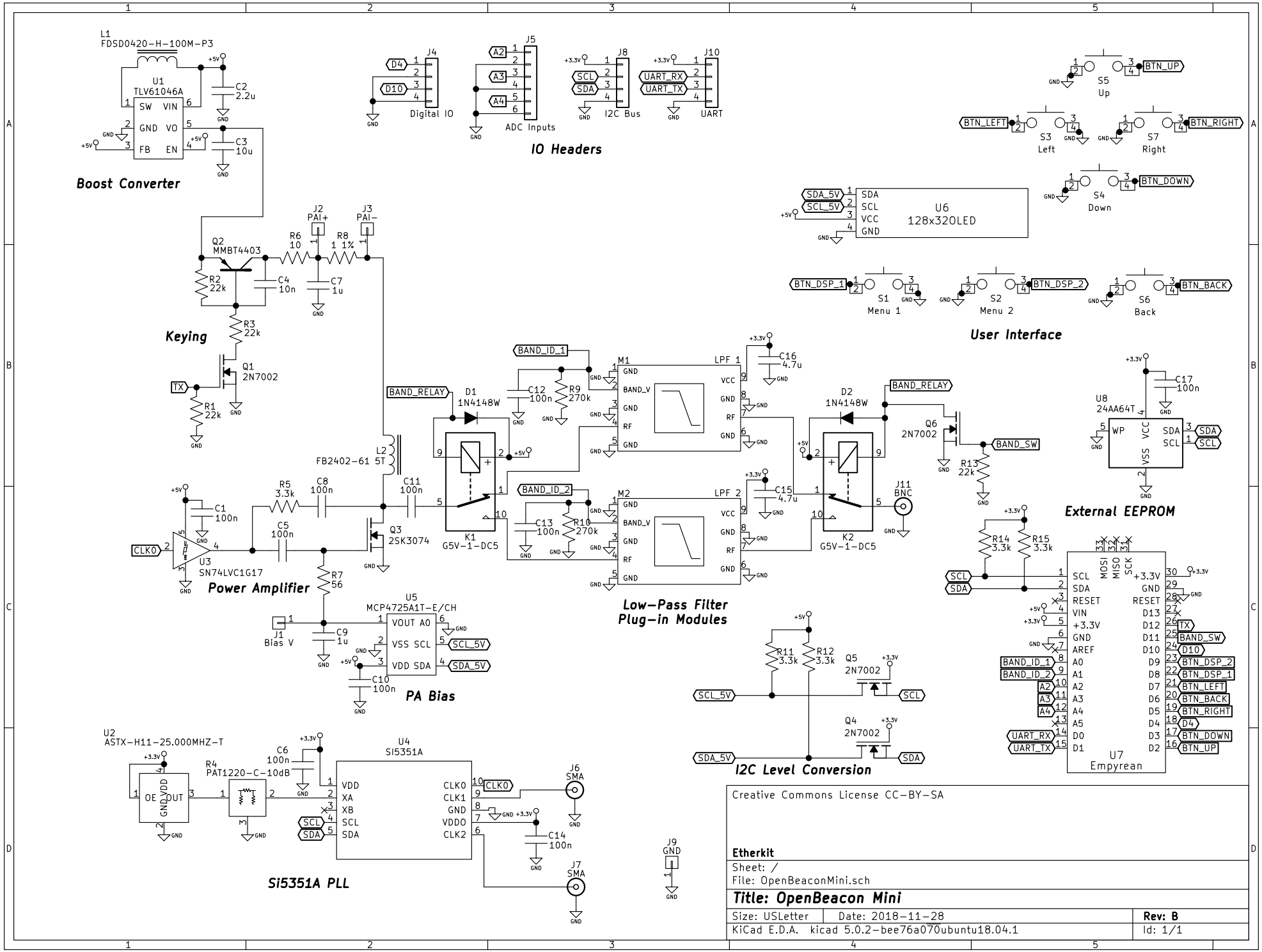
Boost Converter
L1 FDSD0420-H-100M-P3
U1 TLV61046A
SW VIN GND VO FB EN
C2 2.2u
C3 10u
IO Headers
J4 Digital IO
J5 ADC Inputs
J8 I2C Bus
J10 UART
User Interface
U6 128x32OLED
SDA_5V SCL_5V SDA SCL VCC GND
S1 Menu 1
S2 Menu 2
S3 Left
S4 Down
S5 Up
S6 Back
S7 Right
BTN_UP BTN_LEFT BTN_RIGHT BTN_DOWN BTN_DSP_1 BTN_DSP_2 BTN_BACK
Keying
Q2 MMBT4403
R2 22k
R3 22k
Q1 2N7002
R1 22k
TX
R6 10
R8 1 1%
C4 10n
C7 1u
J2 PAI+
J3 PAI-
Power Amplifier
U3 SN74LVC1G17
CLK0
C1 100n
R5 3.3k
C8 100n
C5 100n
C11 100n
L2 FB2402-61 5T
Q3 2SK3074
R7 56
Low-Pass Filter Plug-in Modules
BAND_RELAY
D1 1N4148W
D2 1N4148W
K1 G5V-1-DC5
K2 G5V-1-DC5
BAND_ID_1
BAND_ID_2
C12 100n
R9 270k
C13 100n
R10 270k
M1
M2
BAND_V
LPF 1
LPF 2
C16 4.7u
C15 4.7u
Q6 2N7002
BAND_SW
R13 22k
J11 BNC
External EEPROM
U8 24AA64T
WP VCC SDA SCL VSS
C17 100n
PA Bias
U5 MCP4725A1T-E/CH
VOUT A0 VSS SCL VDD SDA
J1 Bias V
C9 1u
C10 100n
SCL_5V SDA_5V
I2C Level Conversion
R11 3.3k
R12 3.3k
Q5 2N7002
Q4 2N7002
R14 3.3k
R15 3.3k
U7 Empyrean
SCL SDA RESET VIN +3.3V GND AREF A0 A1 A2 A3 A4 A5 D0 D1
MOSI MISO SCK
D13 D12 D11 D10 D9 D8 D7 D6 D5 D4 D3 D2
TX BAND_SW D10 BTN_DSP_2 BTN_DSP_1 BTN_LEFT BTN_BACK BTN_RIGHT D4 BTN_DOWN BTN_UP
Si5351A PLL
U2 ASTX-H11-25.000MHZ-T
OE VDD GND OUT
R4 PAT1220-C-10dB
C6 100n
U4 SI5351A
VDD XA XB SCL SDA CLK0 CLK1 GND VDDO CLK2
C14 100n
J6 SMA
J7 SMA
J9 GND
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Etherkit
Sheet: /
File: OpenBeaconMini.sch
Title: OpenBeacon Mini
Size: USLetter
Date: 2018-11-28
Rev: B
KiCad E.D.A. kicad 5.0.2-bee76a070ubuntu18.04.1
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