

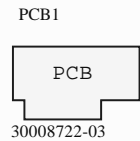
Notes

This board allows the user to test all of the features of the XBee TH modules.

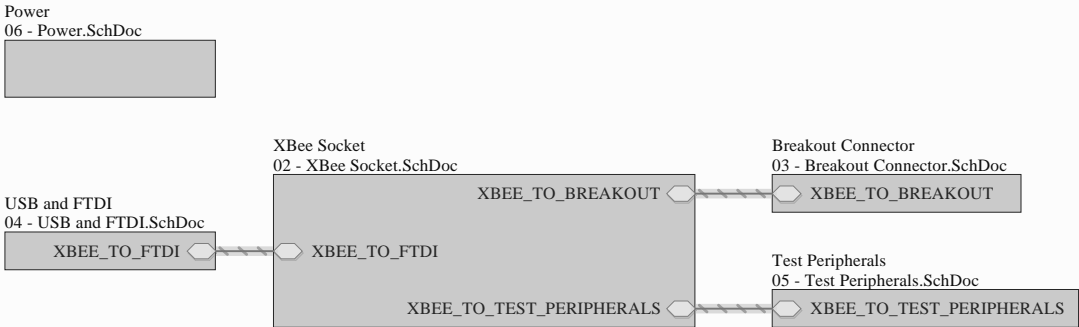
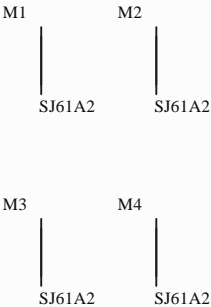
The following peripherals are used on this board to test different features:

- USB-C Connector
 - Powers the whole board with 5V
 - Provides a simple UART communication with the module that is compatible with XCTU
 - Dip switches are provided on each UART line from the USB which allows the user to disconnect any of these lines if he/she wants to test the UART lines with other peripherals
- Battery Connector
 - Can power the whole board with 2V to 5V so long as the USB-C Connector is not plugged in
 - This allows the user to easily power the module in a portable setting
- XBee Current Measurement
 - Allows the user to measure the current draw of the XBee in any mode
 - Easy to use interface: Switch the current measure switch to the "ON" position and place a current meter probe across the current measure header
- LEDs
 - LED indicators for the following lines: UART DOUT, UART DIN, ON/#SLP/DIO9, Conn Status/DIO5, and RSSI/PWM0/DIO10
 - Allows the user to easily test the GPIOs
- Buttons
 - Buttons for the following lines: Reset and Comm/AD0/DIO0
 - Allows the user to easily reset and commission the XBee module
- Grove Connector
 - Grove connector connects to pins 19 and 7 on the XBee module
 - This allows for I2C, ADC, and DIO testing on the Grove.
- Breakout Connector
 - 40-pin external header that connects to power, ground, and each XBee pin
 - This allows the user to connect to any XBee pin easily to test the XBee with other peripherals
 - Daughter boards will be created that can plug into this, which will allow more testing of the XBee functions

PCB and Stencil



Rubber Feet (Bottom)

