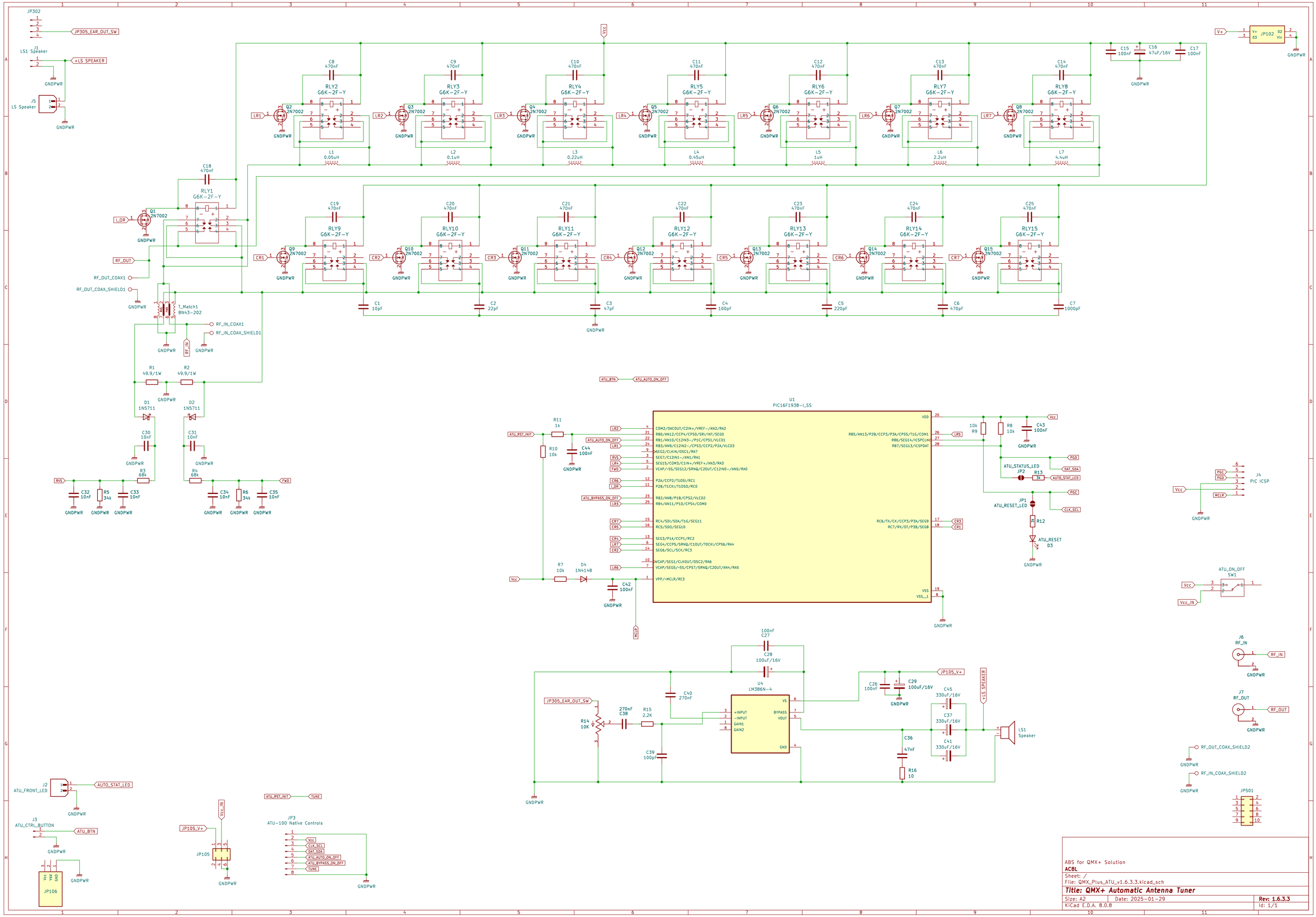
JP302
JP305_EAR_OUT_SW
J1
LS1 Speaker
+LS SPEAKER
J5
LS Speaker
GNDPWR
Vcc
V+
JP102
C15 100nF
C16 47uF/16V
C17 100nF
C8 470nF
C9 470nF
C10 470nF
C11 470nF
C12 470nF
C13 470nF
C14 470nF
RLY1 G6K-2F-Y
RLY2 G6K-2F-Y
RLY3 G6K-2F-Y
RLY4 G6K-2F-Y
RLY5 G6K-2F-Y
RLY6 G6K-2F-Y
RLY7 G6K-2F-Y
RLY8 G6K-2F-Y
Q1 2N7002
Q2 2N7002
Q3 2N7002
Q4 2N7002
Q5 2N7002
Q6 2N7002
Q7 2N7002
Q8 2N7002
LR1
LR2
LR3
LR4
LR5
LR6
LR7
L1 0.05uH
L2 0.1uH
L3 0.22uH
L4 0.45uH
L5 1uH
L6 2.2uH
L7 4.4uH
C18 470nF
I_OR
RF_OUT
RF_OUT_COAX1
RF_OUT_COAX_SHIELD1
T_Match1
BN43-202
RF_IN_COAX1
RF_IN_COAX_SHIELD1
RF_IN
C19 470nF
C20 470nF
C21 470nF
C22 470nF
C23 470nF
C24 470nF
C25 470nF
RLY9 G6K-2F-Y
RLY10 G6K-2F-Y
RLY11 G6K-2F-Y
RLY12 G6K-2F-Y
RLY13 G6K-2F-Y
RLY14 G6K-2F-Y
RLY15 G6K-2F-Y
Q9 2N7002
Q10 2N7002
Q11 2N7002
Q12 2N7002
Q13 2N7002
Q14 2N7002
Q15 2N7002
CR1
CR2
CR3
CR4
CR5
CR6
CR7
C1 10pF
C2 22pF
C3 47pF
C4 100pF
C5 220pF
C6 470pF
C7 1000pF
R1 49.9/1W
R2 49.9/1W
D1 1N5711
D2 1N5711
C30 10nF
C31 10nF
R3 68k
R4 68k
RVS
FWD
C32 10nF
R5 34k
C33 10nF
C34 10nF
R6 34k
C35 10nF
ATU_BTN
ATU_AUTO_ON_OFF
U1
PIC16F1938-I_SS
R11 1k
ATU_RST_INIT
R10 10k
C44 100nF
ATU_BYPASS_ON_OFF
R7 10k
D4 1N4148
C42 100nF
MCLR
VDD
VSS
VSS_1
COM2/DACOUT/C2IN+/VREF-/AN2/RA2
RB0/AN12/CCP4/CPS0/SRI/INT/SEG0
RB1/AN10/C12IN3-/P1C/CPS1/VLCD1
