

Outgassing Compliant Chip Inductors AR413RAB

- Low DCR and high current handling
- Inductance values: 1.0 – 100 μH
- Passes NASA low outgassing (Outgassing meets ASTM E595)
- High temperature materials allow operation in ambient temperatures up to 155°C
- Tin-lead (Sn-Pb) terminations ensure the best possible board adhesion. Note: Nickel barrier termination (tin-lead over nickel over silver-platinum-glass frit, termination code P) is recommended for hand soldering applications

Core material Ceramic/Ferrite

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

Weight 35.0 – 51.0 mg

Ambient temperature -55°C to +125°C with I_{max} 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

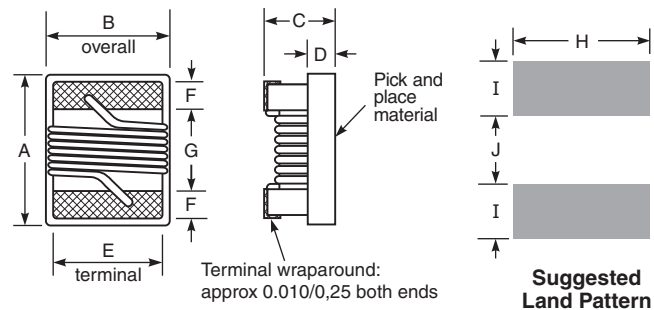
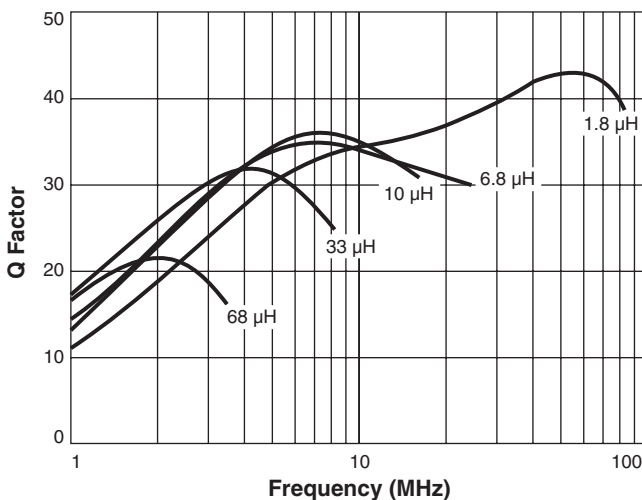
Temperature Coefficient of Inductance (TCL) +25 to +125 ppm/°C

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

Enhanced crush-resistant packaging 2000/7" reel.

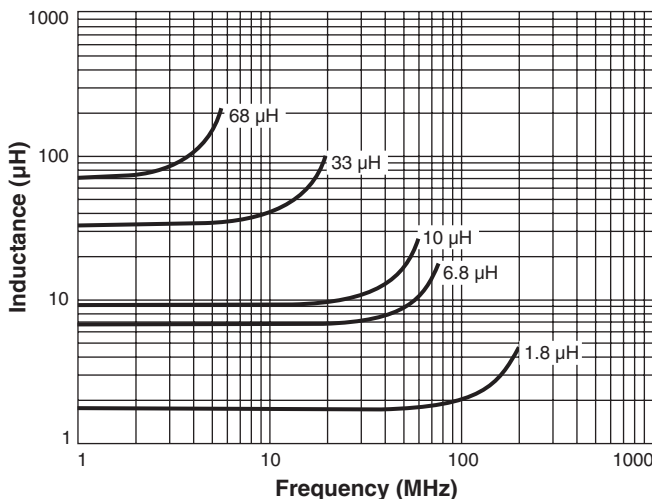
Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 2.0 mm pocket depth

Typical Q vs Frequency



A max	B max	C max	D ref	E	F	G	H	I	J
0.115	0.110	0.080	0.020	0.080	0.020	0.060	0.100	0.040	0.050
2,92	2,79	2,03	0,51	2,03	0,51	1,52	2,54	1,02	1,27

Typical L 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**.



