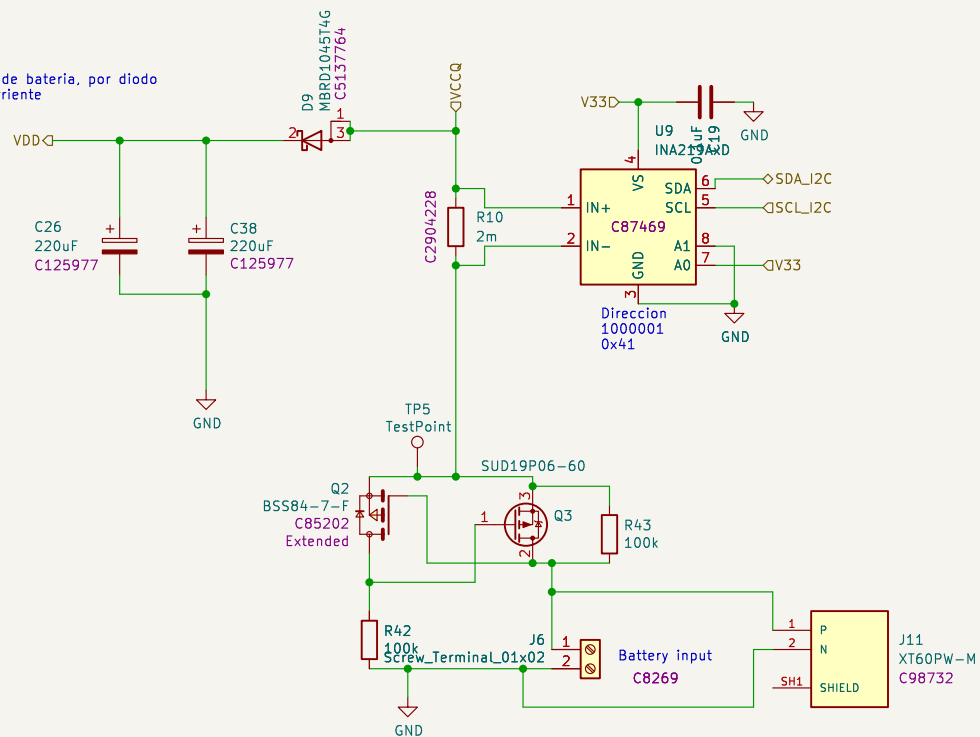


VDD = salida de voltaje de bateria, por diodo evita retorno de corriente



Sheet: /bateria/
File: bateria.kicad_sch

Title:

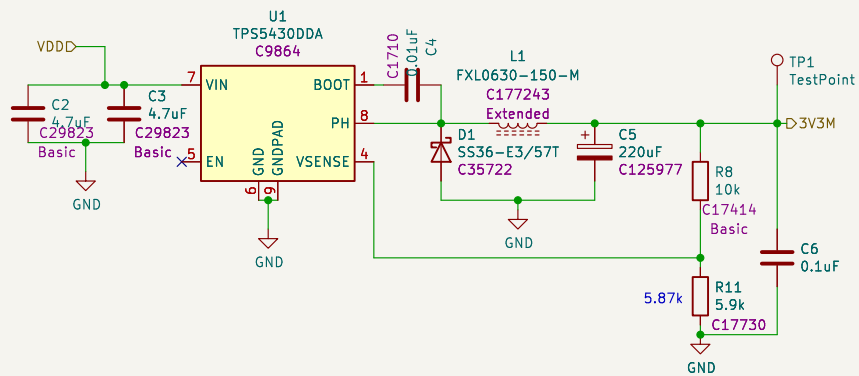
Size: A4

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Rev:

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The schematic diagram illustrates the electrical connections for a u-blox MAX-M10S-00B-01 GPS module. The module is represented by a yellow square with various pins labeled. Key connections include:

- Power Supply:** GPS_VCC is connected to a 3.3V regulator (V33) and a 600nF capacitor (FB1). A 100MHz crystal (C39) and a 22uF capacitor (C40) are connected to the VCC and GND pins.
- I2C Interface:** SDA_I2C and SCL_I2C pins are connected to the module's SDA and SCL pins.
- Antenna:** The GPS_ANT pin is connected to a u.FL antenna (J12). The GPS_RF_IN pin is connected to a 47pF capacitor (C41) and a 27nH RF choke (L3). The GPS_VCC_RF pin is connected to a 10nF capacitor (C42).
- Other Pins:** RESET_N, SAFEBOOT_N, EXTINT, VIO_SEL, LNA_EN, and V_BCKP are connected to GND. The TIMEPULSE pin is connected to a 1Hz signal source (GPS_PPS).

Notes:

- I2C: u-blox supports Fast-mode ONLY (max 320 kHz, no 100 kHz standard-mode). Run the shared bus at <=320 kHz.
- R44/R45 add 4.7k pull-ups: the root sheet currently has NO pull-ups on SDA_I2C/SCL_I2C (OLED module may have its own). If the bus already has one full set of pull-ups, mark R44/R45 DNP.
- Antenna: passive OR active. Active: fit R46 (VCC_RF feeds bias-T L3/C42). Passive: DNP R46 so VCC_RF is not shorted by a DC-grounded patch. RF_IN trace to J12 must be short, 50 ohm controlled impedance, over unbroken ground. J12 is a u.FL – do not confuse with the LoRa u.FL.
- GPS_PPS (TIMEPULSE, 1 Hz) is an optional global label – route to a free ESP32 GPIO (IO27 or IO5) on the root sheet if wanted.
- Unused pins left open per datasheet: TXD, RXD, RESET_N, SAFEBOOT_N, EXTINT, VIO_SEL (open = 3.3 V IO), LNA_EN.
- V_BCKP tied to GPS_VCC (no backup battery): hot-start data is kept only while V33 is up.

Sheet Information:

- Sheet: /gps/
- File: gps.kicad_sch
- Title: GPS – u-blox MAX-M10S
- Size: A4
- Date: 2026-09-22
- Rev: A
- KiCad E.D.A. 9.0.9
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Antenna: passive OR active. Active: fit R46 (VCC_RF feeds bias-T L3/C42). Passive: DNP R46 so VCC_RF is not shorted by a DC-grounded patch. RF_IN trace to J12 must be short, 50 ohm controlled impedance, over unbroken ground. J12 is a u.FL – do not confuse with the LoRa u.FL.

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File: gps.kicad_sch		
Title: GPS - u-blox MAX-M10S		
Size: A4	Date: 2026-09-22	
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