RB3/AN9/C12IN2-/CPS3/CCP2/P2A/VLCD3
SEG2/CLKIN/OSC1/RA7
SEG7/C12IN1-/AN1/RA1
SEG15/CCM3/C1IN+/VREF+/AN3/RA3
VCAP/-SS/SEG12/SRNQ/C2OUT/C12IN0-/ANO/RA0
P2A/CCP2/T1OSI/RC1
P2B/T1CKI/T1OSO/RC0
RB2/ANB/P1B/CPS2/VLCD2
RB4/AN11/P1D/CPS4/COM0
RC4/SDI/SDA/T1G/SEG11
RC5/SDO/SEG10
SEG3/P1A/CCP1/RC2
SEG4/CCP5/SRNQ/C1OUT/TOCKI/CPS6/RA4
SEG6/SCL/SCK/RC3
VCAP/SEG1/CLKOUT/OSC2/RA6
VCAP/SEG5/-SS/CPS7/SRNQ/C2OUT/AN4/RA5
VPP/-MCLR/RE3
RB5/AN13/P2B/CCP3/P3A/CPS5/T1G/COM1
RB6/SEG14/ICSPCLK
RB7/SEG13/ICSPDAT
RC6/TX/CK/CCP3/P3A/SEG9
RC7/RX/DT/P3B/SEG8
10k R9
R8 10k
C43 100nF
ATU_STATUS_LED
JP2
R13 3k
AUTO_STAT_LED
PGD
DAT_SDA
PGC
CLK_SCL
JP1
ATU_RESET_LED
R12
ATU_RESET
D3
J4
PIC ICSP
ATU_ON_OFF
SW1
Vcc_IN
J6
RF_IN
J7
RF_OUT
RF_OUT_COAX_SHIELD2
RF_IN_COAX_SHIELD2
JP501
100nF C27
C28 100uF/16V
U4
LM386N-4
C40 270nF
JP305_EAR_OUT_SW
R14 10K
270nF C38
R15 2.2K
C39 100pF
+INPUT
-INPUT
GAIN1
GAIN2
VS
BYPASS
VOUT
GND
C26 100nF
C29 100uF/16V
JP105_V+
C45 330uF/16V
C37 330uF/16V
C41 330uF/16V
C36 47nF
R16 10
LS1 Speaker
J2
ATU_FRONT_LED
J3
ATU_CTRL_BUTTON
JP106
JP105
ATU_RST_INIT
TUNE
JP3
ATU-100 Native Controls
CLK_SCL
DAT_SDA
ATU_AUTO_ON_OFF
ATU_BYPASS_ON_OFF
ABS for QMX+ Solution
AC8L
Sheet: /
File: QMX_Plus_ATU_v1.6.3.3.kicad_sch
Title: QMX+ Automatic Antenna Tuner
Size: A2
Date: 2025-01-29
Rev: 1.6.3.3
KiCad E.D.A. 8.0.8
Id: 1/1