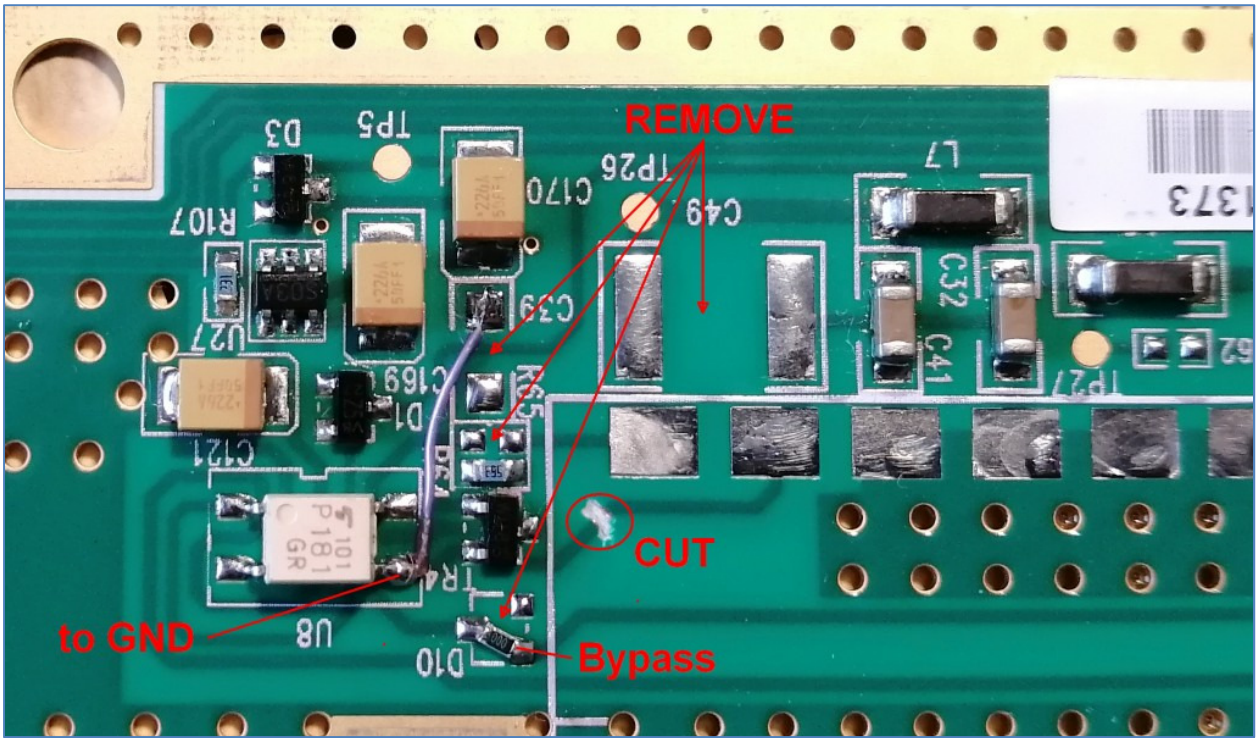
10GHz CBNL VS2 TRX BOARD MODIFICATION

YO4HFU - 01.04.2023, rev.1

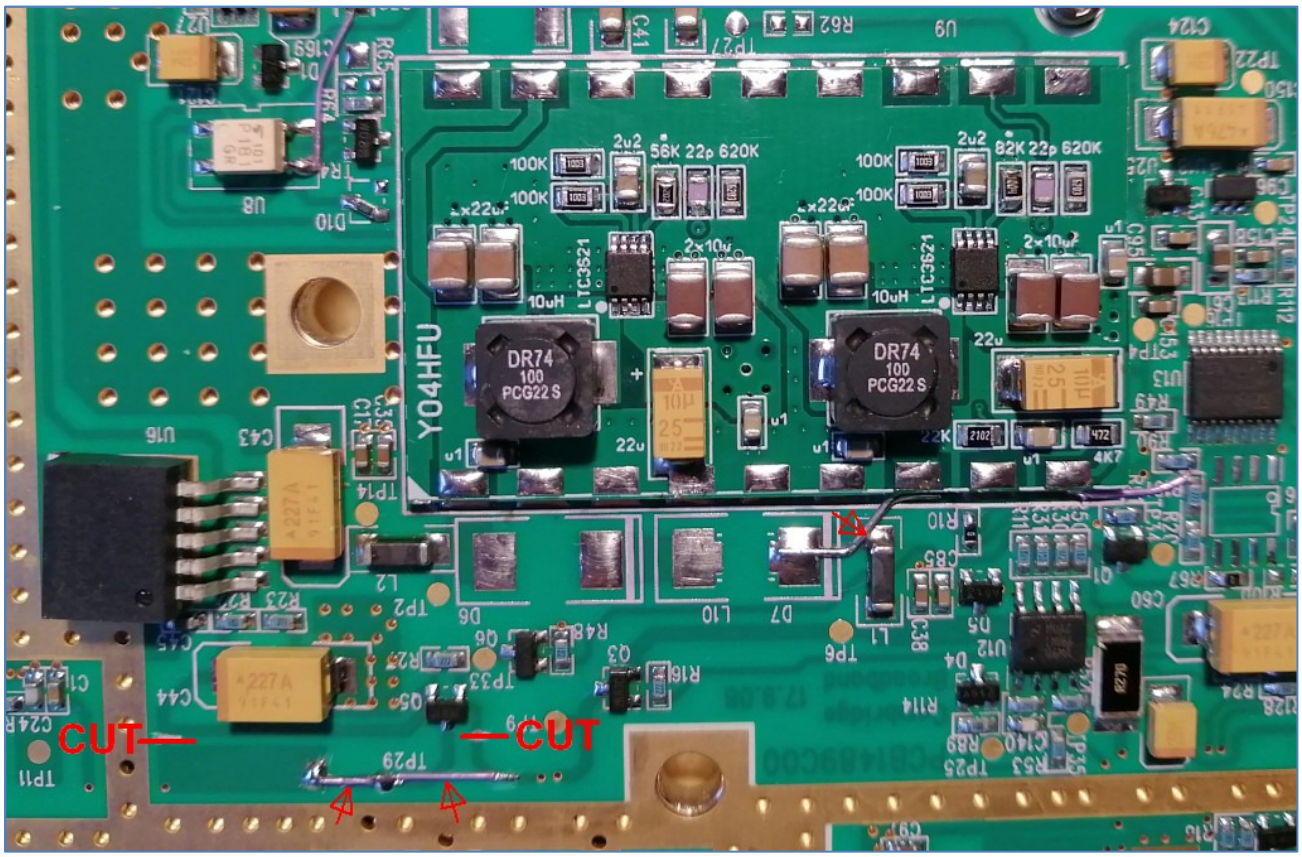
Carefully remove TRX PCB. Use a hotplate on bottom side and hot air gun to remove U9 Ericsson PSU. Do not damage PCB pads.

