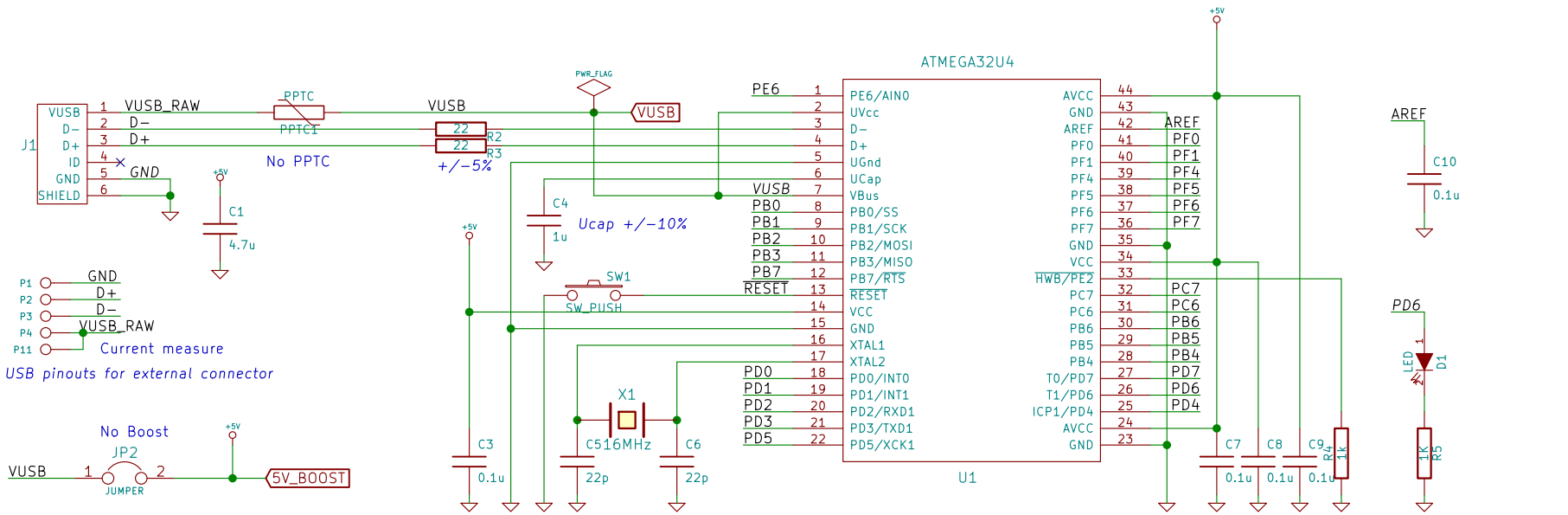
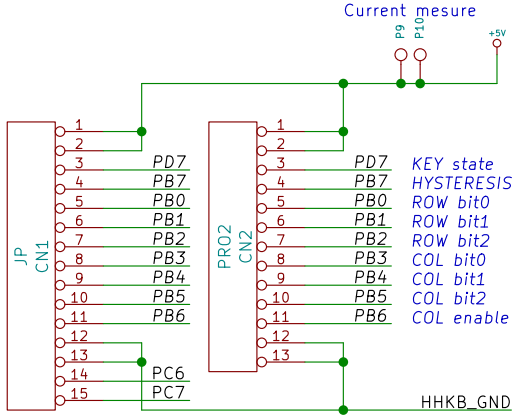
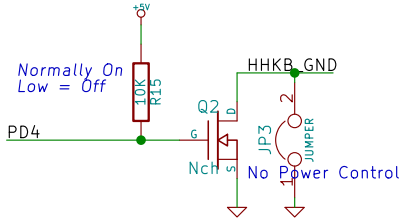


USB keyboard configurations:
1)close "No Power Control" and
2)close "No Boost" jumper to use raw USB power.

