

USB Connector, Filtering and Voltage Regulator

The schematic diagram illustrates the electrical connections for a USB connector, including filtering and voltage regulation. The USB_C_Receptacle_USB2.0 connector (J1) is shown with pins A4 (VBUS), A5 (A5), B5 (B5), A6 (D+), B6 (D+), A7 (D-), B7 (D-), A8 (SBU1), and B8 (SBU2). The shield is connected to S1. The circuit includes a 120Ω ferrite bead (FB1) and a 100nF capacitor (C11) for filtering. The VBUS line is connected to a 1.8V voltage regulator (U2, MIC5225-1.8YM5-TR) through a 2.2μF capacitor (C14). The regulator's output (1.8V_out) is connected to the PWR_FLAG pin. The circuit also includes a 5.1kΩ resistor (R2) and a 5.1kΩ resistor (R3) connected to the shield and ground. The PWR_FLAG pin is connected to the 1.8V output of the regulator through a 2.2μF capacitor (C16).

[illegible][illegible]

VOC-Sensor, T/H-Sensor and i2c pullups

3.5mA @ 1.8V
Startup time: <60s
Response time: 10...30s

350μA @ 1.8V
Accuracy: $\pm 1.8\%$ RH; $\pm 0.2^\circ\text{C}$
Response time: 6s

300ns / 400pF = 750Ω
L_{dwn} = 2.4mA

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