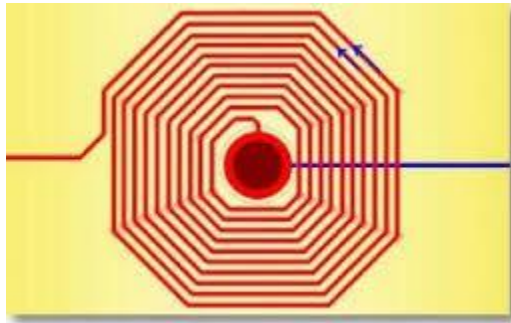
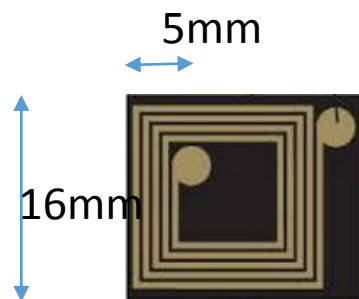


Excercise 5

1. Evaluate (calculate) the inductance value of the planar inductor below. Distance of wires is 0.6mm and the width of wire is 0.4 mm. Find the quality factor ($Q=\omega L/R$ at 1 MHz) for this inductance if the length of printed wire is 0,5m and the thickness of wire is $3\mu\text{m}$. Resistivity of used silver ink is $7\ \mu\Omega\text{cm}$. The diameter of the coil is 3cm.



2. Find inductance of the printed coil below.



3. Find the resonance frequency for the printed circuit below. Relative permittivity of capacitor's dielectric is 5 and thickness of used dielectric is $100\ \mu\text{m}$.