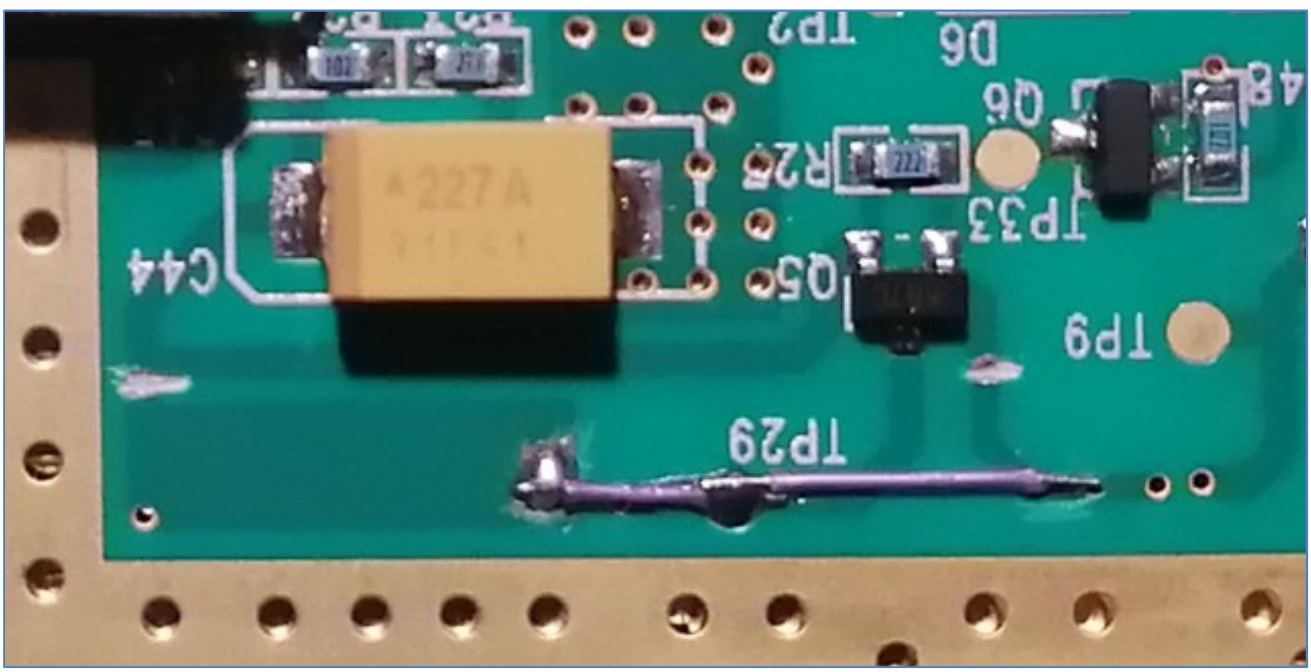
- Remove C39, C49, D10, R65
- Bypass D10, connect U8 pin 3 (emitter) to GND.
- Cut the trace between TR4 emitter and pin 17 U9 PSU.

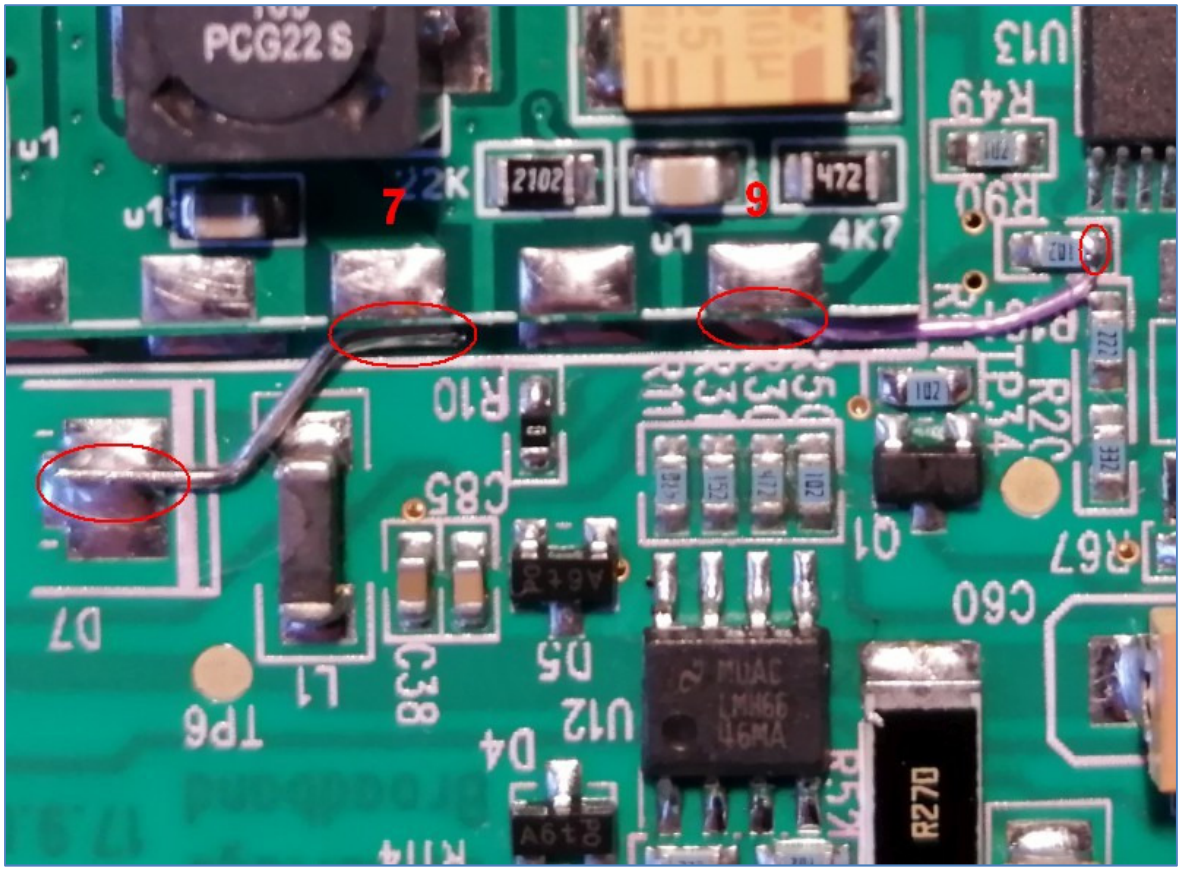
D1, U8 and TR4 are used as -5V interlock. TX PSU will be inhibited in case of -5V malfunction.



