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1 2 3 4

Power

Regulation and filtering

Battery

The image contains several circuit diagrams for power management:

- USB to VBUS:** A diagram showing a USB-MICROB connector (JP1) with pins D-*, D+, and D+ connected to a VBUS pin. A 10uF capacitor (C2) is connected between VBUS and GND.
- Battery Charging:** A diagram showing a VBUS pin connected to a MCP7383/2 Lipo Charger (U2). The charger's VDD, UBAT, PRG, and USS pins are connected to a 1K resistor (R2) and a 10K resistor (R3). The charger's STAT pin is connected to a 10uF capacitor (C6) and a 100mA/200mA/500mA/1000mA current source. The charger's VDDs pin is connected to a 3.75-6V battery with a temperature range of -40-85°C.
- Voltage Regulation:** A diagram showing a VBUS pin connected to a MIC5225-3.3YM5-TR (U3) voltage regulator. The regulator's IN pin is connected to VBUS, and its OUT pin is connected to a 3V3 output. The regulator's EN pin is connected to a 100K resistor (R4) and a 10uF capacitor (C3). The regulator's GND pin is connected to GND. The regulator's P4 pin is connected to a 10uF capacitor (C4) and a 3V3 output.
- Current Limiting:** A diagram showing a VBUS pin connected to a CSR1206-8R01F1 (U4) current limiter. The current limiter's SRN and SRP pins are connected to a 10K resistor (R5) and a 10uF capacitor (C8). The current limiter's VDD pin is connected to a 3V3 output. The current limiter's USS, GPOUT, P4PD, and BIN pins are connected to a 10K resistor (R6) and a 10uF capacitor (C9). The current limiter's GND pin is connected to GND.

Processing / IO

The diagram illustrates the I2C module circuit. It includes a pull-up section for the SCL and SDA lines, connected to a +3V3 supply through 10k resistors (R11, R12). The BMP280 (U6) is connected to +3V3 (pin 8), GND (pin 7), VCCIO (pin 6), and GND (pin 4). Its SDO (pin 5) is connected to SDA, and SCK (pin 4) is connected to SCL. The RTC (U7) DS3231M is connected to GND (pin 4), VCC (pin 2), SQW (pin 3), and RST (pin 1). The LSM303DLHC (U7) is connected to +3V3 (pin 14), GND (pin 7), VDD (pin 4), and VDD_IO (pin 1). Its SDA (pin 3), SCL (pin 2), INT1 (pin 5), INT2 (pin 4), and DRDY (pin 9) pins are connected to the I2C lines. The module also includes capacitors C16 (10uF), C17 (10uF), C18 (1uF), and C19 (0.1uF).

RWatch	
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