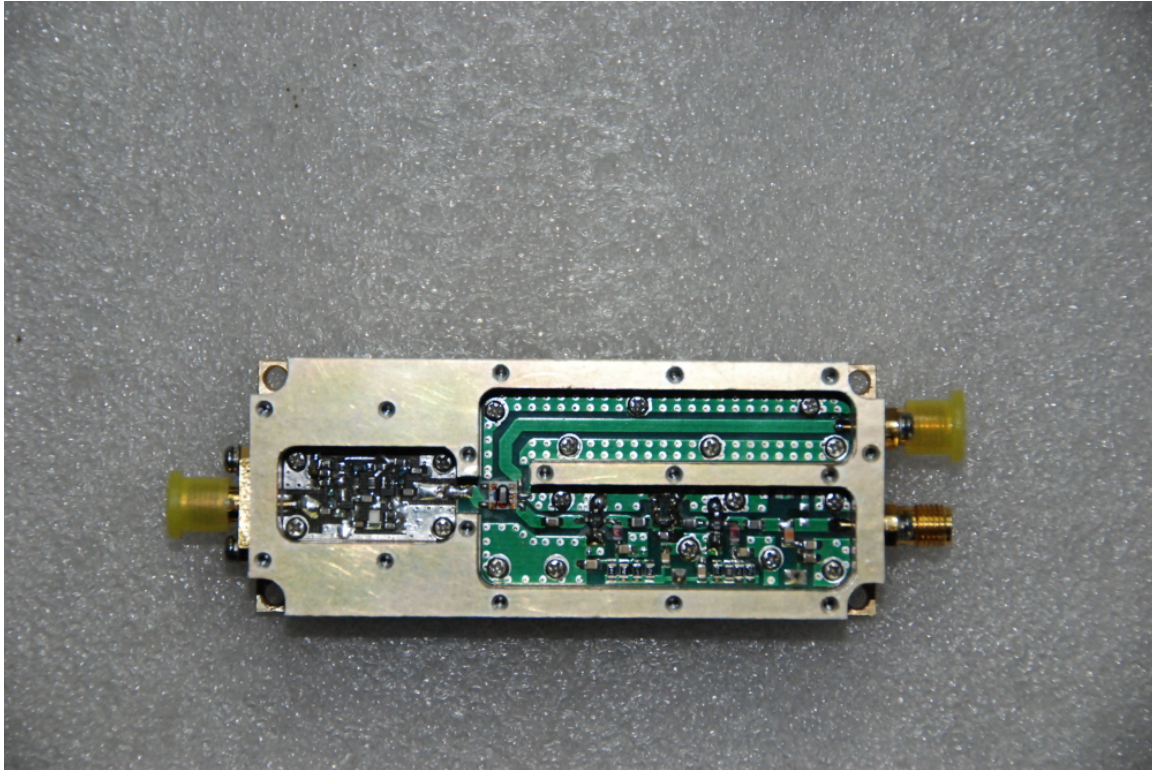
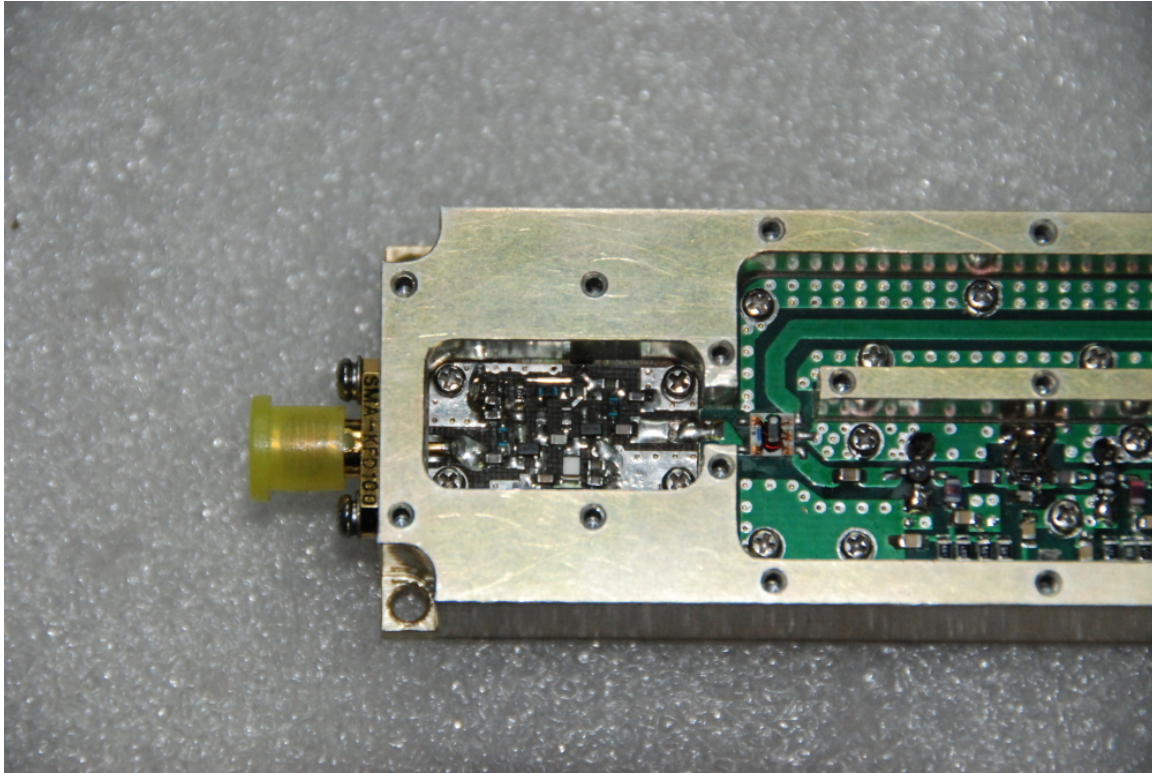


## Institute 54 Low Noise Amplifier.

Report by Jeff Peterson



Input is on the left, output lower right, noise injection port upper right. Inst 54 reports 50 db gain and 0.4 to 0.5 NF, across our entire band. I found the gain to be very stable, varying less than 0.2 db between days. The choice of 50 db gain provides enough signal to drive the RF-over-Optical-Fiber link we discussed in Feb. Since then, I have heard reports of poor stability for these RFOF links and I think we should reconsider using such a link, and perhaps instead just use RG-6. That would require a change in this unit to F-connector output. If we do this probably the gain should then be reduced to 30-40 db. The addition of a pad at the output would reduce standing waves in the cabling. The pad can go in place of the last gain stage.



Close up of the input section shows two stages using unmarked devices, which we are told are GaAs fets. The input coupling has no tuning, and no static protection.