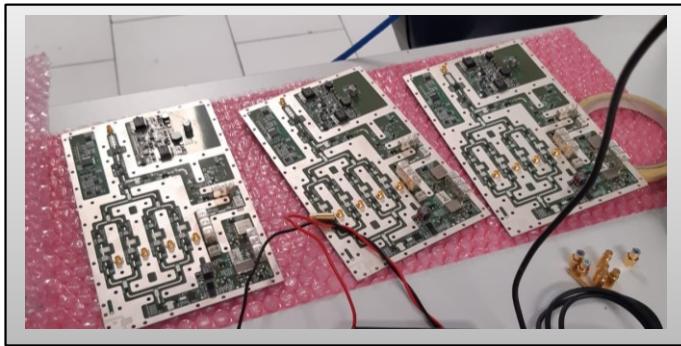


RockSpot

Revision of RF module board (AS07017)



Concerning RF Module inside RockSpot Survey Unit, it was necessary to revise the CS and the schematic to solve the problem of 1/f-like (filckr) noise of which the board was affected. The problem was solved by replacing the receiver mixers and the variable attenuator with its control circuit, with models that introduced less noise.

It is reported below the substantial changes introduced:

- The PCB has been modified from 4 to 6 layer.
- The variable attenuator (UT50) RFSA2113 has been replaced by the MMAT-010521-L1.

While the RFSA2113 attenuator needed a single control voltage, the MMAT-010521-L1 model needs two control voltages, it was therefore necessary to add a portion of the circuit that performed this function.

- The receiving mixers (UT32, UT46, UT56, UT72) HMC412 have been replaced by the CMD177C3.

It is reported below the minor changes introduced:

- Replaced RT55 with 10 kΩ (0402)
- BLT20, BLT25, BLT35, BLT45: replaced with PCB trace
- Replaced all regulators AP2204 (obsolete) with AP2205
- RT50: select case 0805 (1/2W) instead of 0603 (1/3W)
- Removed ON circuit in sequence of -4V_VIDEO (RB33, RB34, RB35, QB1, QB2)
- Replaced CB16, CB46, CB70, CB98 with 10 pF
- Removed output filter from UB9: CT174, CT158 and BLT29
- Removed CT155 and CT154
- Removed CT157, CT156, CT173 and BLT28
- Added C1013
- Added C1014, C1015, C1016, C1017
- Added D100, D101
- Added R1015, R1016, R1017, R1018, R1019, R1020
- Replaced RB25 with 0Ω