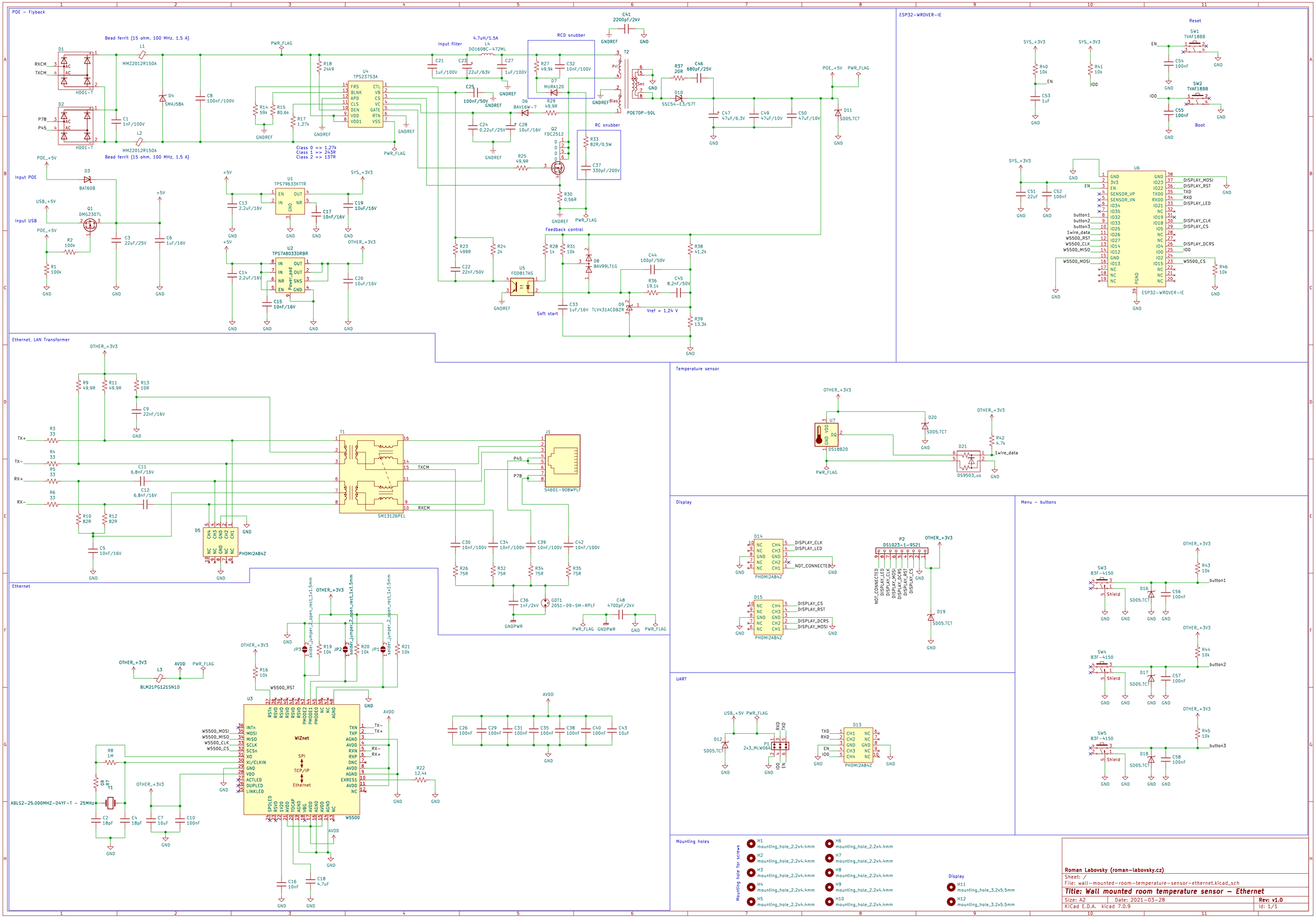
POE – Flyback
Bead ferrit (15 ohm, 100 MHz, 1,5 A)
L1
MMZ2012R150A
L2
MMZ2012R150A
Bead ferrit (15 ohm, 100 MHz, 1,5 A)
D1
HD01-T
D2
HD01-T
RXCM
TXCM
P78
P45
D4
SMAJ58A
C8
100nF/100V
C1
1nF/100V
PWR_FLAG
R18
24k9
U4
TPS23753A
FRS
BLNK
APD
CLS
DEN
VDD
VDD1
CTL
VB
CS
VC
GATE
RTN
VSS
R14
59k
R15
80,6k
R17
1,27k
GNDREF
Class 0 => 1,27k
Class 1 => 243R
Class 2 => 137R
Input filter
4.7uH/1.5A
L4
DO1608C-472ML
C21
1uF/100V
C23
22uF/63V
C27
1uF/100V
C25
100nF/50V
RCD snubber
R27
49,9k
C32
10nF/100V
D7
MURA120
D6
BAV16W-7
R29
49,9R
C24
0,22uF/25V
C28
10uF/16V
Q2
FDC2512
R25
49,9R
R30
0,56R
RC snubber
R33
82R/0,5W
C37
330pF/200V
C41
2200pF/2kV
T2
Pri
Sec
Bias
POE70P-50L
R37
20R
C46
680pF/25V
D10
SSC54-E3/57T
C47
47uF/6,3V
C49
47uF/10V
C50
47uF/10V
POE_+5V
D11
SD05.TCT
Input POE
POE_+5V
D3
BAT60B
Input USB
USB_+5V
Q1
DMG2307L
R2
100k
R1
100k
C3
22uF/25V
C6
1uF/16V
+5V
U1
TPS79633KTTR
EN
IN
OUT
NR
GND
SYS_+3V3
C13
2.2uF/16V
C17
10nF/16V
C19
10uF/16V
U2
TPS7A8033RBR
IN
OUT
NR
EN
SNS
Power_pad
OTHER_+3V3
C14
2.2uF/16V
C15
10nF/16V
C20
10uF/16V
R23
499R
R24
2k
C22
22nF/50V
U5
FOD817AS
Feedback control
R28
1k
R31
10k
D8
BAV99LT1G
C44
100pF/50V
R38
41,2k
R36
19,1k
C45
8,2nF/50V
D9
TLV431ACDBZR
Vref = 1,24 V
R39
13,3k
C33
1uF/16V
Soft start
ESP32-WROVER-IE
SYS_+3V3
R40
10k
EN
C53
1uF
R41
10k
IO0
Reset
SW1
TVAF18BB
C54
100nF
SW2
TVAF18BB
C55
100nF
Boot
U6
GND
3V3
EN
SENSOR_VP
SENSOR_VN
IO34
IO35
IO32
IO33
IO25
IO26
IO27
IO14
IO12
IO13
NC
PGND
IO23
IO22
TXD0
RXD0
IO21
IO19
IO18
IO5
IO4
IO0
IO2
IO15
button1
button2
button3
1wire_data
W5500_RST
W5500_CLK
W5500_MISO
W5500_MOSI
DISPLAY_MOSI
DISPLAY_RST
TXD
RXD
DISPLAY_LED
DISPLAY_CLK
DISPLAY_CS
DISPLAY_DCRS
IO0
W5500_CS
C51
22uF
C52
100nF
R46
10k
Ethernet, LAN Transformer
OTHER_+3V3
R9
49,9R
R11
49,9R
R13
10R
C9
22nF/16V
TX+
TX–
RX+
RX–
R3
33
R4
33
R5
33
R6
33
C11
6,8nF/16V
C12
6,8nF/16V
R10
82R
R12
82R
C5
10nF/16V
D5
PHDMI2AB4Z
