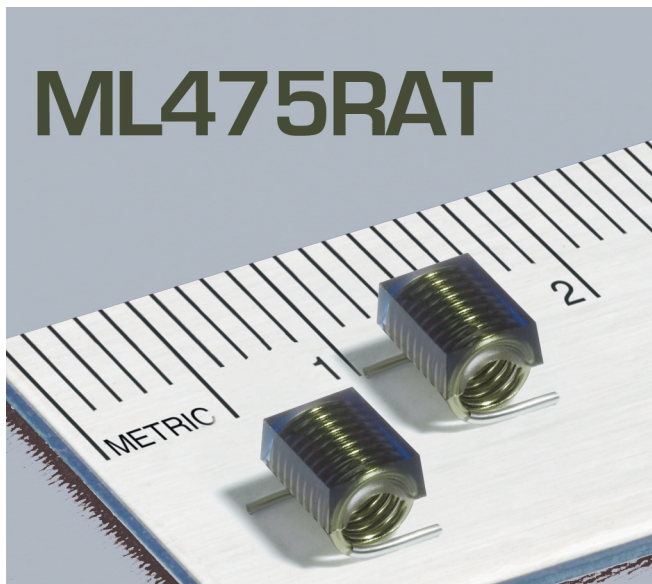


# High-Reliability Air Core Inductors ML475RAT



- 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

**Ambient temperature** -55°C to +125°C with  $I_{max}$  current, +125°C to +155°C with derated current

**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 <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent tolerance	Q typ <sup>3</sup>	Qmin <sup>3</sup>	SRF min <sup>4</sup> (GHz)	DCR max <sup>5</sup> (mOhm)	I <sub>max</sub> (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	2.1	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 = COTS

H = Screening per Coilcraft CP-SA-10001

N = Screening per Coilcraft CP-SA-10003

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**

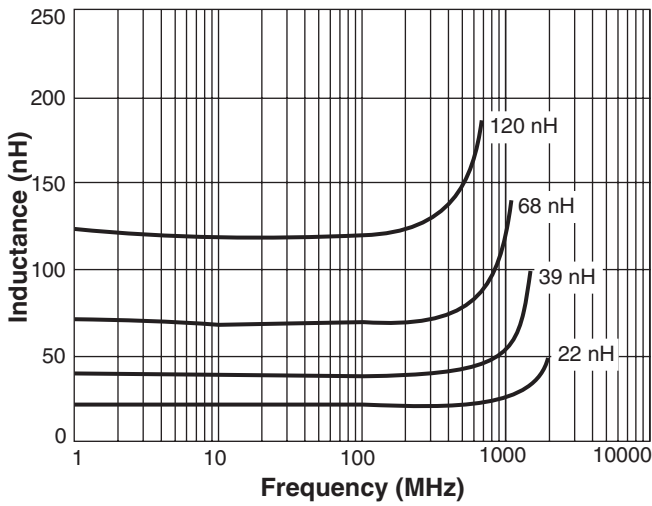
ON OUR WEB SITE

**SPICE models**

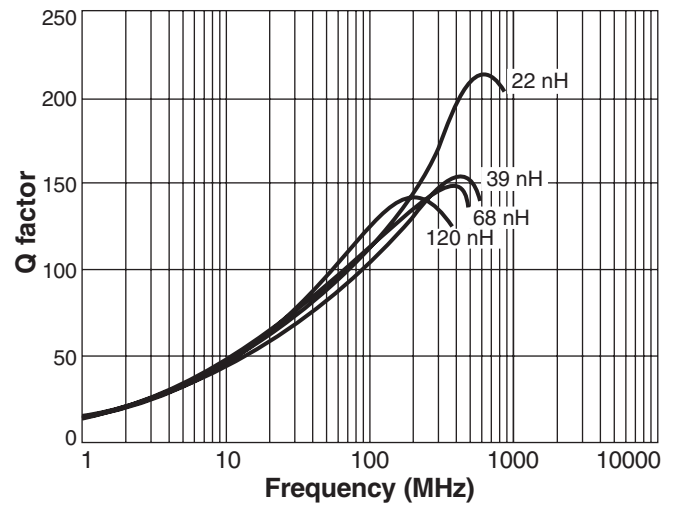
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# ML475RAT Air Core Inductors

## Typical L vs Frequency



## Typical Q vs Frequency



## Current Derating

