(http://www.ti.com)

WEBENCH® Coil Designer

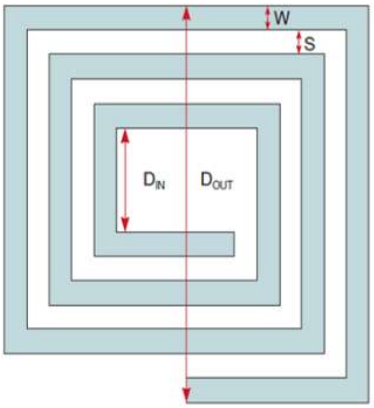
1: Select LDC Part

LDC1000 ▼

Parameter range for selected part	
Name	Range
Voltage (Oscillation Amplitude)	1 to 4 V
Operating Temperature	-40 to 125 ° C
Sensor Frequency	5k to 5M Hz
Resonance Impedance	798 to 3.93M Ω

2: Select Coil Type

Square ▼



3: Output Graph

Layers vs. Total Inductance

☐ Circular ☑ Square ☐ Hexagonal ☐ Octagonal

Y-axis:

Total Inductance ▼

X-axis:

Layers ▼

4: Select Coil Geometry And Other Parameters

Metric | Imperial

Oz-Cu: ON | OFF

LC sensor capacitance(C)	1000 pF min: 50 - max: 10000
Outer diameter of inductor(D_{out})	400 mils min: 42 - max: 5900
Layers(M)	2 Layer min: 1 - max: 8
Turns(N)	16 Turns min: 1 - max: 120
Trace width(W)	4 mils min: 2 - max: 40
Spacing between traces(S)	4 mils min: 2 - max: 12
Copper thickness(t)	1 oz-Cu min: 0.5 - max: 5
Temperature(T)	25 ° C min: -40 - max: 125

Output Parameters	
Name	Output
Total inductance - Square	8.59 μH
Sensor frequency	1714.09 kHz
Q factor	13.7
AC resistance (skin effect only)	6.75 Ω
Coil fill ratio	0.36
Coil inner diameter (D_{in})	144 mils

View more

5: Export Design

Share Design

Reset

More information (http://www.ti.com/lsds/ti/analog/webench/inductive-sensing.page#coil)

Support & Community (http://e2e.ti.com/support/development_tools/webench_design_center/f/232)