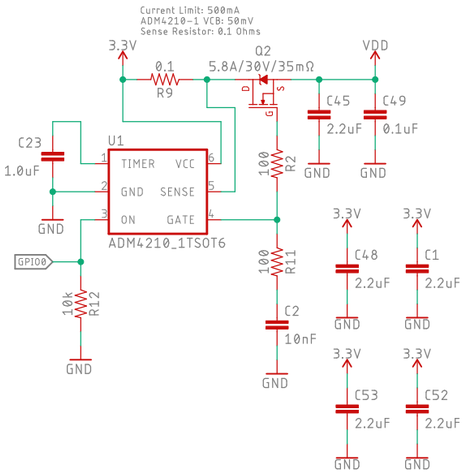
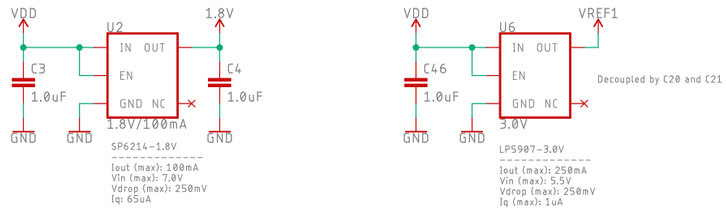
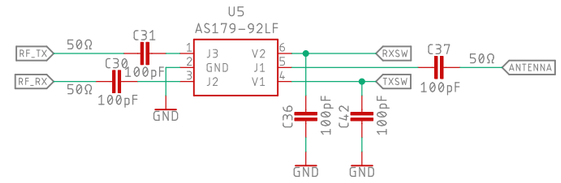
Power Switching & Inrush Current Limit



