

High-Reliability Air Core Inductors ML475RAT



- High Q over a wide range of frequencies
- High temperature materials allow operation in ambient temperatures up to 155°C.

Terminations Tin-silver over copper

Weight 80 – 200 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) +5 to +70 ppm/°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°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 typ ³	Qmin ³	SRF min ⁴ (GHz)	DCR max ⁵ (mOhm)	Imax (A)
ML475RAT22N_LZ	22	5,2	135	100	3.2	4.2	3.0
ML475RAT27N_LZ	27	5,2	135	100	2.7	4.0	3.5
ML475RAT33N_LZ	33	5,2	130	100	2.5	4.8	3.0
ML475RAT39N_LZ	39	5,2	135	100	1.8	4.4	3.0
ML475RAT47N_LZ	47	5,2	135	100	2.1	5.6	3.0
ML475RAT56N_LZ	56	5,2	125	100	1.5	6.2	3.0
ML475RAT68N_LZ	68	5,2	120	100	1.5	8.2	2.5
ML475RAT82N_LZ	82	5,2	120	100	1.3	9.4	2.5
ML475RATR10_LZ	100	5,2	115	100	1.2	12.3	1.7
ML475RATR12_LZ	120	5,2	125	100	1.1	17.3	1.5
ML475RATR15_LZ	150	5,2	145	100	0.75	33.0	1.2

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

ML475RATR15GLZ

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

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.

S-Parameter files

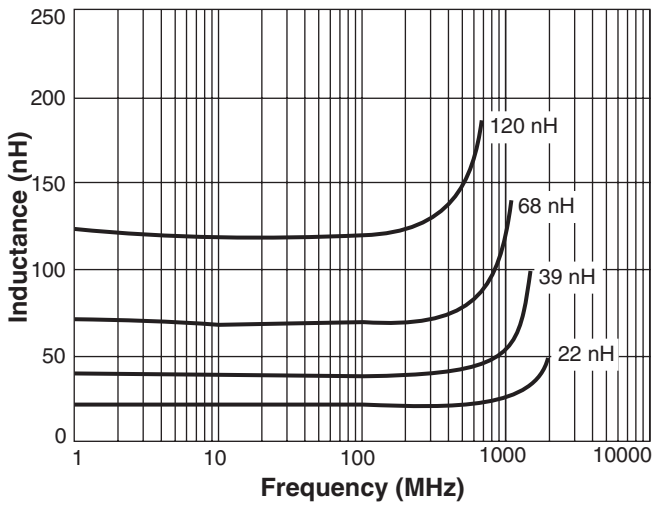
ON OUR WEB SITE

SPICE models

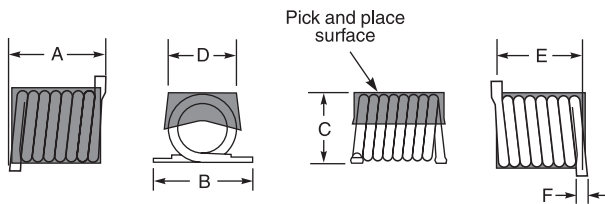
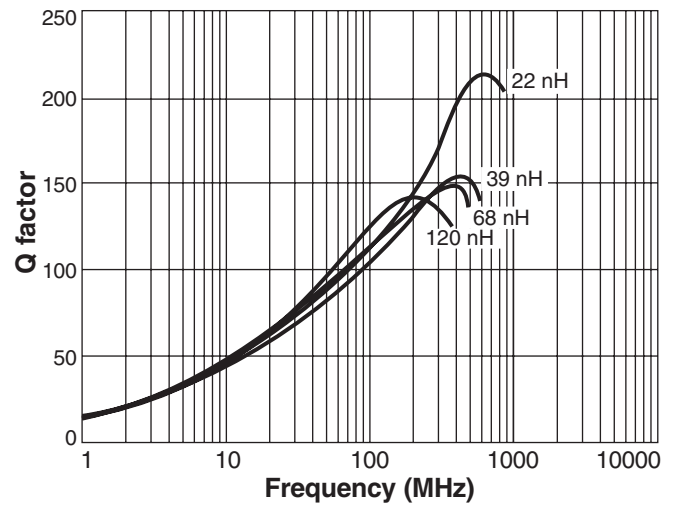
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ML475RAT Air Core Inductors

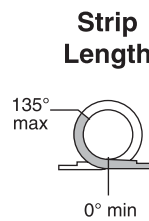
Typical L vs Frequency



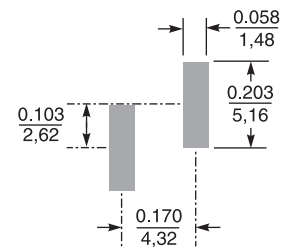
Typical Q vs Frequency



A max	B max	C max	D	E	F max
0,195	0,250	0,165	0,140 ±0,010	0,170 ±0,015	0,030
4,95	6,35	4,20	3,56 ±0,25	4,32 ±0,38	0,76



Suggested Land Pattern



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



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