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 Imax 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)	Imax (A)	Wt (mg)
ST426RAT5N5_LZ	3	5.5	5,2	115	5.0	2.6	4.0	60
ST426RAT9N0_LZ	4	9.0	5,2	120	4.0	3.4	4.0	75
ST426RAT13N_LZ	5	13.0	5,2	100	3.0	3.9	4.0	90
ST446RAT16N_LZ	7	16.0	5,2	110	3.0	5.2	4.0	127
ST446RAT18N_LZ	8	18.0	5,2	110	2.9	6.0	4.0	136
ST446RAT23N_LZ	9	23.0	5,2	110	2.6	6.8	4.0	153
ST446RAT27N_LZ	10	27.0	5,2	110	2.3	7.9	4.0	169

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.

Coilcraft CPS
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

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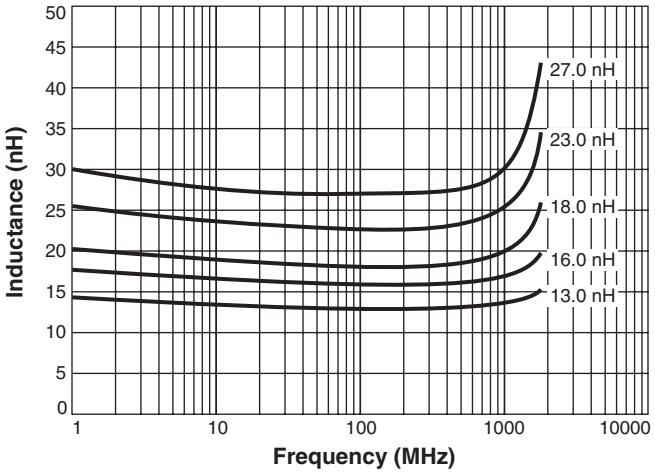
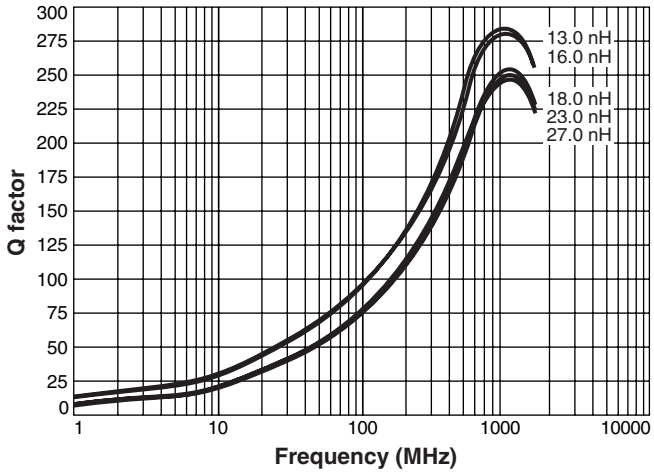
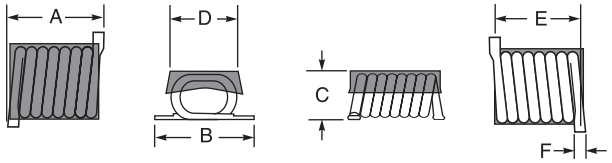
ST426RAT /ST446RAT Low Profile Air Core Inductors

Typical L vs Frequency



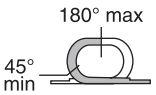
Typical Q vs Frequency



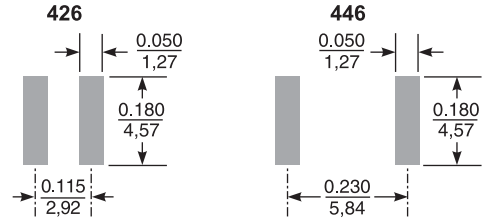


Size	A max	B max	C max	D	E	F max
426	0.155 3,94	0.165 4,19	0.079 2,01	0.135 3,43	0.115 ±0.015 2,92 ±0,38	0.029 0,74
446	0.270 6,86	0.165 4,19	0.079 2,01	0.135 3,43	0.230 ±0.015 5,84 ±0,38	0.029 0,74

Strip Length



Suggested Land Patterns



Dimensions are in inches / mm

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