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AR413RAB Series (1008)

Part number ¹	Inductance ² ±5% µH	Q min ³	SRF min ⁴ (MHz)	DCR max ⁵ (Ohms)	Imax (mA)
AR413RAB102JPZ	1.0 @ 7.9 MHz	16 @ 2.5 MHz	230	0.62	370
AR413RAB122JPZ	1.2 @ 7.9 MHz	18 @ 2.5 MHz	210	0.68	370
AR413RAB152JPZ	1.5 @ 7.9 MHz	20 @ 2.5 MHz	190	0.76	370
AR413RAB182JPZ	1.8 @ 7.9 MHz	20 @ 2.5 MHz	170	0.84	370
AR413RAB222JPZ	2.2 @ 7.9 MHz	22 @ 2.5 MHz	150	1.10	310
AR413RAB272JPZ	2.7 @ 7.9 MHz	20 @ 2.5 MHz	135	1.28	270
AR413RAB332JPZ	3.3 @ 7.9 MHz	20 @ 2.5 MHz	120	1.46	260
AR413RAB392JPZ	3.9 @ 7.9 MHz	22 @ 2.5 MHz	105	1.56	250
AR413RAB432JPZ	4.3 @ 7.9 MHz	24 @ 2.5 MHz	85	1.70	230
AR413RAB472JPZ	4.7 @ 7.9 MHz	24 @ 2.5 MHz	90	1.68	230
AR413RAB502JPZ	5.0 @ 7.9 MHz	23 @ 2.5 MHz	30	2.20	200
AR413RAB562JPZ	5.6 @ 7.9 MHz	23 @ 2.5 MHz	80	1.82	220
AR413RAB622JPZ	6.2 @ 7.9 MHz	24 @ 2.5 MHz	75	2.50	195
AR413RAB682JPZ	6.8 @ 7.9 MHz	24 @ 2.5 MHz	70	2.00	210
AR413RAB822JPZ	8.2 @ 7.9 MHz	23 @ 2.5 MHz	65	2.65	190
AR413RAB912JPZ	9.1 @ 7.9 MHz	25 @ 2.5 MHz	57	2.90	170
AR413RAB103JPZ	10 @ 7.9 MHz	24 @ 2.5 MHz	60	2.95	165
AR413RAB123JPZ	12 @ 2.5 MHz	28 @ 2.5 MHz	38	3.30	160
AR413RAB153JPZ	15 @ 2.5 MHz	28 @ 2.5 MHz	30	3.70	150
AR413RAB183JPZ	18 @ 2.5 MHz	28 @ 2.5 MHz	26	4.00	140
AR413RAB223JPZ ⁶	22 @ 2.5 MHz	28 @ 2.5 MHz	22	6.14	115
AR413RAB273JPZ ⁶	27 @ 2.5 MHz	28 @ 2.5 MHz	12	6.45	110
AR413RAB333JPZ ⁶	33 @ 2.5 MHz	30 @ 2.5 MHz	19	7.00	110
AR413RAB393JPZ ⁶	39 @ 2.5 MHz	29 @ 2.5 MHz	26	10.0	90
AR413RAB473JPZ ⁶	47 @ 2.5 MHz	30 @ 2.5 MHz	12	10.7	80
AR413RAB563JPZ ⁶	56 @ 2.5 MHz	20 @ 0.79 MHz	8.0	10.0	95
AR413RAB683JPZ ⁶	68 @ 0.79 MHz	17 @ 0.79 MHz	5.7	13.5	85
AR413RAB104JPZ ⁶	100 @ 0.79 MHz	18 @ 0.79 MHz	4.5	20.5	65

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

AR413RAB104JSZ

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 option G or F.

2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer or equivalent with Coilcraft-provided correlation pieces.

3. Q measured 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 with a Coilcraft CCF1502 fixture.

5. DCR measured on a Keithley 580 micro-ohmmeter or equivalent and a Coilcraft CCF1502 test fixture.

6. Part not compliant with MIL-STD-981 Family 50, Class S due to wire gauge.

7. Electrical specifications at 25°C.

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



CRITICAL PRODUCTS & SERVICES

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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.