

200°C Air Core Inductors AT475RAT



- High Q over a wide range of frequencies
- Special materials allow operation in ambient temperatures as low as -60°C and up to 200°C .
- Passes NASA low outgassing specifications

Terminations Tin-lead (63/37) over copper

Weight 80 – 200 mg

Ambient temperature -60°C to $+150^{\circ}\text{C}$ with I_{max} current

Maximum part temperature $+200^{\circ}\text{C}$ (ambient + temp rise).

Storage temperature Component: -60°C to $+200^{\circ}\text{C}$.

Tape and reel packaging: -55°C to $+80^{\circ}\text{C}$

Resistance to soldering heat Max three 40 second reflows at $+260^{\circ}\text{C}$, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) $+5$ to $+70$ ppm/ $^{\circ}\text{C}$

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

Enhanced crush-resistant packaging 500 per 7" reel
Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 4.2 mm pocket depth

Part number ¹	Inductance ² (nH)	Percent tolerance	Q ³ typ	Q ³ min	SRF min ⁴ (GHz)	DCR max ⁵ (mOhm)	I _{max} (A)
AT475RAT22N_SZ	22	5,2	135	100	3.2	4.2	3.0
AT475RAT27N_SZ	27	5,2	135	100	2.7	4.0	3.5
AT475RAT33N_SZ	33	5,2	130	100	2.5	4.8	3.0
AT475RAT39N_SZ	39	5,2	135	100	1.8	4.4	3.0
AT475RAT47N_SZ	47	5,2	135	100	2.1	5.6	3.0
AT475RAT56N_SZ	56	5,2	125	100	1.5	6.2	3.0
AT475RAT68N_SZ	68	5,2	120	100	1.5	8.2	2.5
AT475RAT82N_SZ	82	5,2	120	100	1.3	9.4	2.5
AT475RATR10_SZ	100	5,2	115	100	1.2	12.3	1.7
AT475RATR12_SZ	120	5,2	125	100	1.1	17.3	1.5
AT475RATR15_SZ	150	5,2	145	100	0.75	33.0	1.2

1. When ordering, specify **tolerance** and **testing** codes:

AT475RATR15GSZ

Tolerance: G = 2% J = 5%

Testing: Z = Unscreened

H = Group A screening per Coilcraft CP-SA-10001

T = Screening per MIL-STD-981

U = Screening per EEE-INST-002

F = Screening per ESCC 3201

All screening performed to the document's latest revision

Custom screening also available

Testing is performed using 155°C as max component temperature

2. Inductance measured at 150 MHz on an Agilent/HP 4286A or equivalent with a Coilcraft SMD-A test fixture and correlation.

3. Q measured at 150 MHz on an Agilent/HP 4291A or equivalent with a 16193A test fixture or equivalent.

4. SRF measured on an Agilent/HP 8753ES or equivalent with a Coilcraft CCF1268 test fixture.

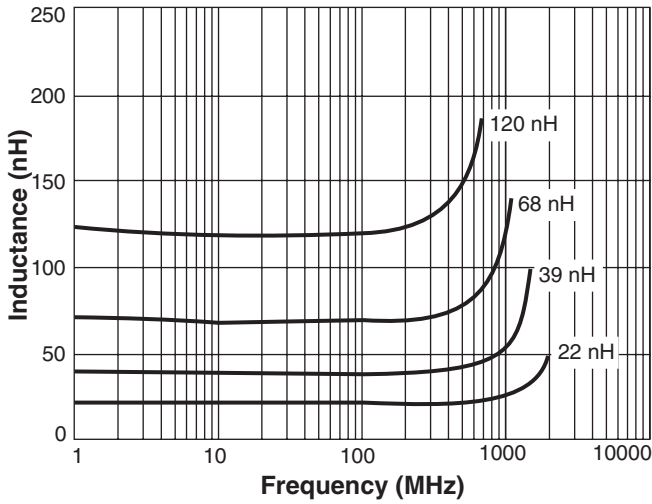
5. DCR measured on a Keithley 580 Micro-Ohmmeter or equivalent.

6. Electrical specifications at 25°C .

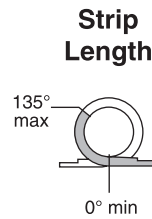
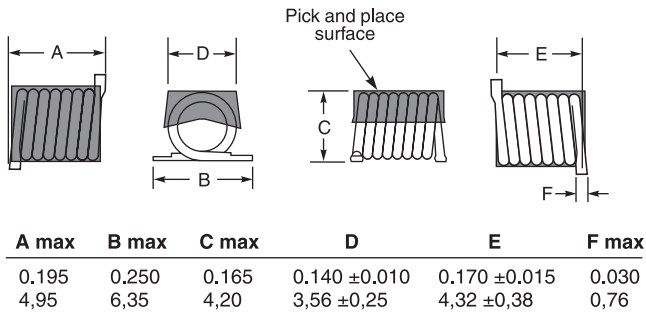
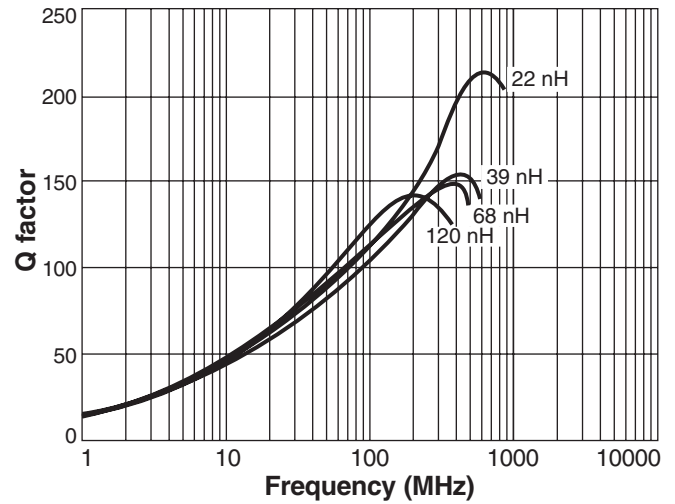
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

AT475RAT Air Core Inductors

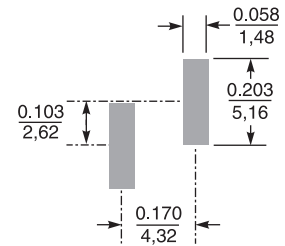
Typical L vs Frequency



Typical Q vs Frequency



Suggested Land Pattern



Dimensions are in $\frac{\text{inches}}{\text{mm}}$