @ 250 MHz	21 @ 250 MHz	2700	0.85	240
AR235RAP560JPZ	56 @ 250 MHz	21 @ 250 MHz	2600	0.90	240
AR235RAP680JPZ	68 @ 250 MHz	11 @ 100 MHz	760	0.85	230
AR235RAP720JPZ	72 @ 250 MHz	12 @ 100 MHz	720	0.90	210
AR235RAP750JPZ	75 @ 250 MHz	11 @ 100 MHz	700	0.90	210
AR235RAP820JPZ	82 @ 250 MHz	11 @ 100 MHz	680	0.95	210
AR235RAP900JPZ	90 @ 250 MHz	11 @ 100 MHz	560	1.00	210
AR235RAP910JPZ	91 @ 250 MHz	10 @ 100 MHz	560	1.00	200
AR235RAP101JPZ	100 @ 250 MHz	10 @ 100 MHz	680	1.05	200
AR235RAP111JPZ	110 @ 250 MHz	10 @ 100 MHz	670	1.10	190
AR235RAP121JPZ	120 @ 250 MHz	11 @ 100 MHz	530	1.15	190
AR235RAP151JPZ	150 @ 100 MHz	10 @ 100 MHz	640	1.35	180
AR235RAP181JPZ	180 @ 100 MHz	9 @ 100 MHz	510	1.45	170
AR235RAP201JPZ	200 @ 100 MHz	9 @ 100 MHz	510	1.55	170
AR235RAP221JPZ	220 @ 100 MHz	9 @ 100 MHz	540	1.70	170
AR235RAP271JPZ	270 @ 25 MHz	8 @ 25 MHz	470	1.95	160
AR235RAP301JPZ	300 @ 25 MHz	8 @ 25 MHz	480	2.15	160
AR235RAP331JPZ	330 @ 25 MHz	8 @ 25 MHz	410	2.23	150
AR235RAP361JPZ	360 @ 25 MHz	8 @ 25 MHz	388	2.36	140
AR235RAP391JPZ	390 @ 25 MHz	8 @ 25 MHz	208	2.35	140
AR235RAP471JPZ	470 @ 25 MHz	8 @ 25 MHz	176	2.67	130

1. When ordering, specify **termination** and **screening** codes:

AR235RAP471JPZ

Termination: **P** = Tin-lead (63/37) over tin over nickel over silver-platinum-glass frit.
S = Tin-lead (63/37) over leach-resistant silver-platinum-glass frit
L = Silver-palladium-platinum-glass frit

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 using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286A impedance analyzer or equivalent.
3. Q measured using an Agilent/HP 4291A with an Agilent/HP 16197A test fixture or equivalents.
4. SRF measured using an Agilent/HP 8753ES network analyzer and a Coilcraft CCF1232 test fixture.
5. DCR measured on a Keithley 580 micro-ohmmeter and a Coilcraft CCF1010 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 tin over nickel over silver-platinum-glass frit. Other terminations are also available.

Weight 0.7 – 1.3 mg

Ambient temperature –55°C to +125°C with Irms current,

Maximum part temperature +155°C (ambient + temp rise).

Storage temperature Component: –55°C to +155°C.
Tape and reel 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 +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, 0.66 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.

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