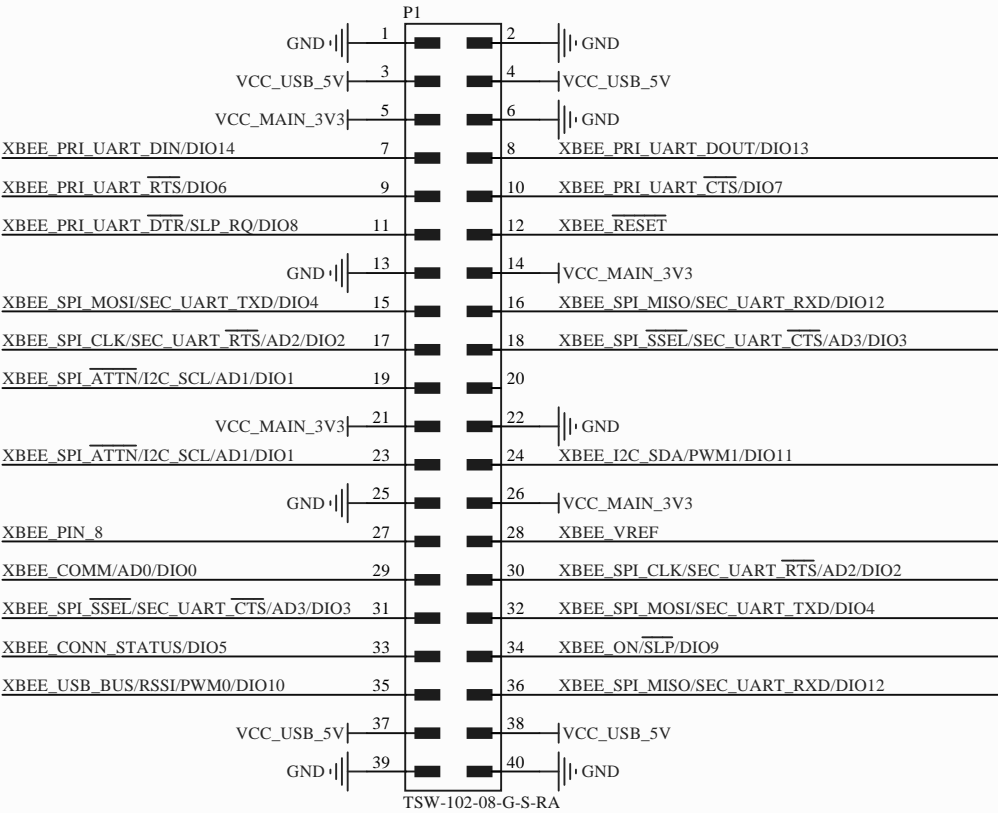
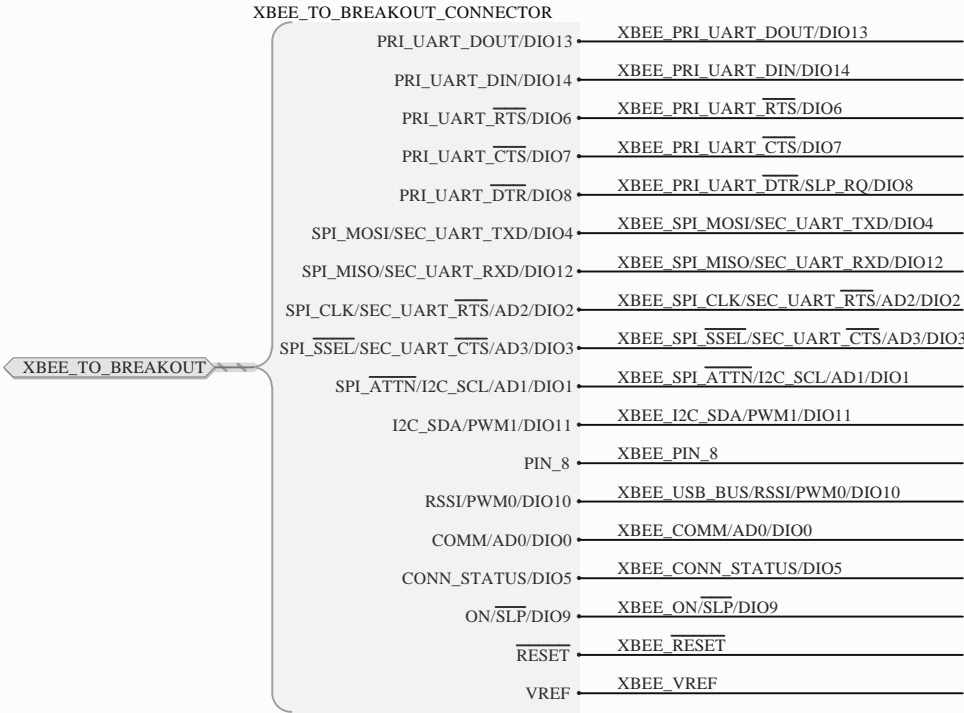


