NFC antenna Tuning

1. Tuning frequency = ~13.56MHz
2. Preferred inductance = ~ 957nH (since it is the inductance of the coil it is possible)
3. Preferred capacitance = ~ 144pF (so the parallel connection of 62pF and 82 pF) and reduce the value to ~13.560MHz. I think it is not that bad for preventing communication. Maybe changing the inductance a little bit can make it perfect.
4. Geometry
   - ☐ Turns = 4
   - ☐ Antenna Length = 30mm
   - ☐ Antenna Width = 22mm
5. Conductor (Copper Trace)
   - ☐ Width = 0.3mm
   - ☐ Spacing = 0.3mm
   - ☐ Thickness = 35um
6. Substrate (FR-4)
   - ☐ Thickness = 1.6mm
   - ☐ Electrical permittivity(ε_r) = 4.6
7. MCU = TRF7970 A

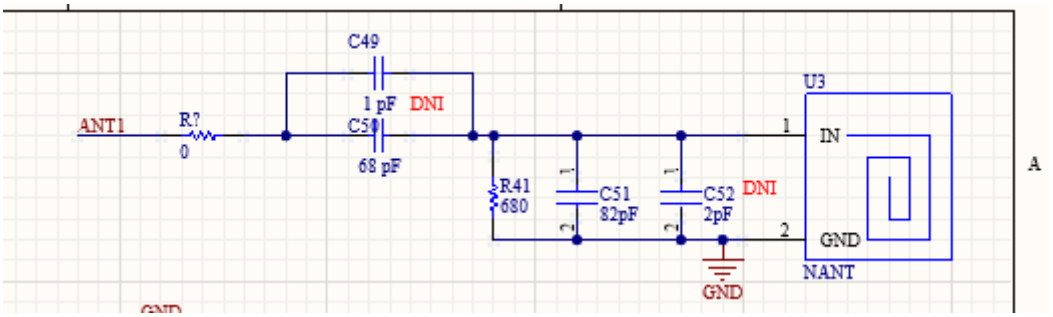

Figure 1. Impedance matching circuit