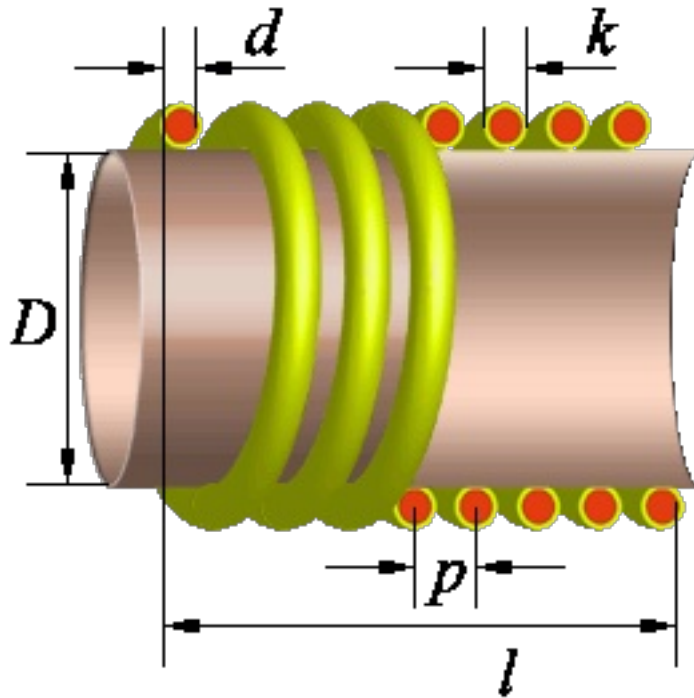


Coil64 v2.1.28 - One layer coil with round wire**Input:**

Inductance L: 220 nH
 Frequency f: 50 MHz
 Former diameter D: 9,5 mm
 Wire diameter d: 1,5 mm
 Wire diameter with insulation k: 1,635 mm
 Winding pitch p: 2 mm

Result:

Number of turns of the coil $N = 5,561$
 Length of wire without leads $l_w = 19,484$ cm
 Length of winding $l = 12,757$ mm
 Weight of wire $m = 3,085$ g
 Resistance of the coil $R_{dc} = 0,002$ Ohm
 Reactance of the coil $X = 69,115$ Ohm
 Self capacitance $C_s = 0,348$ pF
 Coil self-resonance frequency $F_{sr} = 627,577$ MHz
 Coil constructive Q-factor $Q = 541$
 Loss resistance ESR = 0,127 Ohm

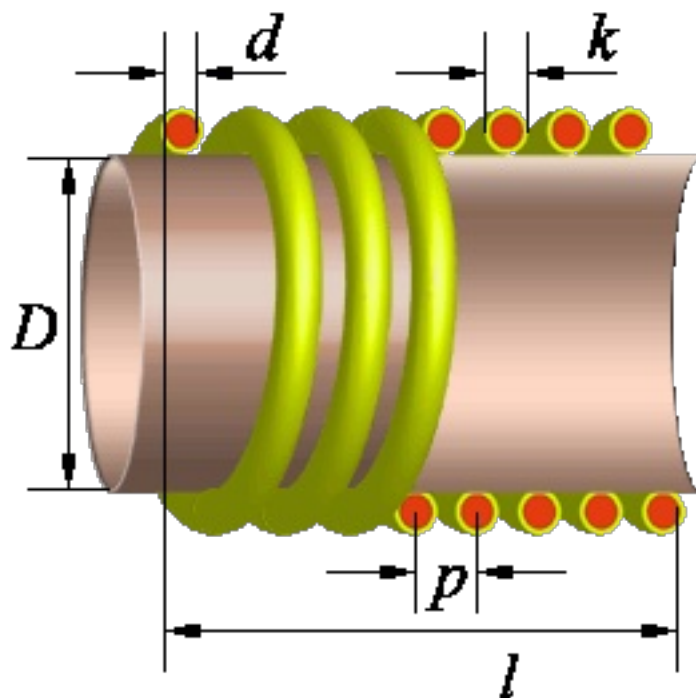
Additional results for parallel LC circuit at the working frequency:

=> Circuit capacitance: $C_k = 45,707$ pF
 => Characteristic impedance: $\rho = 69$ Ohm
 => Equivalent resistance: $R_e = 24,264$ kOhm
 => Bandwidth: $3dB\Delta f = 142,421$ kHz

Input data for LTSpice:

