

The diagram illustrates a battery-powered microcontroller system. Key components and their connections include:

- Power Source:** A 4V 35mA solar panel (P1) provides input to the system.
- Resistors:** A 40k resistor (R1) is connected to the solar panel output. A 1M resistor (R2) is connected to the solar panel input. A 10k resistor (R5) is connected to the output of the step-down converter.
- Switch:** A switch labeled SOLAR_SW controls the input to the step-down converter.
- Step-Down Converter:** An SI1869DH (IC1) step-down converter is used to regulate the voltage. Its output is connected to a 10µF capacitor (C1) and a 10k resistor (R5).
- Diode:** A BAT54CLT1G diode (D1) is connected to the output of the step-down converter, with its cathode to ground and its anode to the VBAT pin.
- Batteries:** Two AAA batteries (BT1, BT2) are connected in series to provide power to the system. A BAT_SENSE pin is connected to the positive terminal of the battery stack.
- Microcontroller:** The system is powered by a microcontroller (UC) which is connected to the VBAT pin.

Pin connection diagram for HMC5883L:

- VDD (pin 2) and VDDIO (pin 13) are connected to VBAT through capacitor C7 (100nF).
- SCL (pin 1) and SDA (pin 16) are connected to the I2C bus.
- SETP (pin 8) and SETC (pin 12) are connected to ground through capacitor C9 (220nF).
- C1 (pin 10) and C11 (pin 15) are connected to ground through capacitor C11 (4.7uF).
- GND (pin 9) and GND (pin 11) are connected to ground.
- Pin 15 is marked with an 'X'.

The diagram shows the BMP180 sensor module (IC3) connected to the VBAT supply. The module's pins are labeled: SDA (pin 6), SCL (pin 5), VDD (pin 2), and GND (pin 7). The VDD pin is connected to the VBAT supply. A 100nF capacitor (C8) is connected between VBAT and GND.

[illegible]

P2	VBAT
P3	SWDIO
P4	SWDCLK
P5	RST
P6	GND
P7	TX

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