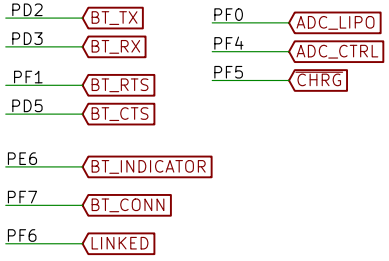
HHKB Matrix Interface



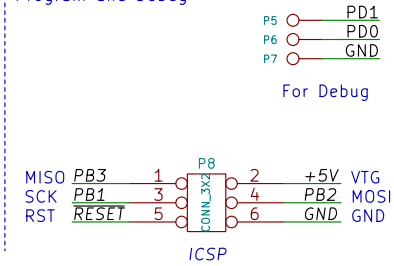


Optional

Bluetooth Extension



Program and Debug



bluetooth

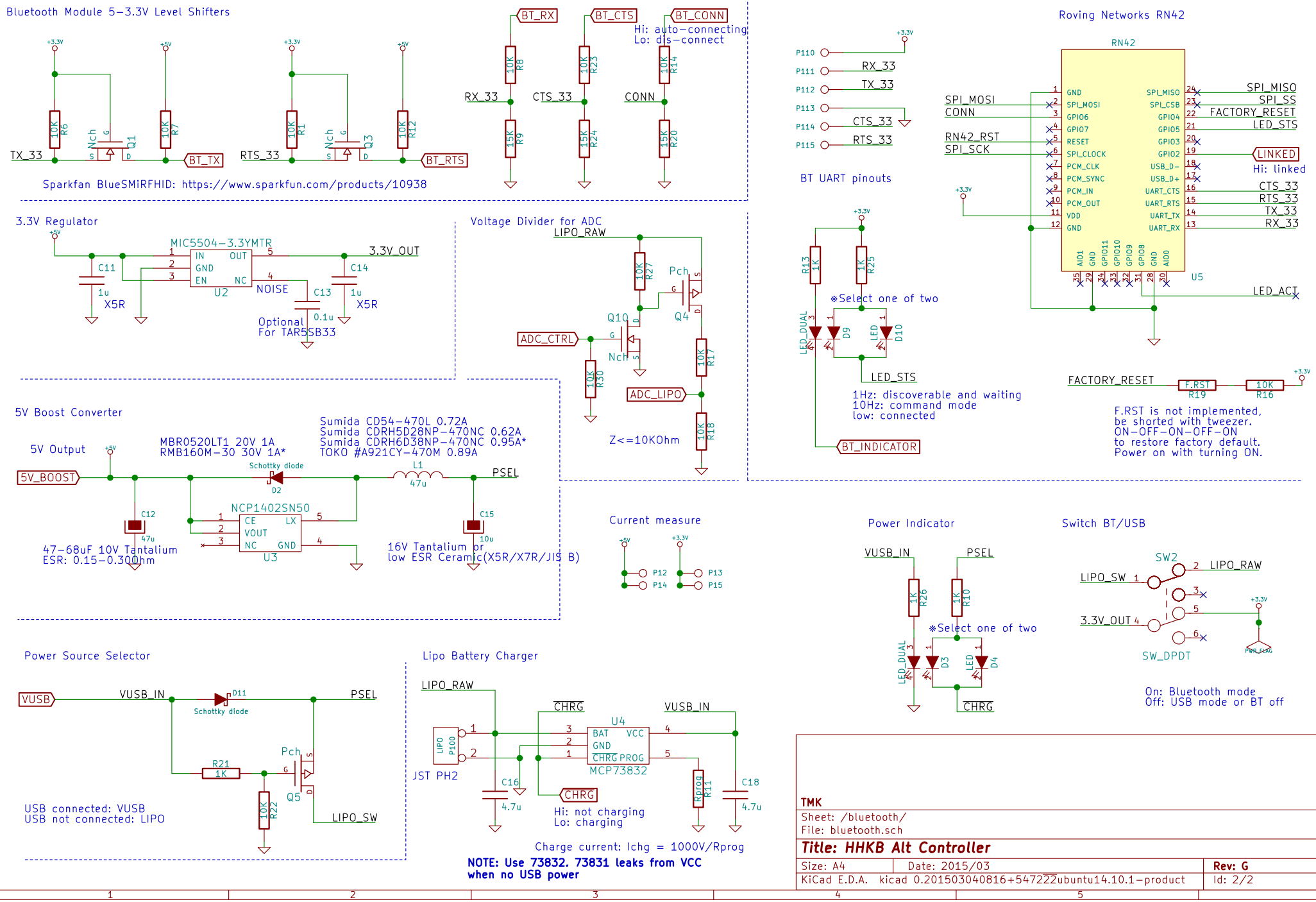
bluetooth.sch

TMK

Sheet: /
File: HHKB_controller.sch

Title: HHKB Alt Controller/Bluetooth

Size: A4	Date: 2015/03	**Rev: G**
KiCad E.D.A. kicad 0.201503040816+547222ubuntu14.10.1−product		Id: 1/2


Bluetooth Module 5-3.3V Level Shifters
Sparkfan BlueSMiRFHID: https://www.sparkfun.com/products/10938
BT_RX
BT_CTS
BT_CONN
Hi: auto-connecting
Lo: dis-connect
Roving Networks RN42
RN42
SPI_MOSI
CONN
RN42_RST
SPI_SCK
LINKED
Hi: linked
LED_ACT
BT UART pinouts
※Select one of two
1Hz: discoverable and waiting
10Hz: command mode
low: connected
BT_INDICATOR
FACTORY_RESET
F.RST is not implemented,
be shorted with tweezer.
ON-OFF-ON-OFF-ON
to restore factory default.
Power on with turning ON.
3.3V Regulator
MIC5504-3.3YMTR
3.3V_OUT
NOISE
Optional
For TAR5SB33
Voltage Divider for ADC
LIPO_RAW
ADC_CTRL
ADC_LIPO
Z<=10KOhm
5V Boost Converter
5V Output
5V_BOOST
MBR0520LT1 20V 1A
RMB160M-30 30V 1A*
Schottky diode
Sumida CD54-470L 0.72A
Sumida CDRH5D28NP-470NC 0.62A
Sumida CDRH6D38NP-470NC 0.95A*
TOKO #A921CY-470M 0.89A
PSEL
NCP1402SN50
47-68uF 10V Tantalium
ESR: 0.15-0.300hm
16V Tantalium or
low ESR Ceramic(X5R/X7R/JIS B)
Current measure
Power Indicator
VUSB_IN
※Select one of two
Switch BT/USB
SW2
LIPO_SW
3.3V_OUT
SW_DPDT
On: Bluetooth mode
Off: USB mode or BT off
Power Source Selector
VUSB
VUSB_IN
Schottky diode
PSEL
LIPO_SW
USB connected: VUSB
USB not connected: LIPO
Lipo Battery Charger
LIPO_RAW
JST PH2
MCP73832
CHRG
Hi: not charging
Lo: charging
Charge current: Ichg = 1000V/Rprog
NOTE: Use 73832. 73831 leaks from VCC
when no USB power
TMK
Sheet: /bluetooth/
File: bluetooth.sch
Title: HHKB Alt Controller
Size: A4
Date: 2015/03
Rev: G
KiCad E.D.A. kicad 0.201503040816+547222ubuntu14.10.1-product
Id: 2/2