Inductance: 0.220p
 Series resistance: 1.901m
 Parallel resistance: 37.097k
 Parallel capacitance: 0.348p

Coil64 v2.1.28 - One layer coil with round wire



Input:

Inductance L: 270 nH
 Frequency f: 50 MHz
 Former diameter D: 9,5 mm
 Wire diameter d: 1,5 mm
 Wire diameter with insulation k: 1,635 mm
 Winding pitch p: 2 mm

Result:

Number of turns of the coil N = 6,501
 Length of wire without leads lw = 22,779 cm
 Length of winding l = 14,637 mm
 Weight of wire m = 3,607 g
 Resistance of the coil Rdc = 0,002 Ohm
 Reactance of the coil X = 84,823 Ohm

 Self capacitance Cs = 0,36 pF
 Coil self-resonance frequency Fsr = 566,705 MHz
 Coil constructive Q-factor Q = 541
 Loss resistance ESR = 0,155 Ohm

Additional results for parallel LC circuit at the working frequency:

=> Circuit capacitance: Ck = 37,166 pF
 => Characteristic impedance: $\rho = 85 \text{ Ohm}$
 => Equivalent resistance: Re = 29,779 kOhm
 => Bandwidth: 3dBAf = 142,421kHz

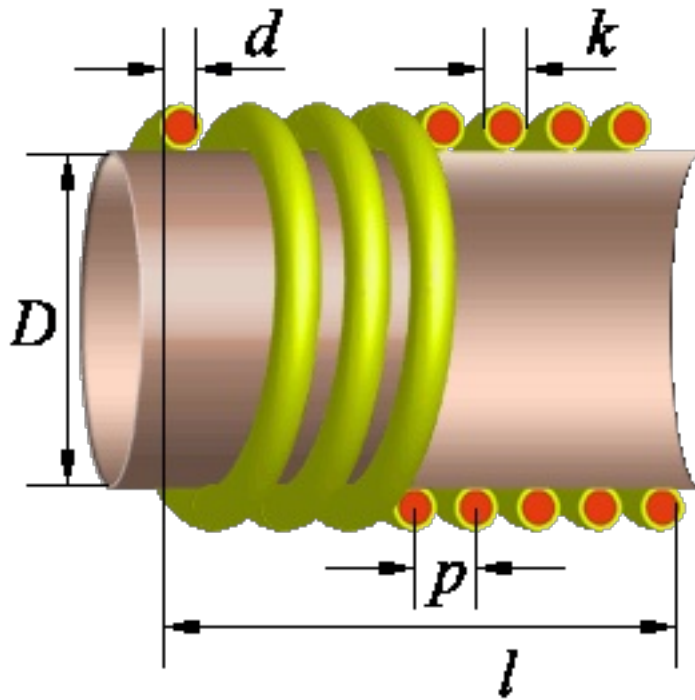
Input data for LTSpice:

Inductance: 0.270 μ
 Series resistance: 2.222m
 Parallel resistance: 45.416k
 Parallel capacitance: 0.360p

[x](#)

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Coil64 v2.1.28 - One layer coil with round wire



Input:
 Inductance L: 160 nH
 Frequency f: 50 MHz
 Former diameter D: 9,5 mm
 Wire diameter d: 1,5 mm
 Wire diameter with insulation k: 1,635 mm
 Winding pitch p: 2 mm

Result:
 Number of turns of the coil $N = 4,387$
 Length of wire without leads $l_w = 15,371$ cm
 Length of winding $l = 10,409$ mm
 Weight of wire $m = 2,434$ g
 Resistance of the coil $R_{dc} = 0,001$ Ohm
 Reactance of the coil $X = 50,265$ Ohm
 Self capacitance $C_s = 0,338$ pF
 Coil self-resonance frequency $F_{sr} = 737,034$ MHz
 Coil constructive Q-factor $Q = 542$
 Loss resistance $ESR = 0,092$ Ohm

