

Product name:RFID/NFC Module Antenna

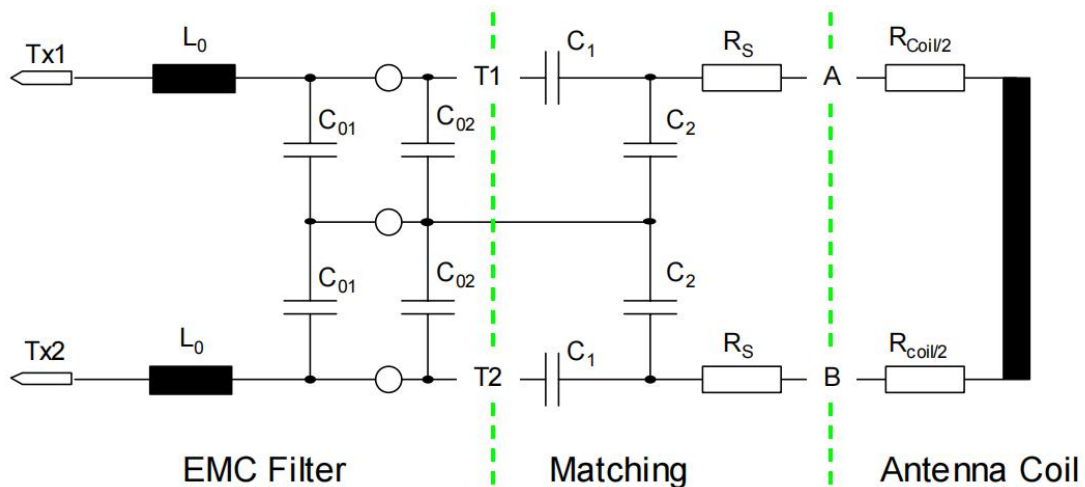
Model type:B22-1938S

Antenna principle:

The overall functionality can be separated into three basic functions:

1. Transmit power: The radiated magnetic field has to be maximized considering the radiation and datasheet limits, especially the limits for the radiation of the harmonics (up to 1GHz).
2. Transmit data: The 10% or 100% ASK modulated data signal has to be transmitted in such way, that every card is able to receive it. The signal shape and timing (i.e. the Q-factor) has to be considered.
3. Receive data: The cards answer has to be delivered to the receive input of the Micore.

Schematic of a directly matched antenna:



