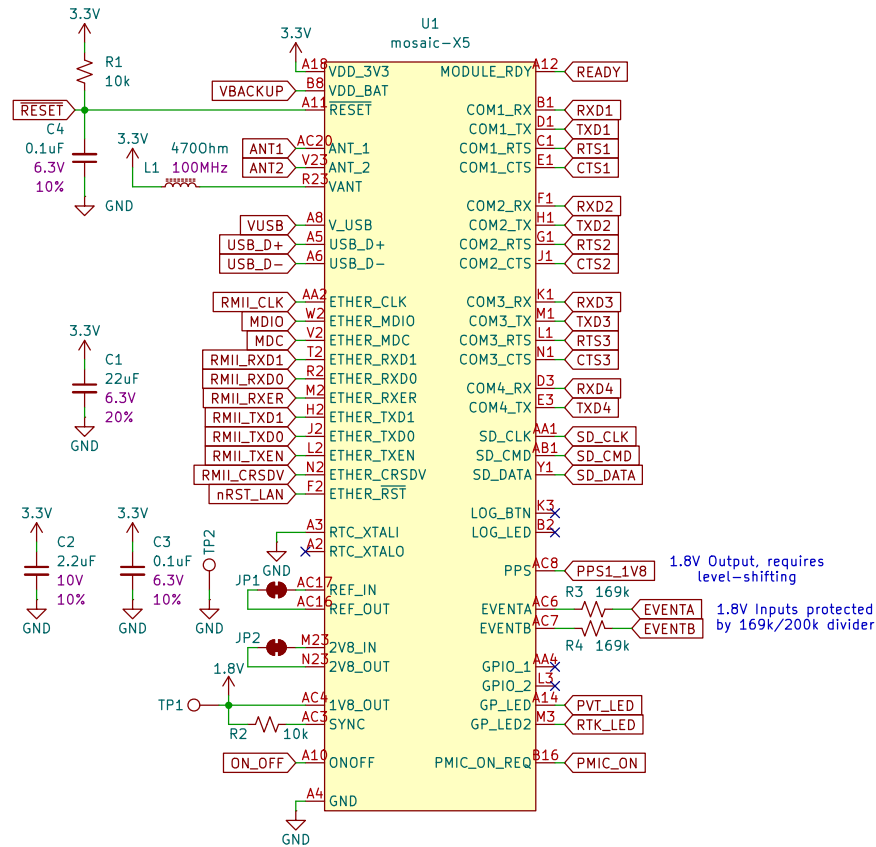
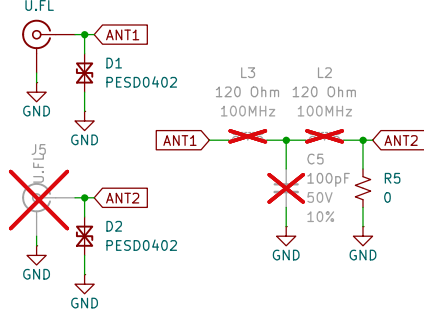


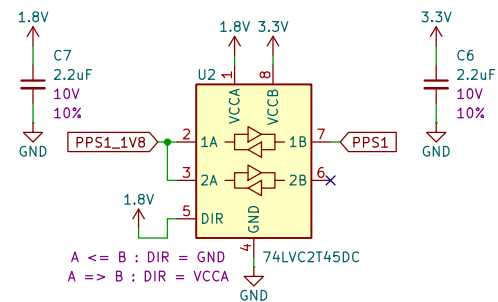
GNSS – mosaic-X5



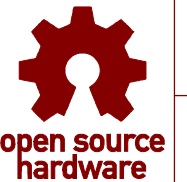
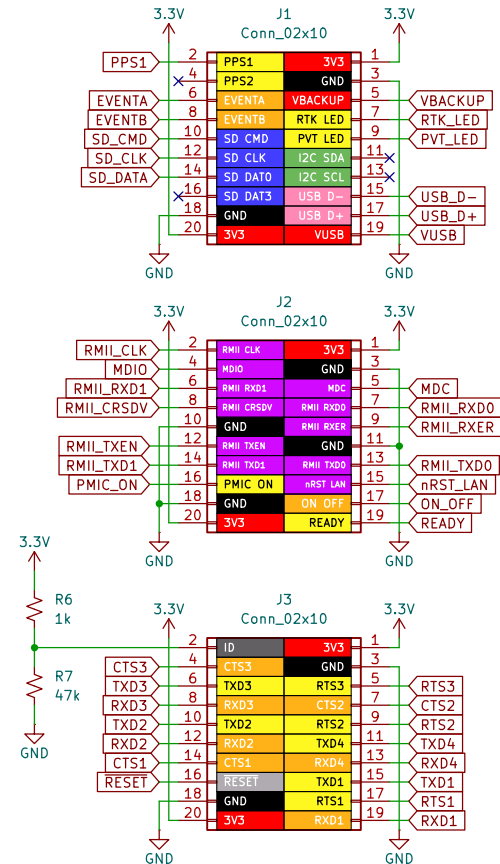
Antenna



Level Shifting – 74LVC2T45



Connectors



SPARKPNT

Designed by: P.C.

SparkFun Electronics

Sheet: /

File: SparkFun_GNSS_Flex_Module_mosaic-X5.kicad_sch

Title: SparkFun GNSS Flex Module – mosaic-X5

Size: USLetter Date: 2025-03-20

KiCad E.D.A. 8.0.7

Rev: v10

Id: 1/1

Microstrip Calculations:
Copper Thickness (1oz): 1.4mil/0.035mm
Board Thickness: 1.6mm
Dielectric Thickness (layer 1 to 2): 0.2mm
Er: 4.6
Polyimide Insulation: 6mil/0.1524mm
RF Trace Width: 13mil/0.33mm
<https://chemandy.com/calculators/coplanar-waveguide-with-ground-calculator.htm>

USB Trace Impedance: Differential Pair
<https://saturnpcb.com/saturn-pcb-toolkit/>
Prepreg Thickness: 6.3 mil (ALC7620), Er = 4.6
10.5 mil trace with 9.5 mil gap (20 mil center to center) = 90 Ohms