

200°C Air Core Inductors

AT426RAT
AT446RAT



- Only 2 mm tall
- High Q over a wide range of frequencies
- Low DCR and excellent current handling capability
- Special materials allow operation in ambient temperatures as low as -60°C and up to 200°C .
- Passes NASA low outgassing specifications
- Tin-lead (Sn-Pb) terminations ensure the best possible board adhesion

Part number ¹	Turns	Inductance ² (nH)	Percent tolerance	Q min ³	SRF min ⁴ (GHz)	DCR max ⁵ (mOhm)	Imax (A)	Wt (mg)
AT426RAT5N5_SZ	3	5.5	5,2	115	5.0	2.6	4.0	52
AT426RAT9N0_SZ	4	9.0	5,2	120	4.0	3.4	4.0	65
AT426RAT13N_SZ	5	13.0	5,2	100	3.0	3.9	4.0	78
AT446RAT16N_SZ	7	16.0	5,2	110	3.0	5.2	4.0	110
AT446RAT18N_SZ	8	18.0	5,2	110	2.9	6.0	4.0	118
AT446RAT23N_SZ	9	23.0	5,2	110	2.6	6.8	4.0	133
AT446RAT27N_SZ	10	27.0	5,2	110	2.3	7.9	4.0	147

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

AT446RAT27NGSZ

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 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.

Terminations Tin-lead (63/37) over copper

Ambient temperature -60°C to $+155^{\circ}\text{C}$ with Imax current, $+155^{\circ}\text{C}$ to $+200^{\circ}\text{C}$ with derated current

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

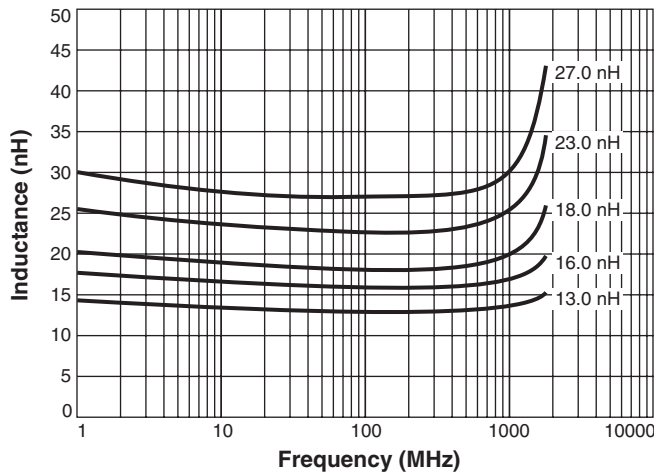
Temperature Coefficient of Inductance (TCL) +5 to +70 ppm/ $^{\circ}\text{C}$

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

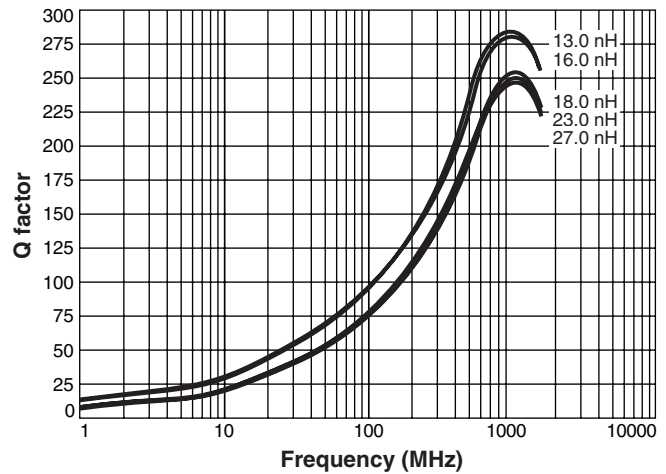
Enhanced crush-resistant packaging 1000 per 7" reel
Plastic tape: 2 mm wide, 0.23 mm thick, 8 mm pocket spacing, 2.2 mm pocket depth

AT426RAT/AT446RAT Low Profile Air Core Inductors

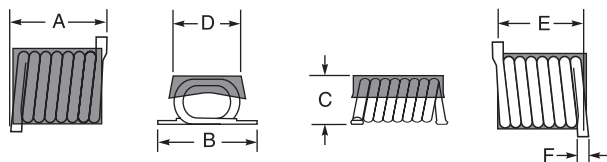
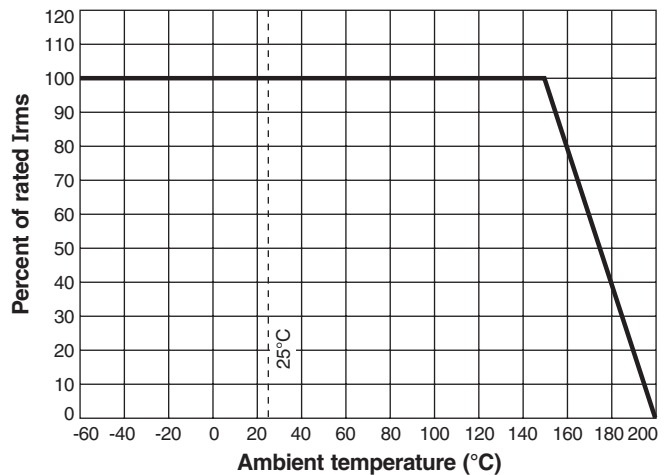
Typical L vs Frequency



Typical Q vs Frequency

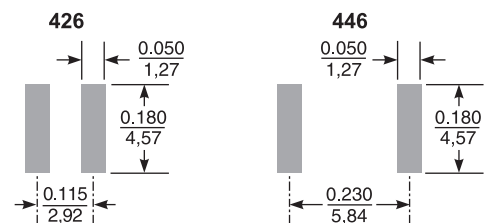


Typical Current Derating

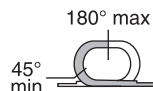


Size	A max	B max	C max	D	E	F max
426	0.155 3,94	0.165 4,19	0.079 2,01	0.135 3,43	0.115 ±0.015 2,92 ±0,38	0.029 0,74
446	0.270 6,86	0.165 4,19	0.079 2,01	0.135 3,43	0.230 ±0.015 5,84 ±0,38	0.029 0,74

Suggested Land Patterns



Strip Length



Dimensions are in inches/mm