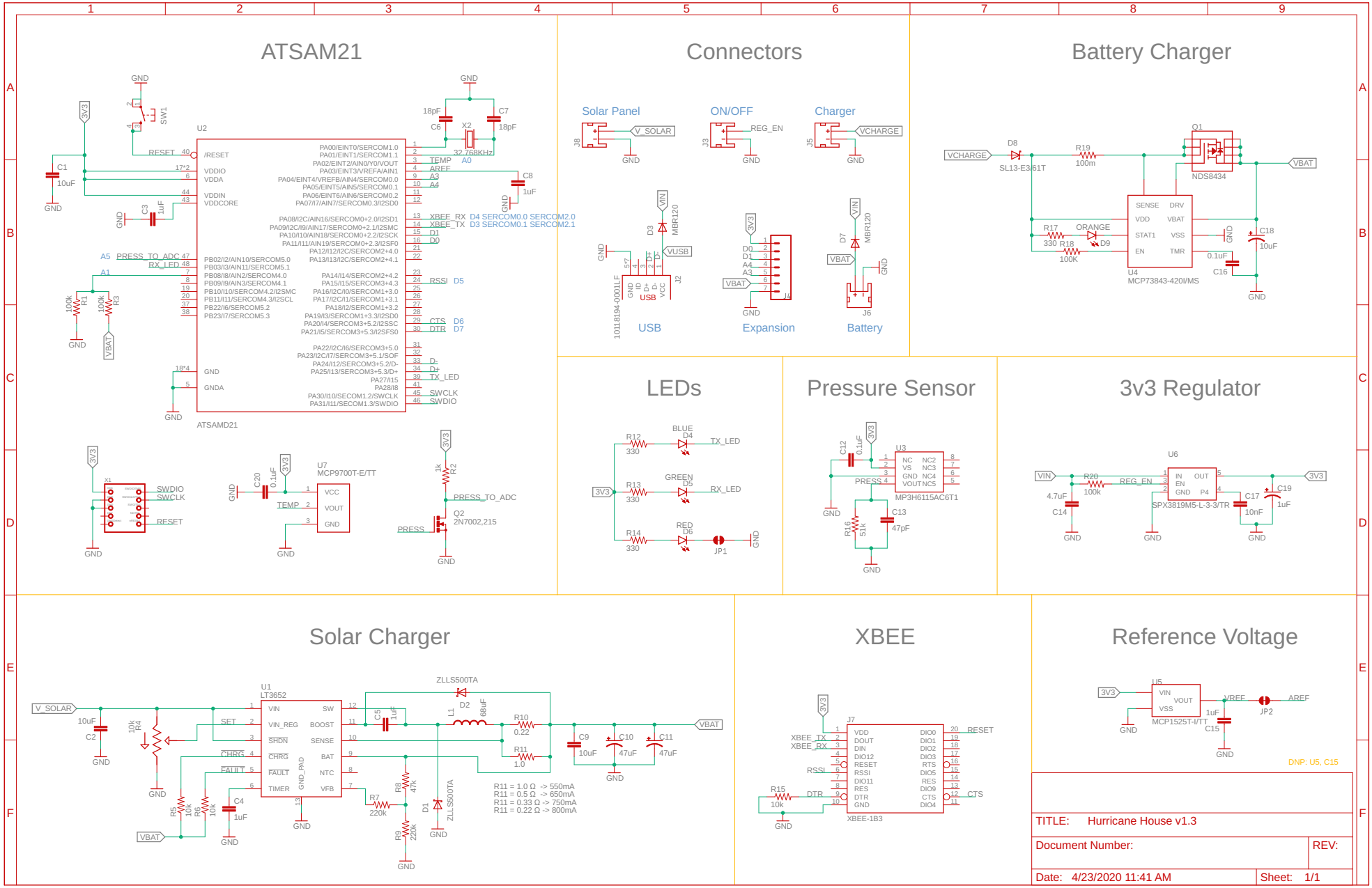
ATSAM21
U2
ATSAMD21
/RESET
VDDIO
VDDA
VDDIN
VDDCORE
GND
GNDA
PA00/EINT0/SERCOM1.0
PA01/EINT1/SERCOM1.1
PA02/EINT2/AIN0/Y0/VOUT
PA03/EINT3/VREFA/AIN1
PA04/EINT4/VREFB/AIN4/SERCOM0.0
PA05/EINT5/AIN5/SERCOM0.1
PA06/EINT6/AIN6/SERCOM0.2
PA07/I7/AIN7/SERCOM0.3/I2SD0
PA08/I2C/AIN16/SERCOM0+2.0/I2SD1
PA09/I2C/I9/AIN17/SERCOM0+2.1/I2SMC
PA10/I10/AIN18/SERCOM0+2.2/I2SCK
PA11/I11/AIN19/SERCOM0+2.3/I2SF0
PA12/I12/I2C/SERCOM2+4.0
PA13/I13/I2C/SERCOM2+4.1
PA14/I14/SERCOM2+4.2
PA15/I15/SERCOM3+4.3
PA16/I2C/I0/SERCOM1+3.0
PA17/I2C/I1/SERCOM1+3.1
PA18/I2/SERCOM1+3.2
PA19/I3/SERCOM1+3.3/I2SD0
PA20/I4/SERCOM3+5.2/I2SSC
PA21/I5/SERCOM3+5.3/I2SFS0
PA22/I2C/I6/SERCOM3+5.0
PA23/I2C/I7/SERCOM3+5.1/SOF
PA24/I12/SERCOM3+5.2/D-
PA25/I13/SERCOM3+5.3/D+
PA27/I15
PA28/I8
PA30/I10/SECOM1.2/SWCLK
PA31/I11/SECOM1.3/SWDIO
PB02/I2/AIN10/SERCOM5.0
PB03/I3/AIN11/SERCOM5.1
PB08/I8/AIN2/SERCOM4.0
PB09/I9/AIN3/SERCOM4.1
PB10/I10/SERCOM4.2/I2SMC
PB11/I11/SERCOM4.3/I2SCL
PB22/I6/SERCOM5.2
PB23/I7/SERCOM5.3
RESET
TEMP A0
AREF
A3
A4
XREF_RX D4 SERCOM0.0 SERCOM2.0
XREF_TX D3 SERCOM0.1 SERCOM2.1
D1
D0
PRESS_TO_ADC A5
RX_LED A1
RSSI D5
CTS D6
DTR D7
D-
D+
TX_LED
SWCLK
SWDIO
X2 32.768KHz
C1 10uF
C3 1uF
C6 18pF
C7 18pF
C8 1uF
SW1
R1 100k
R3 100k
VBAT
3V3
Connectors
Solar Panel
J8