Breakout Connector

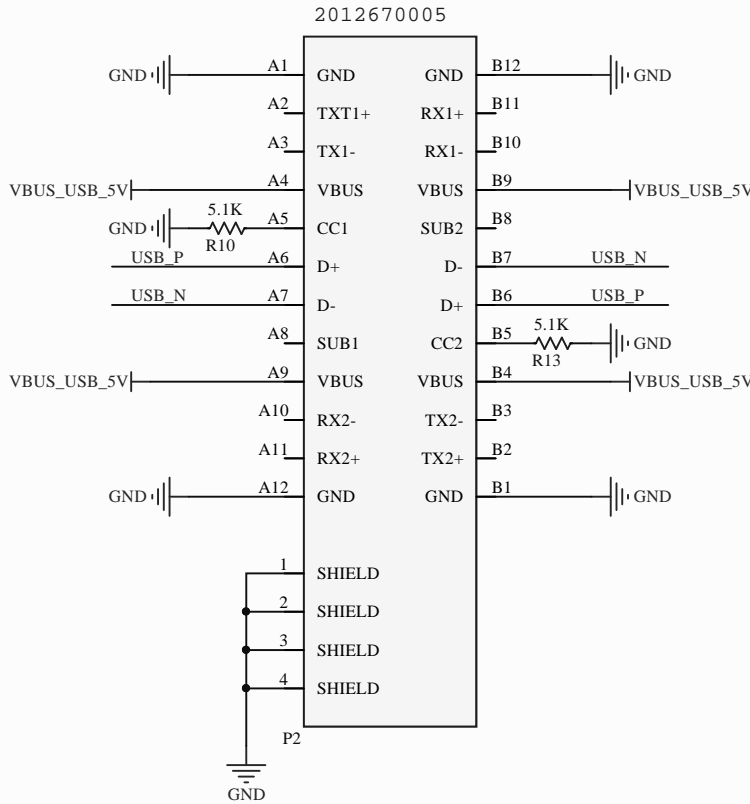
The Breakout Connector is connected to every pin on the XBee module and allows the user to test the pins on separate boards.

The VCC_XBEE lines should only be used to power the XBee. It is not meant to source power. SW? should be switched to External Power/Current Measure setting.

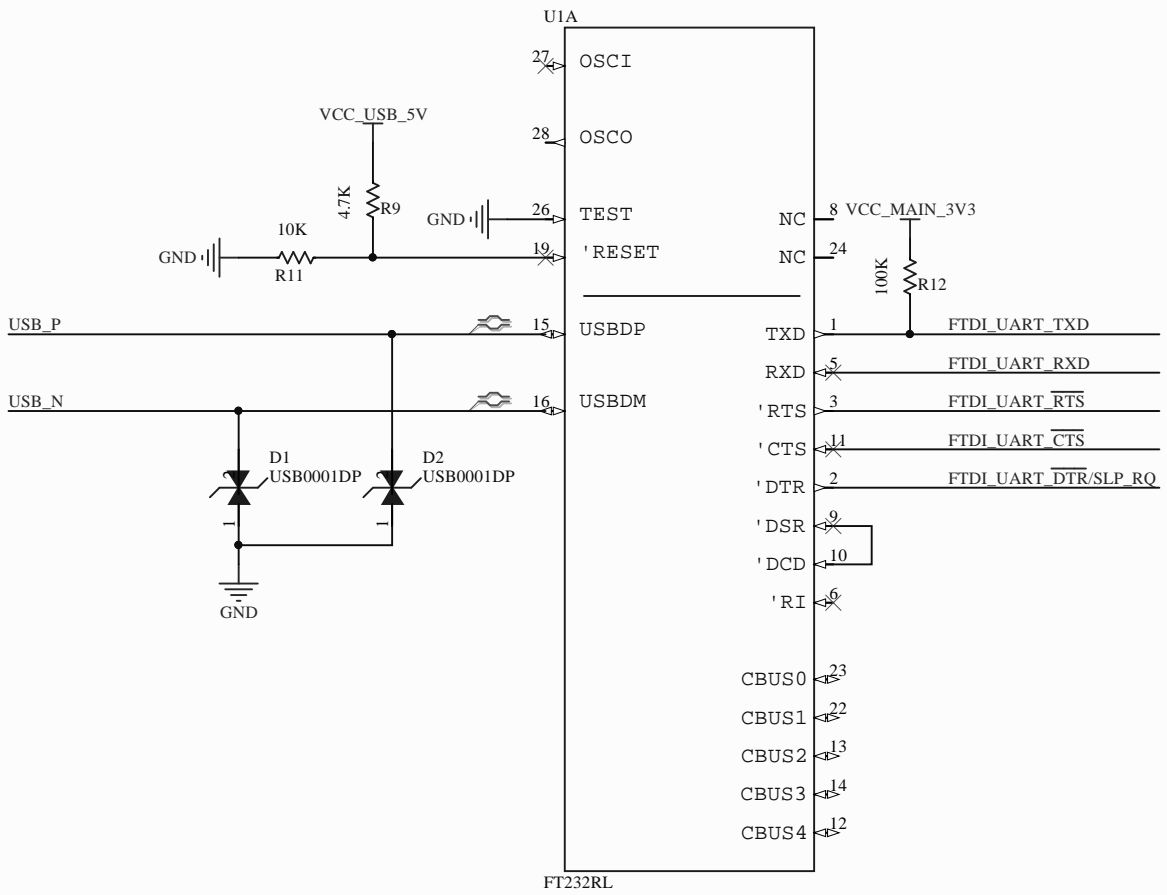
The VCC_MAIN_3V3 can be used to source power.