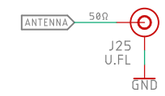
Voltage Regulation



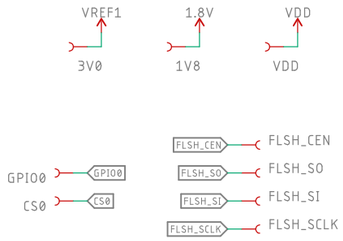
Antenna Switch



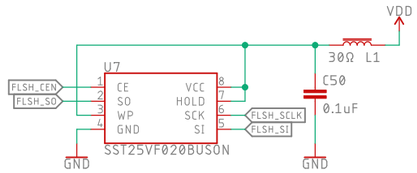
Antenna



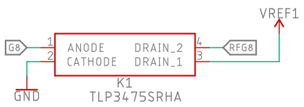
Test Points



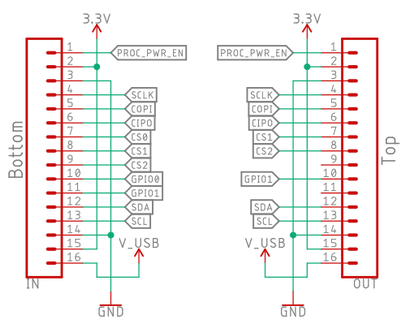
FLASH Memory



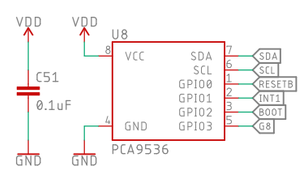
Gain Opto-Isolation



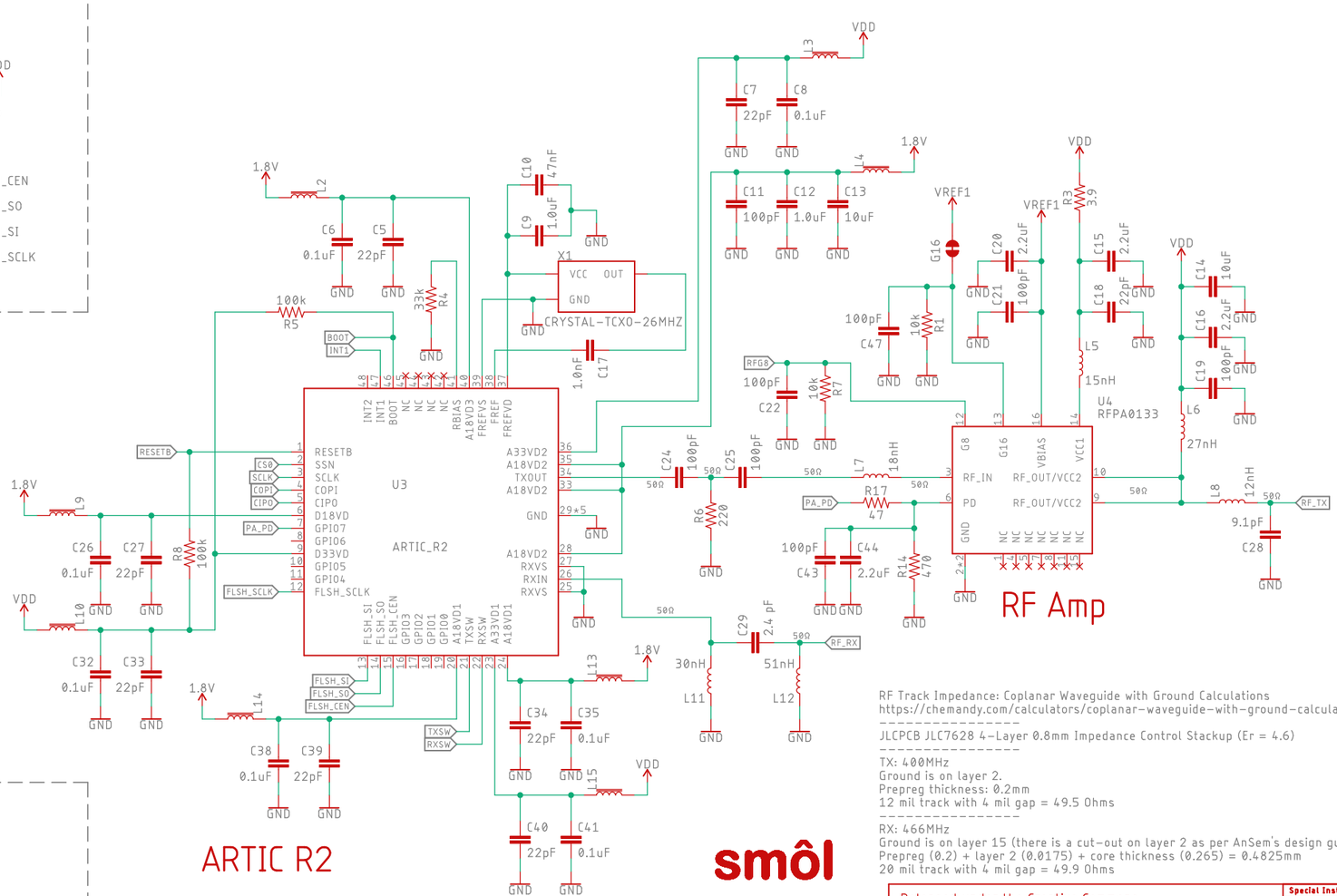
EZ Connectors



I2C GPIO



ARTIC R2



RF Track Impedance: Coplanar Waveguide with Ground Calculations
https://chemandy.com/calculators/coplanar-waveguide-with-ground-calculator.htm

JLCPCB JLC7628 4-Layer 0.8mm Impedance Control Stackup (Er = 4.6)

TX: 400MHz
Ground is on layer 2.
Prepreg thickness: 0.2mm
12 mil track with 4 mil gap = 49.5 Ohms

RX: 466MHz
Ground is on layer 15 (there is a cut-out on layer 2 as per AnSem's design guide).
Prepreg (0.2) + layer 2 (0.0175) + core thickness (0.265) = 0.4825mm
20 mil track with 4 mil gap = 49.9 Ohms

smôl

open hardware

SPARK X

TITLE: SparkX_smol_ARTIC_R2		
Design by: Paul Clark Based on the Icoteq Reference Design		REV: X01
Date: 19/08/2021 15:32	Sheet: 1/1	