

# High-Reliability Air Core Inductors

ML426RAT  
ML446RAT



- Only 2 mm tall
- High Q over a wide range of frequencies
- Low DCR and excellent current handling capability
- 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<sub>max</sub> 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** 1000 per 7" reel  
Plastic tape: 2 mm wide, 0.23 mm thick, 8 mm pocket spacing, 2.2 mm pocket depth

Part number <sup>1</sup>	Turns	Inductance <sup>2</sup> (nH)	Percent tolerance	Q min <sup>3</sup>	SRF min <sup>4</sup> (GHz)	DCR max <sup>5</sup> (mOhm)	I <sub>max</sub> (A)	Wt (mg)
ML426RAT5N5_LZ	3	5.5	5,2	115	5.0	2.6	4.0	60
ML426RAT9N0_LZ	4	9.0	5,2	120	4.0	3.4	4.0	75
ML426RAT13N_LZ	5	13.0	5,2	100	3.0	3.9	4.0	90
ML446RAT16N_LZ	7	16.0	5,2	110	3.0	5.2	4.0	127
ML446RAT18N_LZ	8	18.0	5,2	110	2.9	6.0	4.0	136
ML446RAT23N_LZ	9	23.0	5,2	110	2.6	6.8	4.0	153
ML446RAT27N_LZ	10	27.0	5,2	110	2.3	7.9	4.0	169

1. When ordering, specify **tolerance** code:

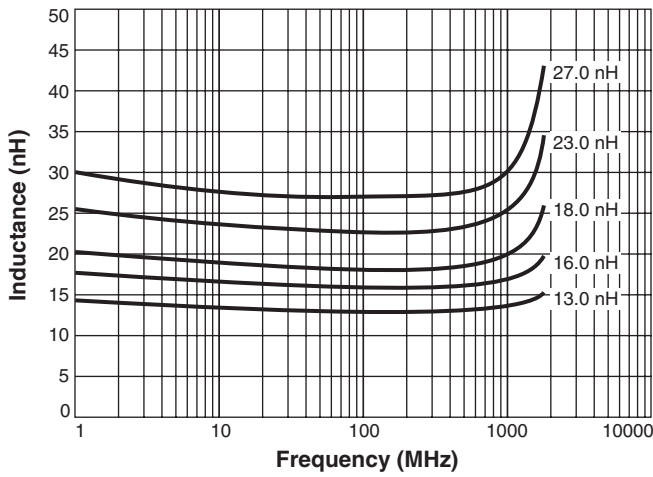
ML446RAT27NGLZ

**Tolerance:** G = 2% J = 5%

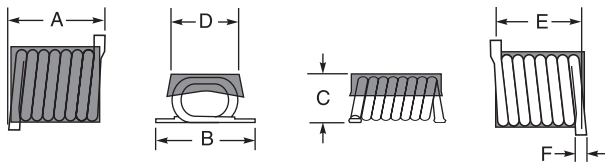
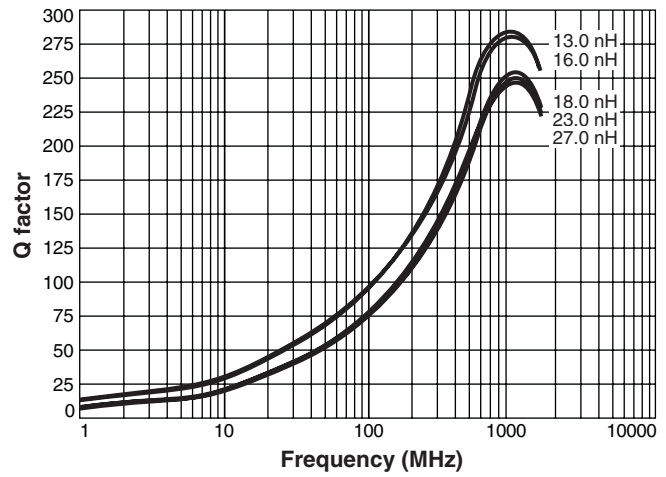
2. Inductance measured at 250 MHz on an Agilent/HP 4286A or equivalent with a Coilcraft SMD-A test fixture and correlation.
  3. Q measured at 250 MHz on an Agilent/HP 4291A or equivalent with a 16193A test fixture or equivalent.
  4. SRF measured on an Agilent/HP 8753ES or equivalent with a Coilcraft 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.

# ML426RAT / ML446RAT Low Profile Air Core Inductors

## Typical L vs Frequency

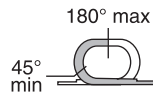


## Typical Q vs Frequency

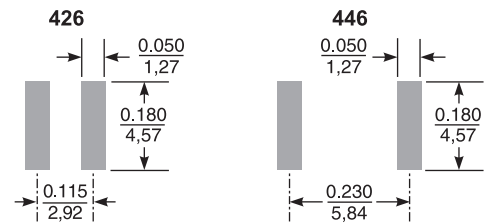


Size	A max	B max	C max	D	E	F max
426	0,155 3,94	0,165 4,19	0,079 2,01	0,135 3,43	0,115 ±0,015 2,92 ±0,38	0,029 0,74
446	0,270 6,86	0,165 4,19	0,079 2,01	0,135 3,43	0,230 ±0,015 5,84 ±0,38	0,029 0,74

### Strip Length



### Suggested Land Patterns



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



CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road  
Cary, IL 60013  
Phone 800-981-0363

Fax 847-639-1508  
Email cps@coilcraft.com  
www.coilcraft-cps.com

Document ML404-2 Revised 06/21/22

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.