Voltage at this point should be 0.2–2V

R15 560 R17 270 C41 1n

TP3 TestPoint_Probe

C37 470p C39 15n

TP1 TestPoint_Probe

GND

EXT_OSC_IN

C30 100n R12 3R9 C38 22n +3.3V C44 10n

GND DNP L14 C45 100n

GND +3.3V C31 10n GND

+3.3V

RX C23 4p7 L4 27n

GND GND GND GND GND GND

U5 ADF7021

1 VCOIN
2 CREG1
3 VDD1
4 RFOUT
5 RFGND
6 RFIN
7 RFINB
8 RLNA
9 VDD4
10 RSET
11 CREG4
12 GND4

48 CVCO
47 GND1
46 L1
45 GND
44 L2
43 VDD
42 CPOUT
41 CREG3
40 VDD3
39 OSC1
38 OSC2
37 MUXOUT

36 CLKOUT
35 TxRxCLK
34 TxRxDATA
33 SWD
32 VDD2
31 CREG2
30 ADCIN
29 GND2
28 SCLK
27 SREAD
26 SDATA
25 SLE

13 MIX_I
14 NMIX_I
15 MIX_Q
16 NMIX_Q
17 FILT_I
18 NFILT_I
19 GND4
20 FILT_Q
21 NFILT_Q
22 GND4
23 TEST_A
24 CE

49 EPAD

RN2 4 x 1k ISOLATED

ADF_MUXOUT SPI2_SCK SPI2_MISO SPI2_MOSI ADF_SWD

+3.3V C56 10n

C46 100n

GNDGND

RN1 4 x 1k ISOLATED

ADF_SCLK ADF_SREAD ADF_SDATA ADF_SLE

+3.3V C12 22u/TA

ADF_CE

C25 6p8 R9 1k1 C28 10n R11 3k6 C33 100n

+3.3V 22n C108 GND

RX U? BGA2874–RF_Amplifier Vcc 8p2 C97 L16 13nH 5p1 C107 L17 20nH C58 1000p C60 6p2 L12 15nH C63 1000p C61 7p C64 9p1 C65 9p1 R22 33k L13 15nH C66 0.5p C67 9p1 R23 33k J8 Antenna

Dummy input RX filter, to be done
DO NOT USE AS IS

GND GND GND GND GND GND

M17 Open Source Digital Repeater
Author: DB9MAT Mathis, SO3ALG Nikoloz, SP5WWP Wojciech

Sheet: /
File: rx_board.sch
Title: Digital Repeater RX Board
Size: A3 Date: Rev:
KiCad E.D.A. kicad (5.1.6)-1 Id: 1/1