NFC ATTINY ATECC

Monday, March 2, 2020 1:45 PM

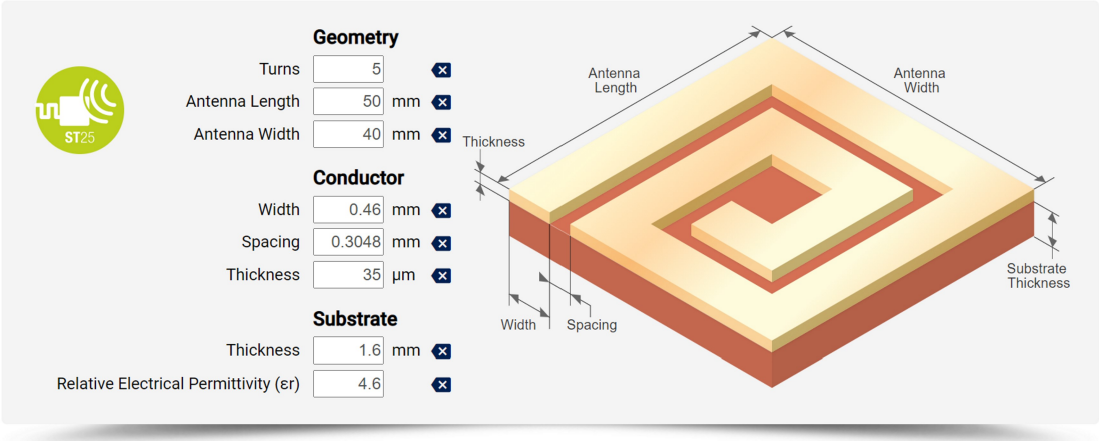
Calculation of loop inductance, chip capacitance is 50pF, frequency is 13.56MHz (datasheet recommends designing for ~14.5MHz)

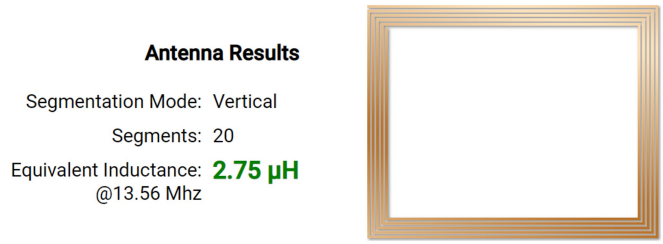
$$Q = \frac{R_{eq}}{2\pi f L}$$

$$f = \frac{1}{2\pi\sqrt{LC}}$$

$$13.56\times10^{6} = \frac{1}{2\pi\sqrt{50\cdot10^{-12}\ L}}$$

$$\mathrm{L} = \frac{25}{919368\pi^{2}} = 2.755\mathrm{uH}$$





Trace = 18mil
Space = 12mil
Thickness = 1oz copper