Picture1

$L_0 = 470\text{nH}$

$C_{01} + C_{02} = 220\text{pF}$

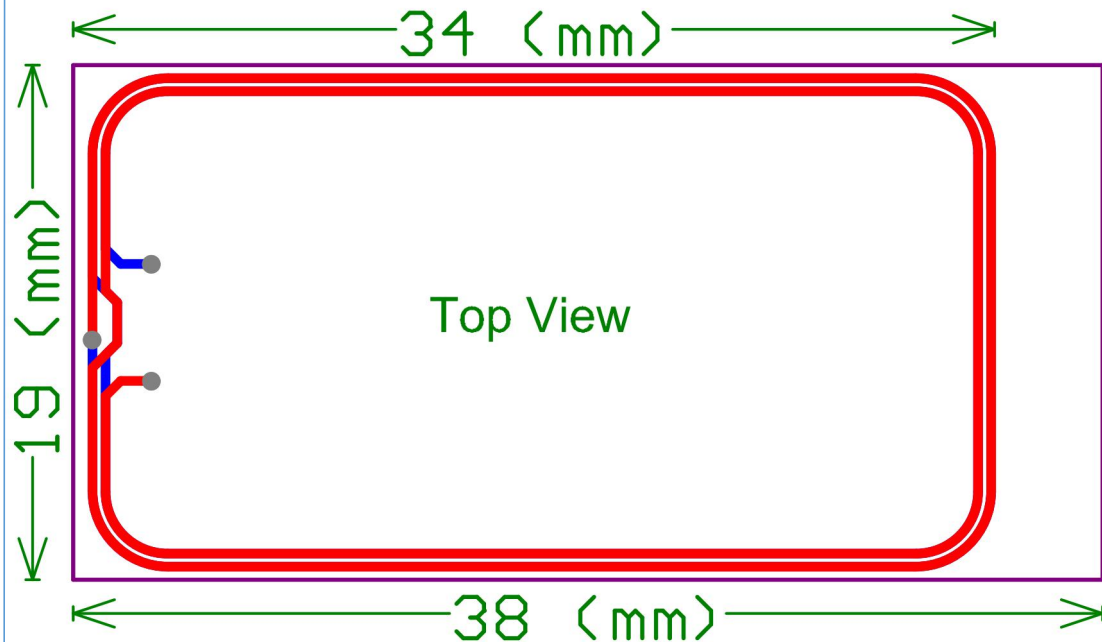
$C_1 = 68\text{pF}$

$C_2 = 270\text{pF} + 39\text{pF}$

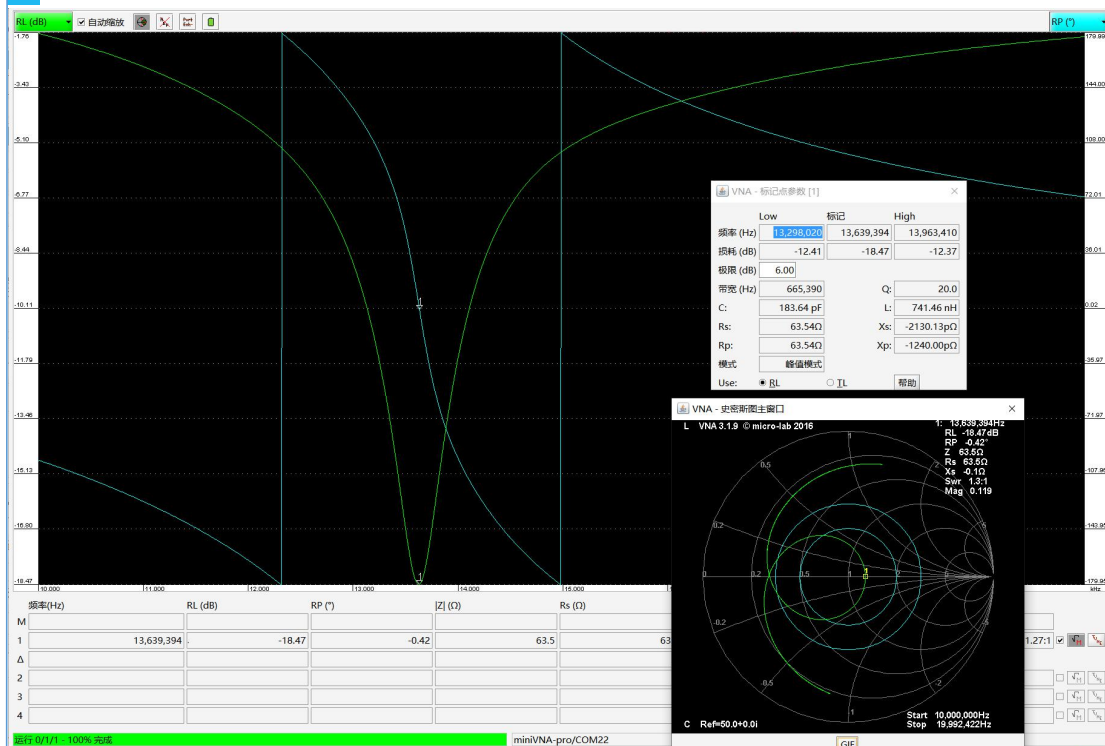
$R_S = 1.2\text{R}$

Antenna coil :

Antenna coil SIZE:34*19mm



Antenna measure (view from TX1 and TX2 of Picture1) :



(parameters may be affected by PCB installation environment)

iSolution Technologies Co., Ltd.

13th Floor, Bldg A, Tanglang Town Plaza West, Liuxian Avenue, Nanshan District, Shenzhen

Antenna Gain: Only radiated measurements are used to show compliance with FCC limits for fundamental and spurious emissions..