USB Type C Connector

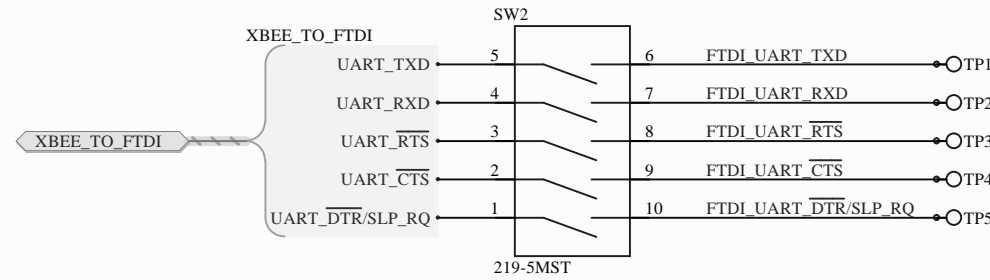


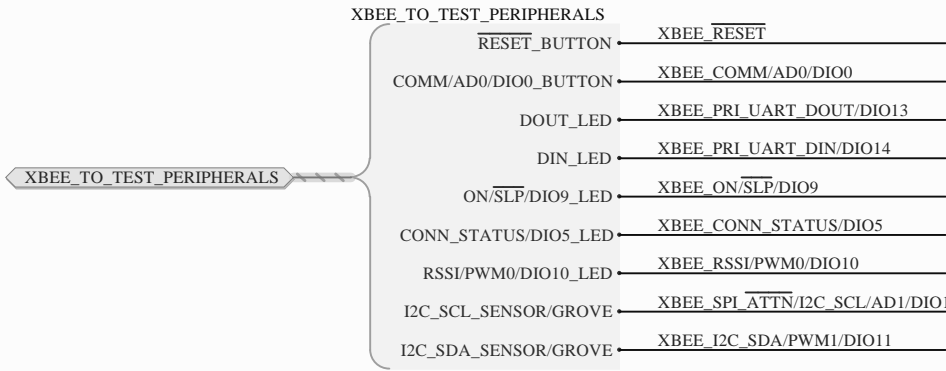
FT232R FTDI Chip (USB to UART)



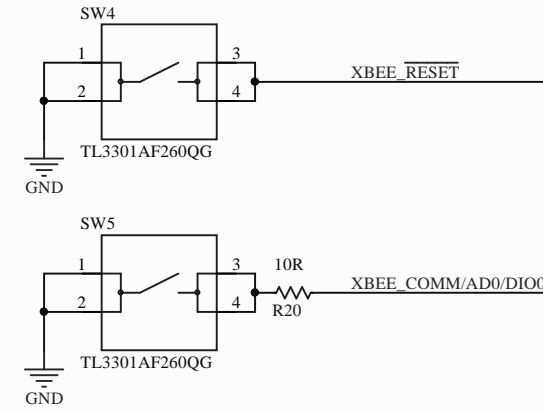
FTDI Dip Switch

This dip switch allows the user to disconnect any of the primary UART lines from the FTDI chip if external testing needs to be done on these lines.