T1
5M13126PEL
TXCM
RXCM
J1
54601-908WPLF
P45
P78
C30
10nF/100V
C34
10nF/100V
C39
10nF/100V
C42
10nF/100V
R26
75R
R32
75R
R34
75R
R35
75R
C36
1nF/2kV
GDT1
2051-09-SM-RPLF
GNDPWR
C48
4700pF/2kV
Ethernet
solder_jumper_2_open_rect_1x1.5mm
JP3
JP2
JP1
R19
10k
R20
10k
R21
10k
R16
10k
W5500_RST
OTHER_+3V3
L3
BLM21PG121SN1D
AVDD
PWR_FLAG
U3
WIZnet
SPI
TCP/IP
Ethernet
W5500
INTn
MOSI
MISO
SCLK
SCSn
XO
XI/CLKIN
GND
VDD
ACTLED
DUPLED
LINKLED
W5500_MOSI
W5500_MISO
W5500_CLK
W5500_CS
TXN
TXP
AGND
AVDD
RXN
RXP
DNC
EXRES1
NC
TX–
TX+
RX–
RX+
R22
12,4k
R8
1M
R7
Y1
ABLS2-25.000MHZ-D4YF-T – 25MHz
C2
18pF
C4
18pF
C7
10uF
C10
100nF
C16
10nF
C18
4,7uF
C26
100nF
C29
100nF
C31
100nF
C35
100nF
C38
100nF
C40
100nF
C43
10uF
Temperature sensor
U7
DS18B20
DQ
VDD
GND
D20
SD05.TCT
R42
4,7k
D21
DS9503_us
1wire_data
Display
D14
PHDMI2AB4Z
DISPLAY_CLK
DISPLAY_LED
NOT_CONNECTED
D15
PHDMI2AB4Z
DISPLAY_CS
DISPLAY_RST
DISPLAY_DCRS
DISPLAY_MOSI
P2
DS1023-1-9S21
NOT_CONNECTED
DISPLAY_LED
DISPLAY_CLK
DISPLAY_MOSI
DISPLAY_DCRS
DISPLAY_RST
DISPLAY_CS
D19
SD05.TCT
UART
USB_+5V
PWR_FLAG
D12
SD05.TCT
P1
2x3_MLW06A
RXD
TXD
IO0
EN
D13
PHDMI2AB4Z
CH1
CH2
CH3
CH4
NC
GND
Menu – buttons
SW3
B3F-4150
Shield
D16
SD05.TCT
C56
100nF
R43
10k
button1
SW4
B3F-4150
D17
SD05.TCT
C57
100nF
R44
10k
button2
SW5
B3F-4150
D18
SD05.TCT
C58
100nF
R45
10k
button3
Mounting holes
Mounting hole for screws
H1 mounting_hole_2.2x4.4mm
H2 mounting_hole_2.2x4.4mm
H3 mounting_hole_2.2x4.4mm
H4 mounting_hole_2.2x4.4mm
H5 mounting_hole_2.2x4.4mm
H6 mounting_hole_2.2x4.4mm
H7 mounting_hole_2.2x4.4mm
H8 mounting_hole_2.2x4.4mm
H9 mounting_hole_2.2x4.4mm
H10 mounting_hole_2.2x4.4mm
Display
H11 mounting_hole_3.2x5.5mm
H12 mounting_hole_3.2x5.5mm
Roman Labovsky (roman-labovsky.cz)
Sheet: /
File: wall-mounted-room-temperature-sensor-ethernet.kicad_sch
Title: Wall mounted room temperature sensor – Ethernet
Size: A2
Date: 2021-03-28
Rev: v1.0
KiCad E.D.A. kicad 7.0.9
Id: 1/1