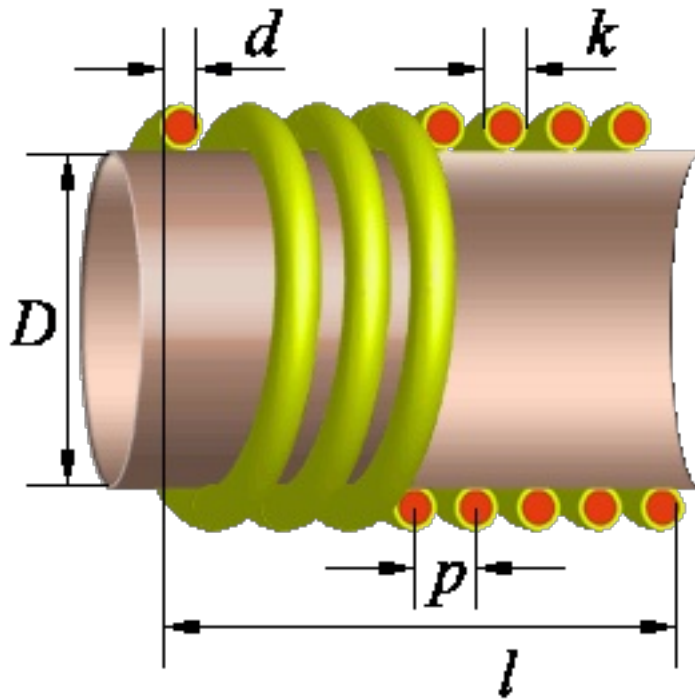
Additional results for parallel LC circuit at the working frequency:
 => Circuit capacitance: $C_k = 62,988$ pF
 => Characteristic impedance: $\rho = 50$ Ohm
 => Equivalent resistance: $R_e = 17,668$ kOhm
 => Bandwidth: $3dB_{Af} = 142,251$ kHz

Input data for LTSpice:
 Inductance: 0.160μ
 Series resistance: 1.500m
 Parallel resistance: 27.108k
 Parallel capacitance: 0.338p

[x](#)

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Coil64 v2.1.28 - One layer coil with round wire



Input:
 Inductance L: 100 nH
 Frequency f: 50 MHz
 Former diameter D: 9,5 mm
 Wire diameter d: 1,5 mm
 Wire diameter with insulation k: 1,635 mm
 Winding pitch p: 2 mm

Result:
 Number of turns of the coil $N = 3,166$
 Length of wire without leads $l_w = 11,095$ cm
 Length of winding $l = 7,968$ mm
 Weight of wire $m = 1,757$ g
 Resistance of the coil $R_{dc} = 0,001$ Ohm
 Reactance of the coil $X = 31,416$ Ohm
 Self capacitance $C_s = 0,337$ pF
 Coil self-resonance frequency $F_{sr} = 929,365$ MHz
 Coil constructive Q-factor $Q = 534$
 Loss resistance ESR = 0,059 Ohm

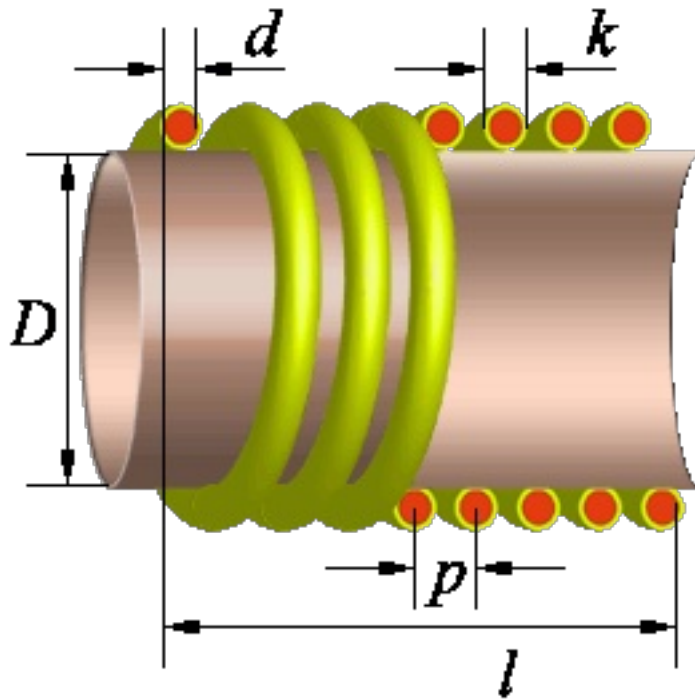
Additional results for parallel LC circuit at the working frequency:
 => Circuit capacitance: $C_k = 100,984$ pF
 => Characteristic impedance: $\rho = 31$ Ohm
 => Equivalent resistance: $R_e = 10,936$ kOhm
 => Bandwidth: $3dB_{Af} = 143,633$ kHz

