

Air Core Inductors for Critical Applications

ST426RAT
ST446RAT



- Only 2 mm tall
- High Q over a wide range of frequencies
- Low DCR and excellent current handling capability

Terminations Tin-silver over copper. Other terminations available at additional cost.

Ambient temperature -40°C to +125°C with I_{max} current

Maximum part temperature +140°C (ambient + temp rise)

Storage temperature Component: -40°C to +140°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)

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 ¹	Turns	Inductance ² (nH)	Percent tolerance	Q min ³	SRF min ⁴ (GHz)	DCR max ⁵ (mOhm)	I _{max} (A)	Wt (mg)
ST426RAT5N5_LZ	3	5.5	5,2	115	5.0	2.6	4.0	52
ST426RAT9N0_LZ	4	9.0	5,2	120	4.0	3.4	4.0	65
ST426RAT13N_LZ	5	13.0	5,2	100	3.0	3.9	4.0	78
ST446RAT16N_LZ	7	16.0	5,2	110	3.0	5.2	4.0	110
ST446RAT18N_LZ	8	18.0	5,2	110	2.9	6.0	4.0	118
ST446RAT23N_LZ	9	23.0	5,2	110	2.6	6.8	4.0	133
ST446RAT27N_LZ	10	27.0	5,2	110	2.3	7.9	4.0	147

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

ST446RAT27NGLZ

Tolerance: G = 2% J = 5%

Termination: L = Tin-silver over copper.

Special order:

T = Tin-silver-copper (95.5/4/0.5) over copper,

S = Tin-lead (63/37) over copper.

Testing: Z = Unscreened

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

All screening performed to the document's latest revision

Custom screening also available

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.

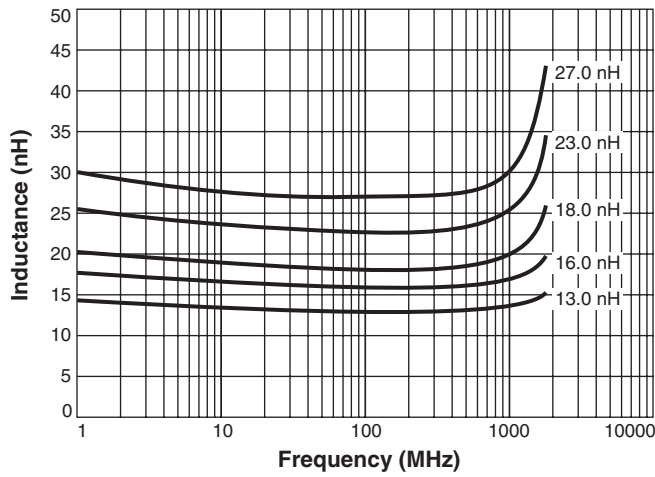
5. DCR measured on a Keithley 580 Micro-Ohmmeter or equivalent.

6. Electrical specifications at 25°C.

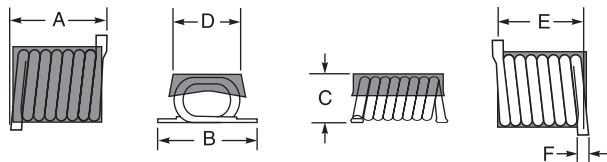
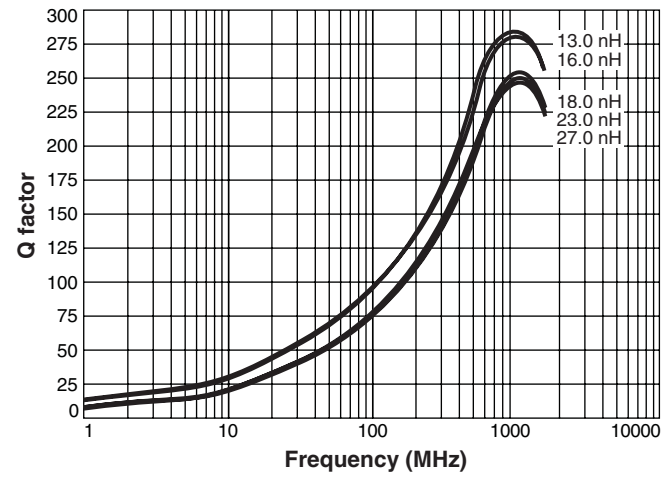
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

ST426RAT / ST446RAT Low Profile Air Core Inductors

Typical L vs Frequency

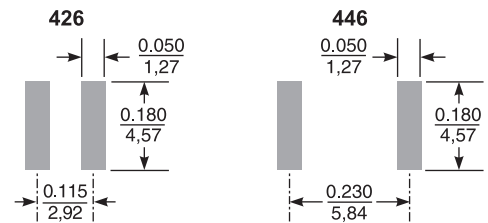


Typical Q vs Frequency



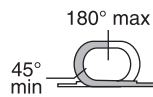
Size	A max	B max	C max	D	E	F max
426	0,155 3,94	0,165 4,19	0,079 2,01	0,135 3,43	0,115 ±0,015 2,92 ±0,38	0,029 0,74
446	0,270 6,86	0,165 4,19	0,079 2,01	0,135 3,43	0,230 ±0,015 5,84 ±0,38	0,029 0,74

Suggested Land Patterns



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

Strip Length



CRITICAL PRODUCTS & SERVICES

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