**TRX Module**

*RFPWR — R3 100R — 1 Q1 BSN20 — R6 4k7 — GND — GND
*RXD — R9 2k2 — R11 3k3 — GND
+3V3
U3 DRA818U
8 VCC — SQ 1 — SQ
16 RXD — AF_OUT 3 — AF_TRX
17 TXD
7 HL — RF/ANT 12
6 PD
5 PTT
18 MIC_IN
GND 9  GND 10
GND

RXD 16
*TXD 17
−SLEEP 6
−PTT 5
MIC_TRX 18

+3V3 — R4 10k — 1 Q2 BSN20 — R7 4k7 — GND — GND
*SLEEP — R5 100R — 1
+3V3 — R1 10k
*PTT — R2 100R — 1 Q3 BSN20 — R8 4k7 — GND — GND

FL1 LFCN−160 — 1 IN — OUT 3 — GND 2
J2 SMA — 1 2 — GND

**MIC AMP**

+3V3 — L2 Ferrit
−SLEEP
U4 MAX9814
C16 100nF — MIC_AR
MIC — R14 #2.2k
1 CT
9 A/R
14 TH
13 MICBIAS
8 MICIN — LN ref — AGC
10 GAIN — LNA — VGA — Gain — MICOUT 6
12 BIAS
3 CG
SHDN 2 — VDD 5
GND 7
RV2 10k
C15 100nF
R13 150k
MIC_GAIN — R15 1k
R12 100k
C17 470nF — C18 2.2uF
C11 1uF
C19 1uF — MIC_TRX
Ferrit L1 — GND

J3 Conn_01x03
3 — +3V3
2 — MIC_GAIN
1 — GND

J4 Conn_01x03
3 — +3V3
2 — MIC_AR
1 — GND

**SPEAKER AMP**

AF_TRX — C1 1uF
VCC
RV1 10k
U2 LM386
3 + — 6
2 − — 7
4 GND — V+ — 1 8
5 — C10 1uF — SPKR
C4 1nF — C5 10uF — C6 1uF
R10 10R
C8 47nF
GND

**CONNECTORS**

J1 Conn_02x08_Odd_Even
External MIC
GND 1 — 2 MIC
SPKR 3 — 4 −PTT
MIC_AR 5 — 6 MIC_TRX
MIC_GAIN 7 — 8 +3V3
*PTT 9 — 10 *TXD
*RFPWR 11 — 12 *RXD
SQ 13 — 14 *SLEEP
GND 15 — 16 VCC
MCU

**LEDS**

R16 1k +3V3 — D1 RED — RXD
R17 1k +3V3 — D2 RED — *TXD
R18 1k +3V3 — D3 RED — −PTT
R19 1k +3V3 — D4 YELLOW — SQ
R20 1k +3V3 — D5 BLUE — GND

**POWER**

U1 AP1117−33
VCC — 3 VI — VO 2 — +3V3
1 GND
C2 10uF — C3 100nF — C7 10uF — C9 100nF
GND

**HELPERS**

+3V3 — VCC
C12 10uF — C13 100nF — C14 10uF
GND — TRX — TRX — LM386

Signals with * as first letter are 5V compatible
Components values marked with # are optional