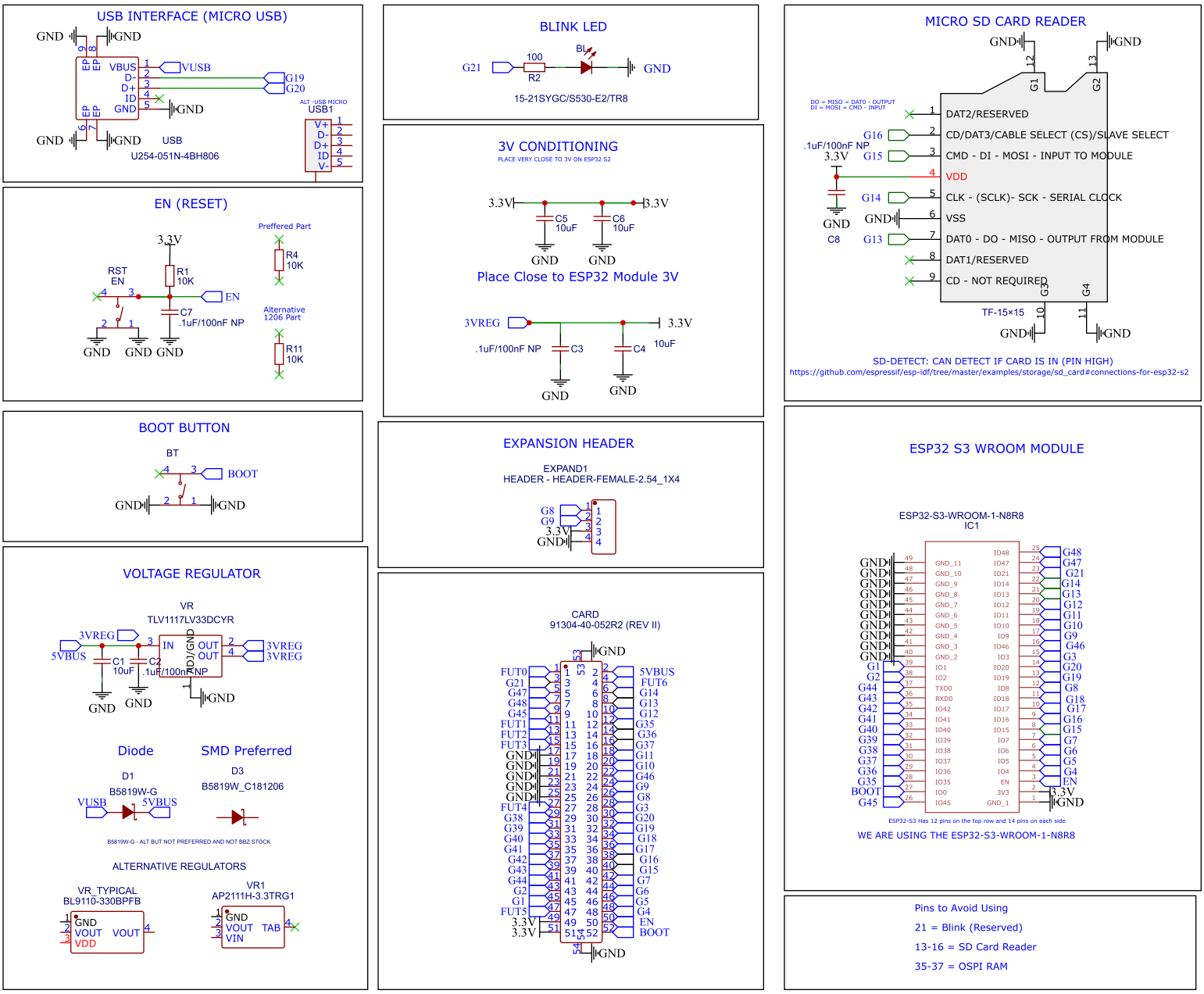
USB INTERFACE (MICRO USB)
GND
VBUS
D-
D+
ID
GND
VUSB
G19
G20
USB
U254-051N-4BH806
ALT -USB MICRO
USB1
V+
D-
D+
ID
V-
BLINK LED
G21
100
R2
BL
GND
15-21SYGC/S530-E2/TR8
MICRO SD CARD READER
DO = MISO = DAT0 - OUTPUT
DI = MOSI = CMD - INPUT
DAT2/RESERVED
CD/DAT3/CABLE SELECT (CS)/SLAVE SELECT
CMD - DI - MOSI - INPUT TO MODULE
VDD
CLK - (SCLK)- SCK - SERIAL CLOCK
VSS
DAT0 - DO - MISO - OUTPUT FROM MODULE
DAT1/RESERVED
CD - NOT REQUIRED
G1
G2
G3
G4
G16
G15
G14
G13
.1uF/100nF NP
3.3V
C8
TF-15×15
SD-DETECT: CAN DETECT IF CARD IS IN (PIN HIGH)
https://github.com/espressif/esp-idf/tree/master/examples/storage/sd_card#connections-for-esp32-s2
EN (RESET)
3.3V
RST
EN
R1
10K
C7
.1uF/100nF NP
Preffered Part
R4
10K
Alternative
1206 Part
R11
10K
3V CONDITIONING
PLACE VERY CLOSE TO 3V ON ESP32 S2
C5
10uF
C6
10uF
Place Close to ESP32 Module 3V
3VREG
C3
C4
BOOT BUTTON
BT
BOOT
EXPANSION HEADER
EXPAND1
HEADER - HEADER-FEMALE-2.54_1X4
G8
G9
3.3V
GND
ESP32 S3 WROOM MODULE
ESP32-S3-WROOM-1-N8R8
IC1
ESP32-S3 Has 12 pins on the top row and 14 pins on each side
WE ARE USING THE ESP32-S3-WROOM-1-N8R8
VOLTAGE REGULATOR
VR
TLV1117LV33DCYR
3VREG
5VBUS
C1
10uF
C2
.1uF/100nF NP
IN
OUT
ADJ/GND
Diode
SMD Preferred
D1
B5819W-G
VUSB
5VBUS
D3
B5819W_C181206
B5819W-G - ALT BUT NOT PREFERRED AND NOT BBZ STOCK
ALTERNATIVE REGULATORS
VR_TYPICAL
BL9110-330BPFB
VOUT
VDD
VR1
AP2111H-3.3TRG1
VIN
TAB
CARD
91304-40-052R2 (REV II)
FUT0
FUT1
FUT2
FUT3
FUT4
FUT5
5VBUS
FUT6
BOOT
Pins to Avoid Using
21 = Blink (Reserved)
13-16 = SD Card Reader
35-37 = OSPI RAM
TITLE:
NEURON-Z3
REV:
Company: BrainBoardz Inc.
Date:
Drawn By: Jeremy Littler
EasyEDA