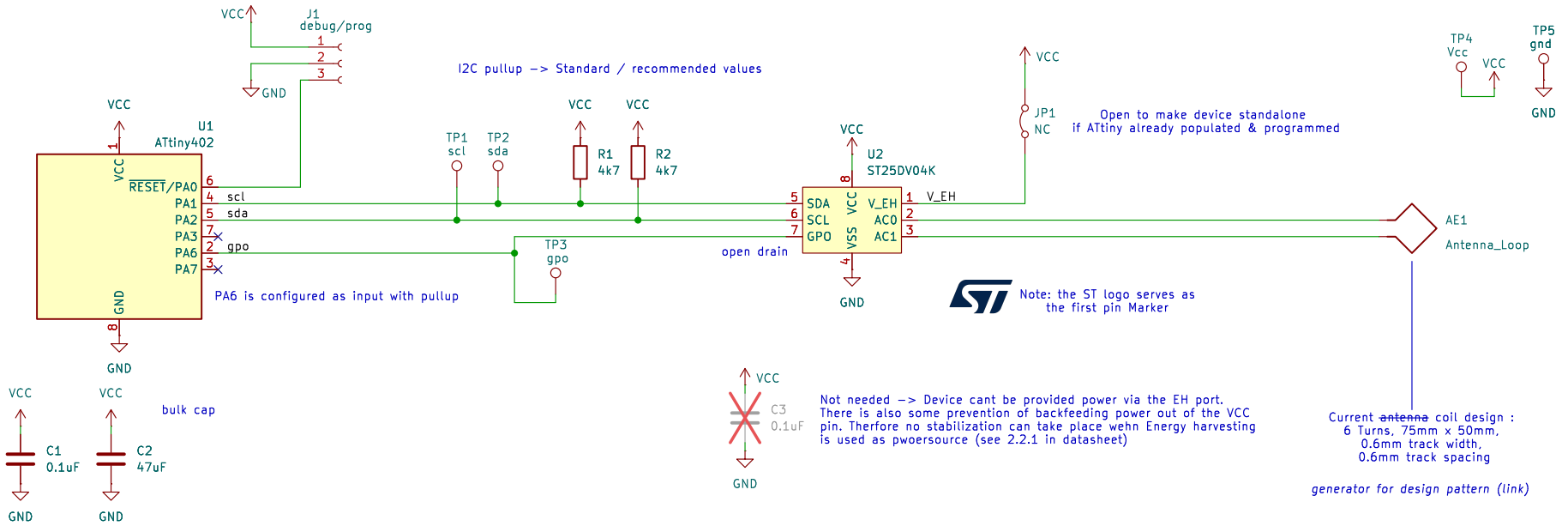

The ST25DV04 only allows for one link to be active at once (RF or I2C).
The GPO output from the ST25 is used as a busy signal for the ATtiny.
It is pulled low in case of RF activity.

$$L = \frac{1}{4\pi^2 f^2 C}$$

The resonant frequency should be 13.56MHz as pecified by ISO 15693.
With a nominal internal tuning cap (28.5pF), the inductance should be around 5.01uH.
However the the internal tuning cap can vary from 24.8pF to 30.2pF.
Therfore the optimum it can vary from 4.56uH to 5.55uH.
AN3249 recommends to assume a capacitance of 29pF.
Therefore the coil should be around 4.75uH.

IO table for the ATtiny

SOIC 8-pin	Pin Name (1,2)	Other/Special	ADC0	AC0	USART0	SPI0	TWI0	TCA0	TCB0	CCL
6	PA0	RESET/UPDI	AIN0		XDIR	SS				LUT0-IN0
5	PA1		AIN1		TXD	MOSI	SDA	WO1		LUT0-IN1
4	PA2	EVOUT0	AIN2		RxD	MISO	SCL	WO2		LUT0-IN2
7	PA3	EXTCLK	AIN3	OUT	XCK	SCK		WO0/WO3		
8	GND									
1	VDD									
2	PA6		AIN6	AINN0	TXD	MOSI			WO	LUT0-OUT
3	PA7		AIN7	AINP0	RXD	MISO		WO0		LUT1-OUT

Fachschaft Elektrotechnik

Fabian Steiner

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Title: NFC card

Size: A4	Date: 2024-09-15	**Rev: V0.0.2**
KiCad E.D.A. 8.0.5		Id: 1/1