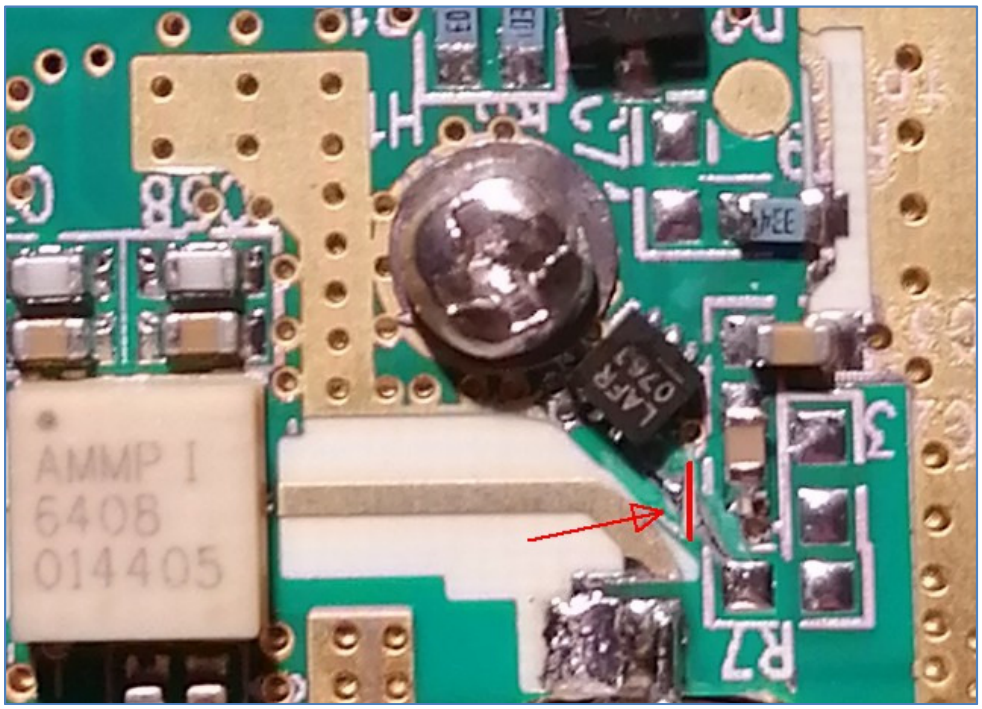
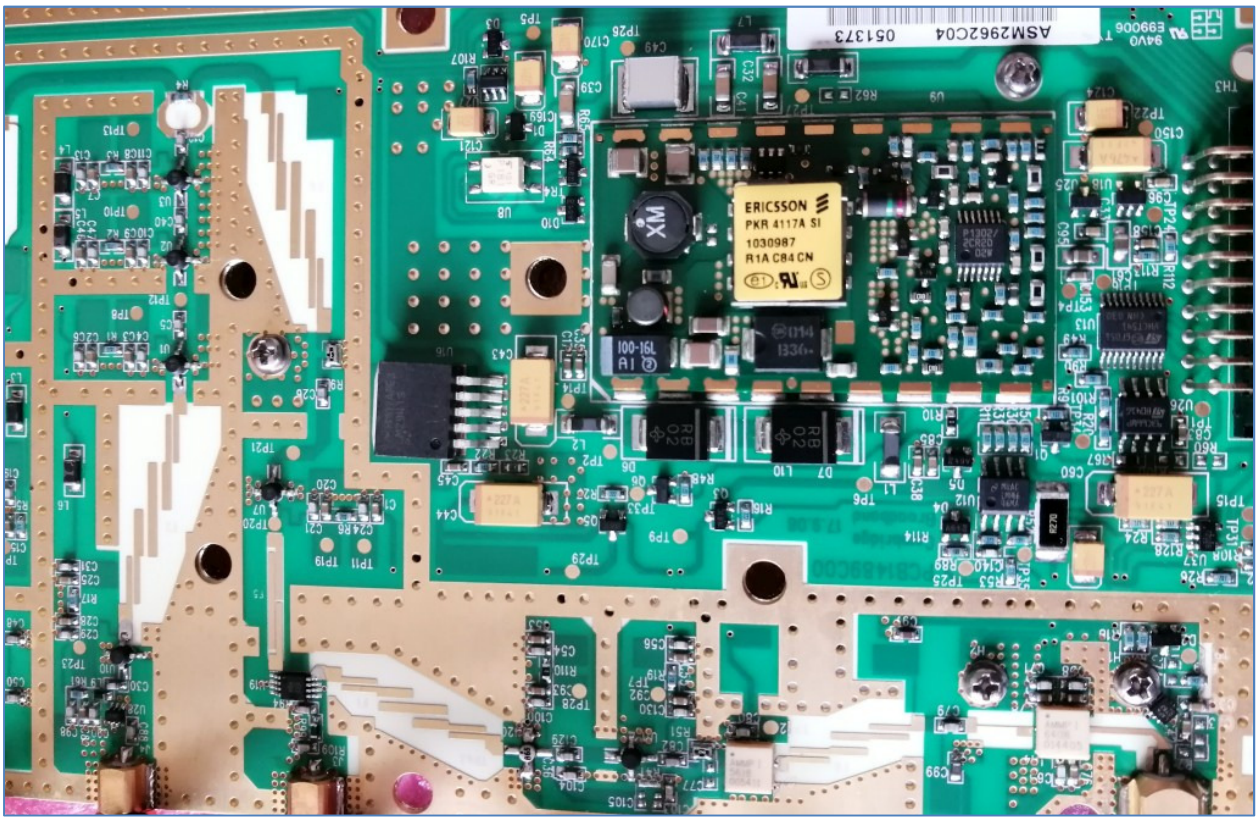
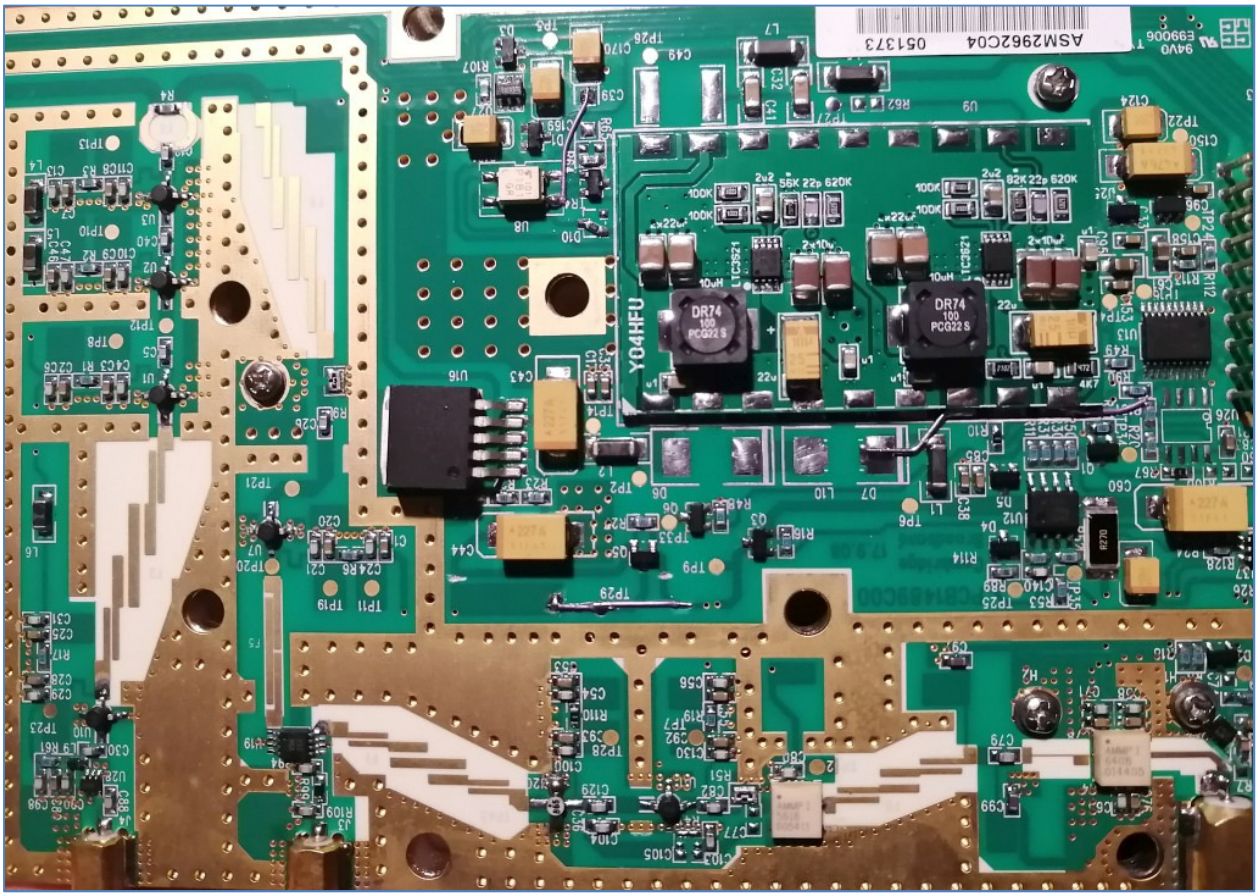
- Install new PSU PCB
- Remove D7 and D9. To reduce voltage drop/dissipation, PA stage will be supplied directly by stable +5V TX.
- Cut next traces according bellow image. Solder jumpers between TP29 and already cut traces. Modification is required to supply U7 & U21 MMIC only during TX.
- Solder jumper between PSU pin 7 (TX +5Vout) and D7 or L1.
- Solder jumper between R90 (1K) terminal and PSU pin 9. Signal used as TX control of PSU.


CUT
CUT
Y04HFU
DR74
100
PCG22 S
DR74
100
PCG22 S
LTC3621
LTC3621
10uH
10uH
2u2
56K 22p 620K
2u2
82K 22p 620K
100K
100K
100K
100K
22u
22u
22K
4K7
TP29


TP2
D6
Q6
R25
TP33
Q5
TP9
TP29
C44
227A



- Half cut of RF pickup line, pin 6 LTC5532. Modification required to avoiding RF detector saturation (max. 4.4V out)



Before and after CBNL TRX modification: