DANGER PINS

GPIO_3
GPIO_45
GPIO_46

U2
ESP32-S3-WROOM-1

ESP_BOOT 27
ESP_EN 3

GPIO_1 39
GPIO_2 38
GPIO_3 15
GPIO_4 4
GPIO_5 5
GPIO_6 6
GPIO_7 7
GPIO_8 12
GPIO_9 17
GPIO_10 18
GPIO_11 19
GPIO_12 20
GPIO_13 21
GPIO_14 22
GPIO_15 8
GPIO_16 9
GPIO_17 10
GPIO_18 11

GPIO0/BOOT
EN
GPIO1/TOUCH1/ADC1_CH0
GPIO2/TOUCH2/ADC1_CH1
GPIO3/TOUCH3/ADC1_CH2
GPIO4/TOUCH4/ADC1_CH3
GPIO5/TOUCH5/ADC1_CH4
GPIO6/TOUCH6/ADC1_CH5
GPIO7/TOUCH7/ADC1_CH6
GPIO8/TOUCH8/ADC1_CH7/SUBSPICS1
GPIO9/TOUCH9/ADC1_CH8/FSPIHD/SUBSPIHD
GPIO10/TOUCH10/ADC1_CH9/FSPICS0/FSPIIO4/SUBSPICS0
GPIO11/TOUCH11/ADC2_CH0/FSPID/FSPIIO5/SUBSPID
GPIO12/TOUCH12/ADC2_CH1/FSPICLK/FSPIIO6/SUBSPICLK
GPIO13/TOUCH13/ADC2_CH2/FSPIQ/FSPIIO7/SUBSPIQ
GPIO14/TOUCH14/ADC2_CH3/FSPIWP/FSPIDQS/SUBSPIWP
GPIO15/U0RTS/ADC2_CH4/XTAL_32K_P
GPIO16/U0CTS/ADC2_CH5/XTAL_32K_NH5
GPIO17/U1TXD/ADC2_CH6
GPIO18/U1RXD/ADC2_CH7/CLK_OUT3

GPIO20/U1CTS/ADC2_CH9/CLK_OUT1/USB_D+ 14
GPIO19/U1RTS/ADC2_CH8/CLK_OUT2/USB_D- 13

D+
D-

U0TXD/GPIO43/CLK_OUT1 37
U0RXD/GPIO44/CLK_OUT2 36
GPIO21 23
GPIO45 26
GPIO46 16
GPIO48/SPICLK_N/SUBSPICLK_N_DIFF 25
GPIO47/SPICLK_P/SUBSPICLK_P_DIFF 24

GPIO_43
GPIO_44
GPIO_21
GPIO_45
GPIO_46
GPIO_48
GPIO_47

SPIIO6/GPIO35/FSPID/SUBSPID 28
SPIIO7/GPIO36/FSPICLK/SUBSPICLK 29
SPIDQS/GPIO37/FSPIQ/SUBSPIQ 30
GPIO38/FSPIWP/SUBSPIWP 31
MTCK/GPIO39/CLK_OUT3/SUBSPICS1 32
MTDO/GPIO40/CLK_OUT2 33
MTDI/GPIO41/CLK_OUT1 34
MTMS/GPIO42 35

GPIO_35
GPIO_36
GPIO_37
GPIO_38
GPIO_39
GPIO_40
GPIO_41
GPIO_42

3V3 2
GND 1

ESP32-S3-WROOM-1

+3V3
C3 10u
C4 10u
C5 100n

+3V3 R1 10k
ESP_EN
C1 100n
SW1 MCU_RESET

+3V3 R6 10k
ESP_BOOT
C2 100n
SW2 MCU_RESET

+3V3 +5V
D1 D2
R4 1k
R5 1k
FB1 FerriteBead_Small
VBUS
U1 SRV05-4
IO1 1
IO2 3
IO3 4
IO4 6
VP 5
VN 2
R2 5k1 cc1
R3 5k1 cc2
D- D+
A4 VBUS
A5 CC1
B5 CC2
A7 D-
B7 D-
A6 D+
B6 D+
B10 RX1-
B11 RX1+
A3 TX1-
A2 TX1+
A10 RX2-
A11 RX2+
B3 TX2-
B2 TX2+
A8 SBU1
B8 SBU2
A1 GND
S1 SHIELD
J1 USB_C_Receptacle
C6 15p
R7 1Meg

+3V3
R22 5k1
R23 5k1
SDA
SCL

PTT2
PD2
H/L2
PTT1
PD1
H/L1
RX2
TX2
RX1
TX1
AUDIO_ON1
AUDIO_ON2

AMP_R
AMP_L
SDA
SCL
G1 GPIO_6
G0 GPIO_5

MISCELANIOUS

H1 hole
H2 hole
H3 hole
H4 hole
FID1 Fiducial
FID2 Fiducial
FID3 Fiducial

AUDIO

Audio_Codec
GPIO_48 R24 27
GPIO_47 R25 10
GPIO_14 R26 27
GPIO_21 R27 27
GPIO_11 R28 27
GPIO_12 R29 27
GPIO_13
RESET
MCLK
WCLK
BCLK
DOUT
DIN
JACK_DETECT

SD card

J2
Micro_SD_Card_Det
+3V3
C7 10u
C8 1u
DATA_2 1
DATA_3 2
CMD 3
VDD 4
CLK 5
VSS 6
DATA_0 7
DATA_1 8
CARD_DETECT 10
DET_B 9
DAT2
DAT3/CD
CMD
VDD
CLK
VSS
DAT0
DAT1
DET_A
DET_B
SHIELD 11

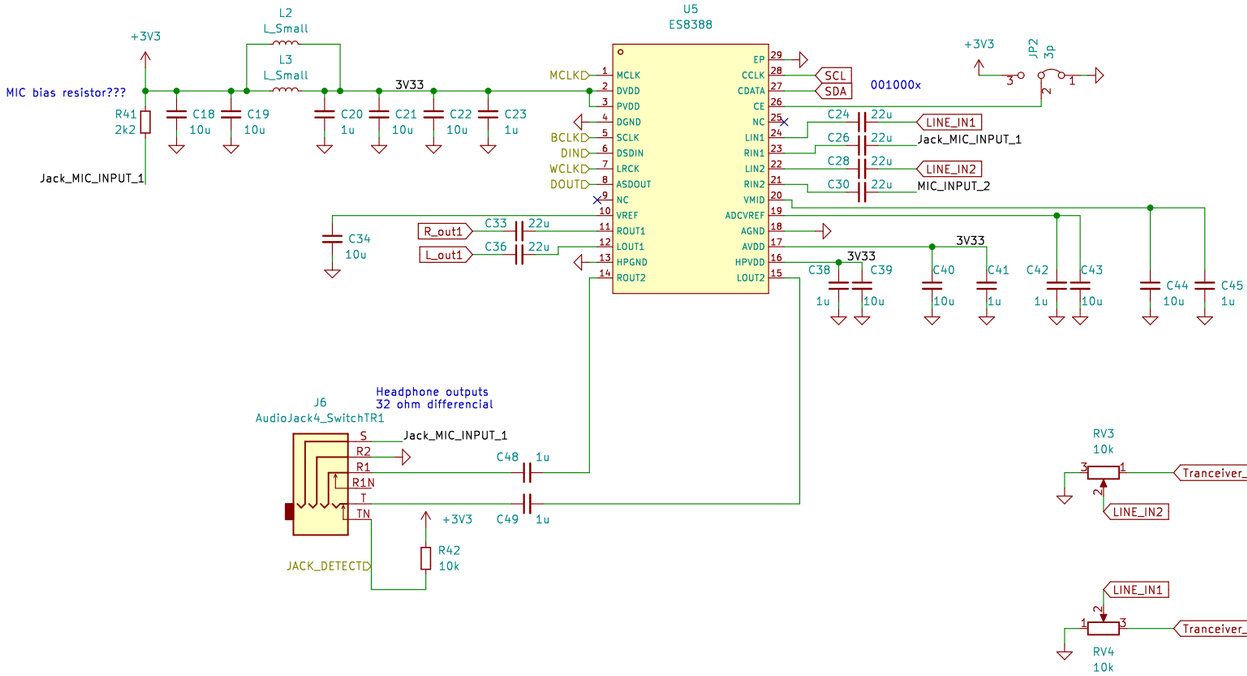
+3V3
R14 10k
R17 10k
R18 10k
R19 10k
R20 10k
R36 10k
R40 10k
GPIO_42 10 R8 DATA_0
GPIO_41 10 R9 DATA_1
GPIO_1 10 R10 DATA_2
GPIO_2 10 R11 DATA_3
GPIO_43 10 R12 CMD
GPIO_44 10 R13 CLK
GPIO_40 10 R21 CARD_DETECT
DATA_0
DATA_1
DATA_2
DATA_3
CMD
CLK
CARD_DETECT