Input data for LTSpice:
 Inductance: 0.100μ
 Series resistance: 1.082m
 Parallel resistance: 16.730k
 Parallel capacitance: 0.337p

[x](#)

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Coil64 v2.1.28 - One layer coil with round wire



Input:

Inductance L: 75 nH
 Frequency f: 50 MHz
 Former diameter D: 9,5 mm
 Wire diameter d: 1,5 mm
 Wire diameter with insulation k: 1,635 mm
 Winding pitch p: 2 mm

Result:

Number of turns of the coil N = 2,581
 Length of wire without leads lw = 9,042 cm
 Length of winding l = 6,796 mm
 Weight of wire m = 1,432 g
 Resistance of the coil Rdc = 0,001 Ohm
 Reactance of the coil X = 23,562 Ohm
 Self capacitance Cs = 0,345 pF
 Coil self-resonance frequency Fsr = 1 079,823 MHz
 Coil constructive Q-factor Q = 535
 Loss resistance ESR = 0,044 Ohm

Additional results for parallel LC circuit at the working frequency:

=> Circuit capacitance: Ck = 134,75 pF
 => Characteristic impedance: $\rho = 24$ Ohm
 => Equivalent resistance: Re = 8,212 kOhm
 => Bandwidth: 3dBAf = 143,458kHz

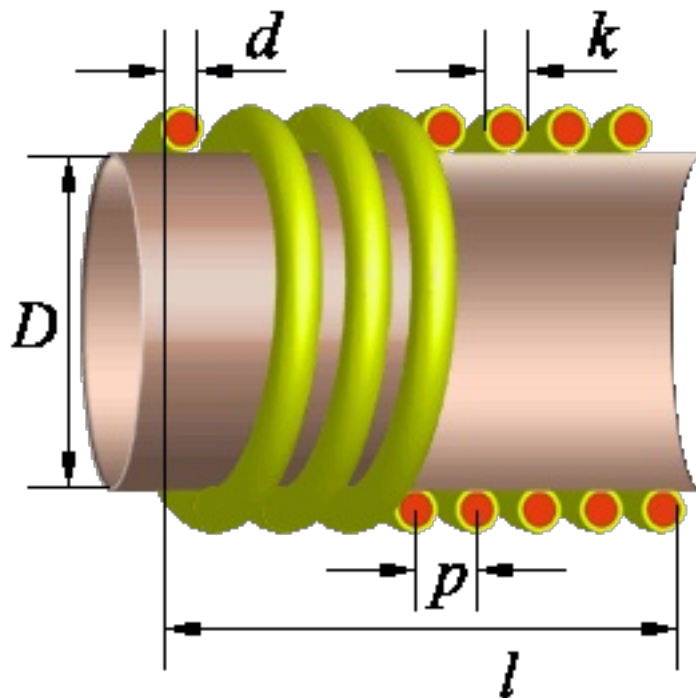
Input data for LTSpice:

Inductance: 0.075 μ
 Series resistance: 0.882m
 Parallel resistance: 12.565k
 Parallel capacitance: 0.345p

[x](#)

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Coil64 v2.1.28 - One layer coil with round wire



Input:

Inductance L: 56 nH
 Frequency f: 50 MHz
 Former diameter D: 9,5 mm
 Wire diameter d: 1,5 mm
 Wire diameter with insulation k: 1,635 mm
 Winding pitch p: 2 mm

Result:

Number of turns of the coil $N = 2,144$
 Length of wire without leads $l_w = 7,512$ cm
 Length of winding $l = 5,923$ mm
 Weight of wire $m = 1,189$ g
 Resistance of the coil $R_{dc} = 0,001$ Ohm
 Reactance of the coil $X = 17,593$ Ohm
 Self capacitance $C_s = 0,356$ pF
 Coil self-resonance frequency $F_{sr} = 1\,239,228$ MHz
 Coil constructive Q-factor $Q = 514$
 Loss resistance $ESR = 0,034$ Ohm

Additional results for parallel LC circuit at the working frequency:

=> Circuit capacitance: $C_k = 180,575$ pF
 => Characteristic impedance: $\rho = 18$ Ohm
 => Equivalent resistance: $R_e = 5,973$ kOhm
 => Bandwidth: $3dB_{Af} = 147,276$ kHz

Input data for LTSpice:

Inductance: 0.056u
 Series resistance: 0.733m
 Parallel resistance: 9.017k
 Parallel capacitance: 0.356p