V_SOLAR
ON/OFF
J3
REG_EN
Charger
J5
VCHARGE
USB
J2
VUSB
D3 MBR120
VIN
10118194-0001LF
Expansion
J4
D0
D1
A4
A3
Battery
J6
D7 MBR120
Battery Charger
Q1
NDS8434
D8 SL13-E3/61T
R19 100m
R17 330
R18 100K
ORANGE D9
U4
MCP73843-420I/MS
SENSE
DRV
VDD
VBAT
STAT1
VSS
EN
TMR
C16 0.1uF
C18 10uF
LEDs
R12 330
BLUE D4
TX_LED
R13 330
GREEN D5
RX_LED
R14 330
RED D6
JP1
Pressure Sensor
U3
MP3H6115AC6T1
NC
VS
GND
VOUT
NC2
NC3
NC4
NC5
PRESS
C12 0.1uF
C13 47pF
R16 51k
3v3 Regulator
U6
SPX3819M5-L-3-3/TR
IN
OUT
EN
GND
P4
R20 100k
REG_EN
C14 4.7uF
C17 10nF
C19 1uF
U7
MCP9700T-E/TT
VCC
VOUT
GND
C20 0.1uF
TEMP
X1
SWDIO
SWCLK
RESET
R2 1k
PRESS_TO_ADC
Q2
2N7002,215
PRESS
Solar Charger
U1
LT3652
VIN
VIN_REG
SHDN
CHRG
FAULT
TIMER
SW
BOOST
SENSE
BAT
NTC
VFB
GND_PAD
SET
V_SOLAR
C2 10uF
R4 10k
R5 10k
R6 10k
C4 1uF
C5 1uF
ZLLS500TA
D2
L1 68uF
R10 0.22
R11 1.0
C9 10uF
C10 47uF
C11 47uF
VBAT
R7 220k
R8 47k
R9 220k
D1 ZLLS500TA
R11 = 1.0 Ω -> 550mA
R11 = 0.5 Ω -> 650mA
R11 = 0.33 Ω -> 750mA
R11 = 0.22 Ω -> 800mA
XBEE
J7
XBEE-1B3
VDD
DOUT
DIN
DIO12
RESET
RSSI
DIO11
RES
DTR
GND
DIO0
DIO1
DIO2
DIO3
RTS
DIO5
RES
DIO9
CTS
DIO4
XBEE_TX
XBEE_RX
R15 10k
Reference Voltage
U5
MCP1525T-I/TT
VIN
VOUT
VSS
VREF
AREF
JP2
C15 1uF
DNP: U5, C15
TITLE: Hurricane House v1.3
Document Number:
REV:
Date: 4/23/2020 11:41 AM
Sheet: 1/1