

WEBENCH® Coil Designer

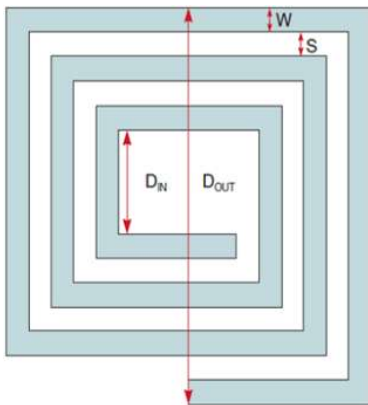
1: Select LDC Part

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 μ H
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/lstds/ti/analog/webench/inductive-sensing.page#coil>)

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

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