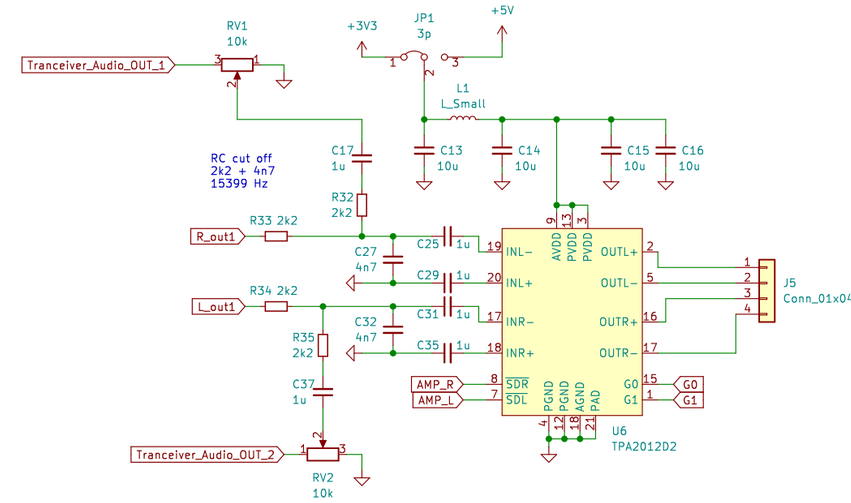
+5V +3V3
D8
U3 AMS1117-3.3
VI 3
VO 2
GND 1
C47 10u
C50 10u

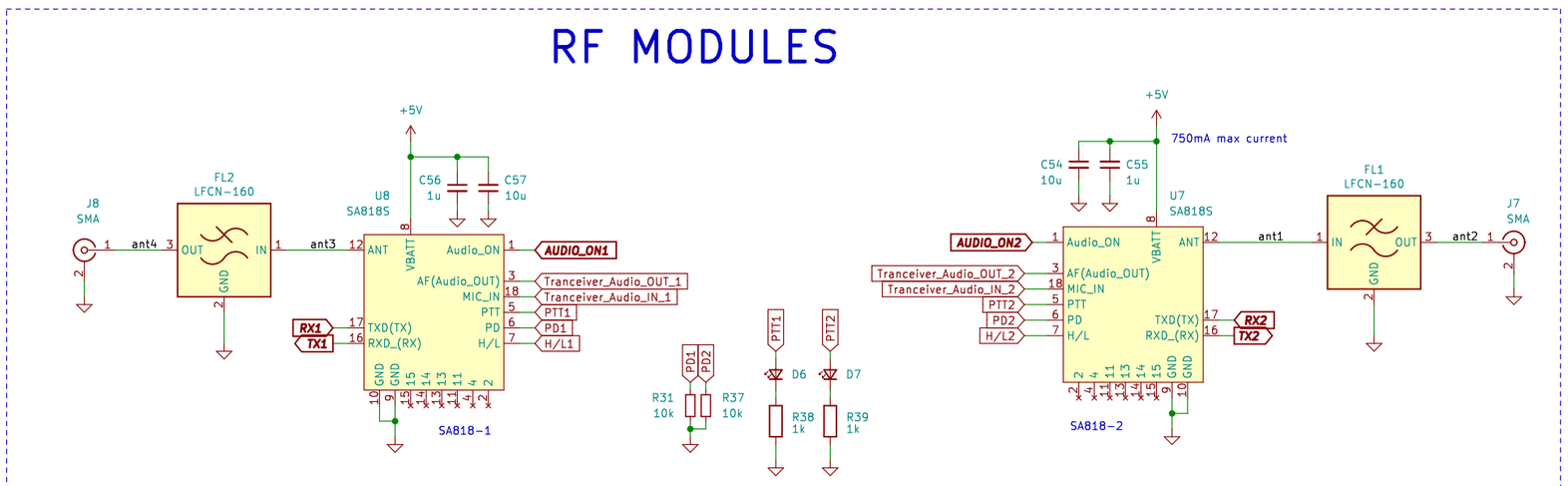
3V3 LDO

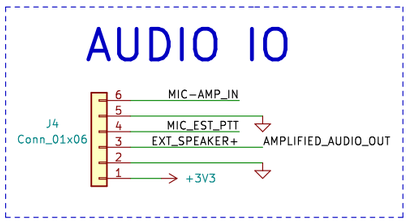
+5V
RShunt (Ω) IBAT (mA)
1 100
0.2 500
0.1 1000
0.067 1500
0.05 2000
R15 1k
C9 10u
CS 13
D4
D5
CHRG
STDBY
VIN 16
VIN 2
VIN 1
LX 3
LX 4
LX 5
VS 8
D3
L4 L_Small
R16 0R2
500mA @3.6V 1.8W
=> 400mA @5V 2W
+3V3
L5 L_Small
C10 10u
C11 10u
C12 10u
C46 10u
VREG 10
RTRICK 12
GND 7
GND 6
BAT 9
TS 11
C51 10u
C52 10u
BT1 Battery_Cell
C53 100n
U4 TP5000
J9 Conn_01x03
GPIO_45
R30 10k
CS
Q1 nMOS
J3 Conn_01x02

Sheet: /		
File: cross_band_handy_walkie_talkie_ES8388.kicad_sch		
Title:		
Size: A3	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.9)		Id: 1/2









Sheet: /Audio_Codec/
File: Audio_Codec.kicad_sch

Title:

Size: A3 | Date: | **Rev:**

KiCad E.D.A. kicad (6.0.9) | Id: 2/2