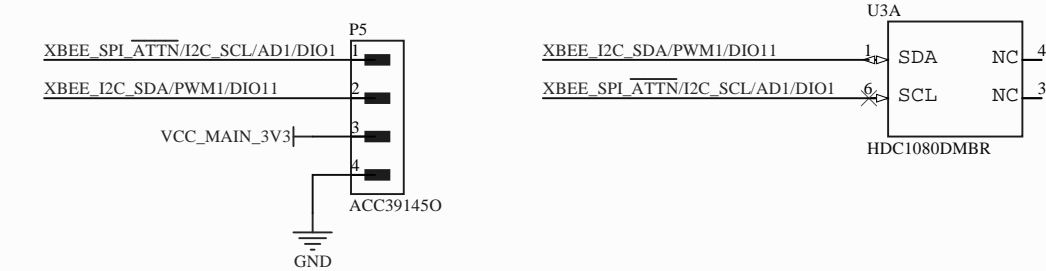




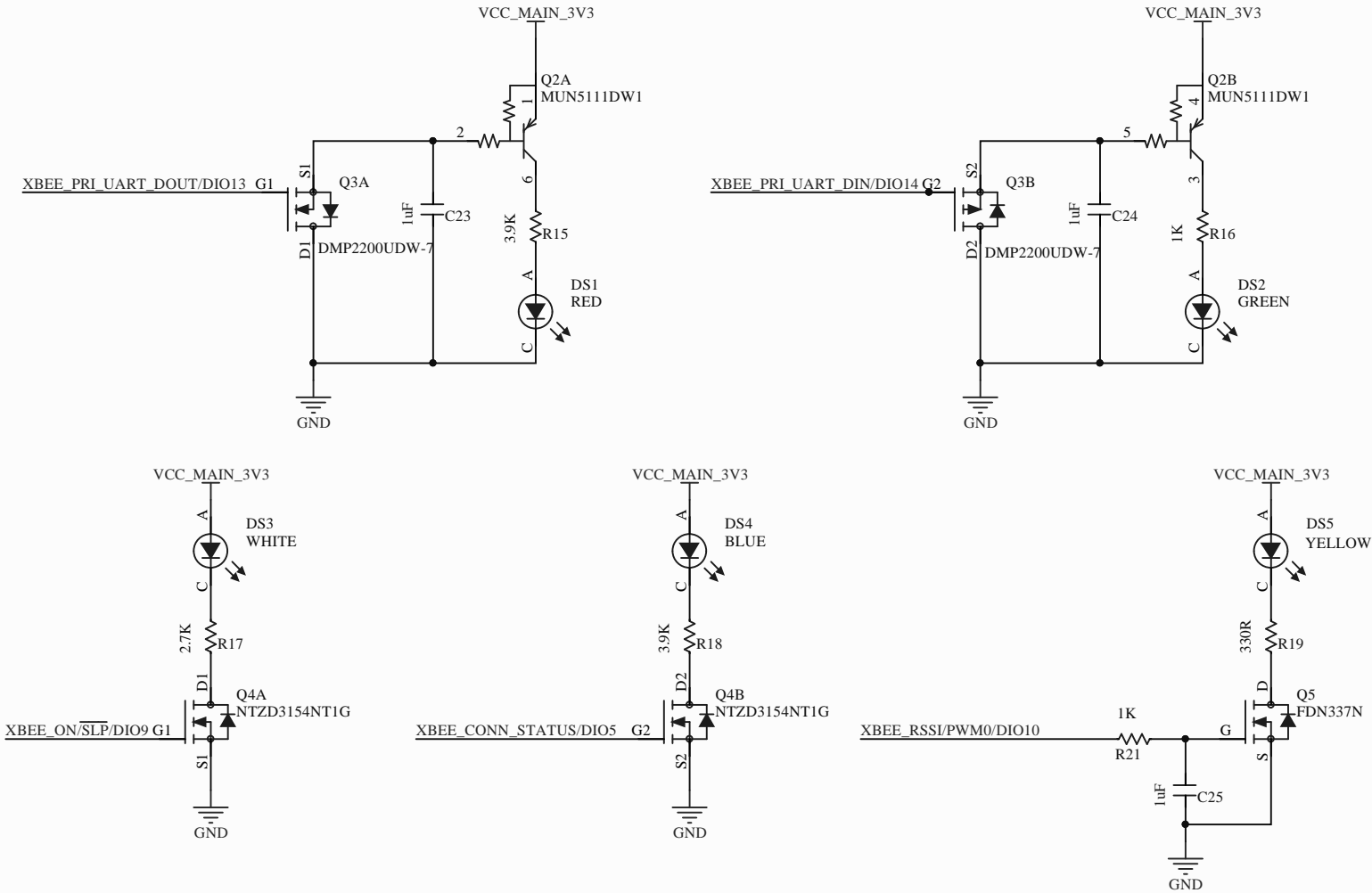
Buttons



I2C Grove and Sensor

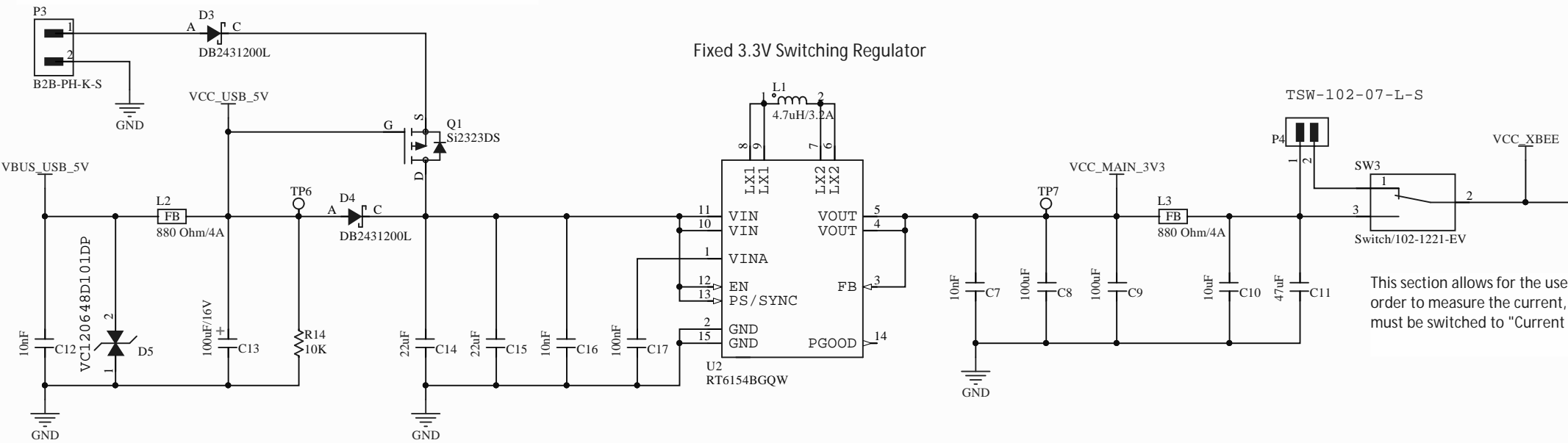


LEDs



3.3V Supply

The supply on the development board will either come from the USB connection or from a battery connection
If both are plugged in, the USB will power the board
The battery will plug into the P3 header and can range from 2V to 5V



J6
390088-02
Place J6 on P4

This section allows for the user to measure the current draw on the Xbee. In order to measure the current, a current probe must be placed on P4 and SW3 must be switched to "Current Measure" setting.

IC Power

