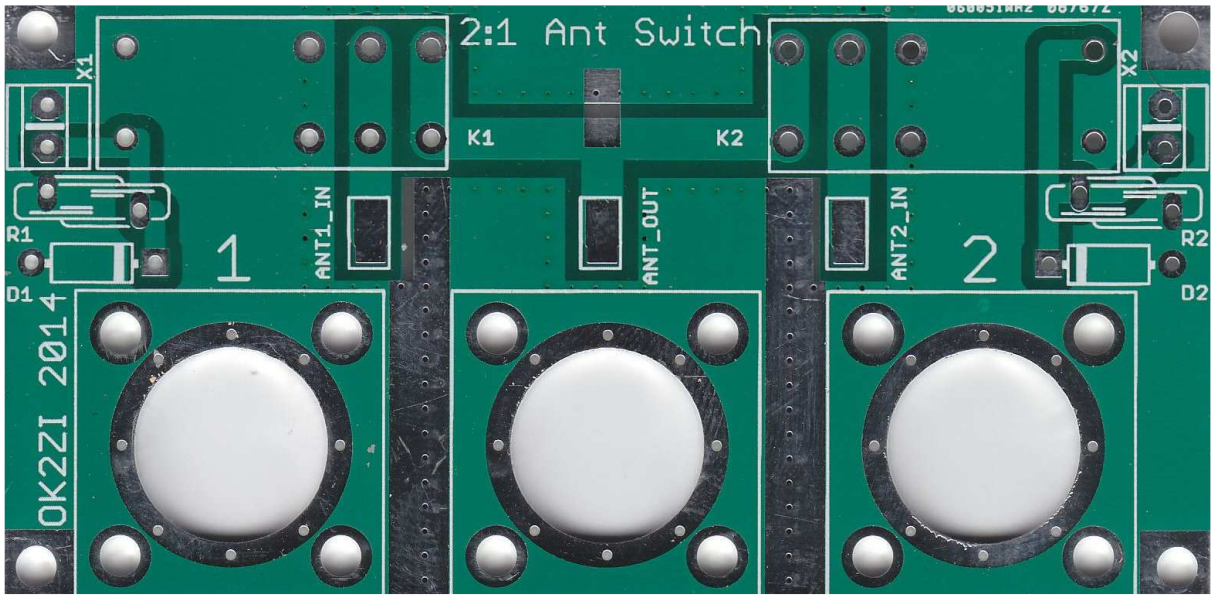
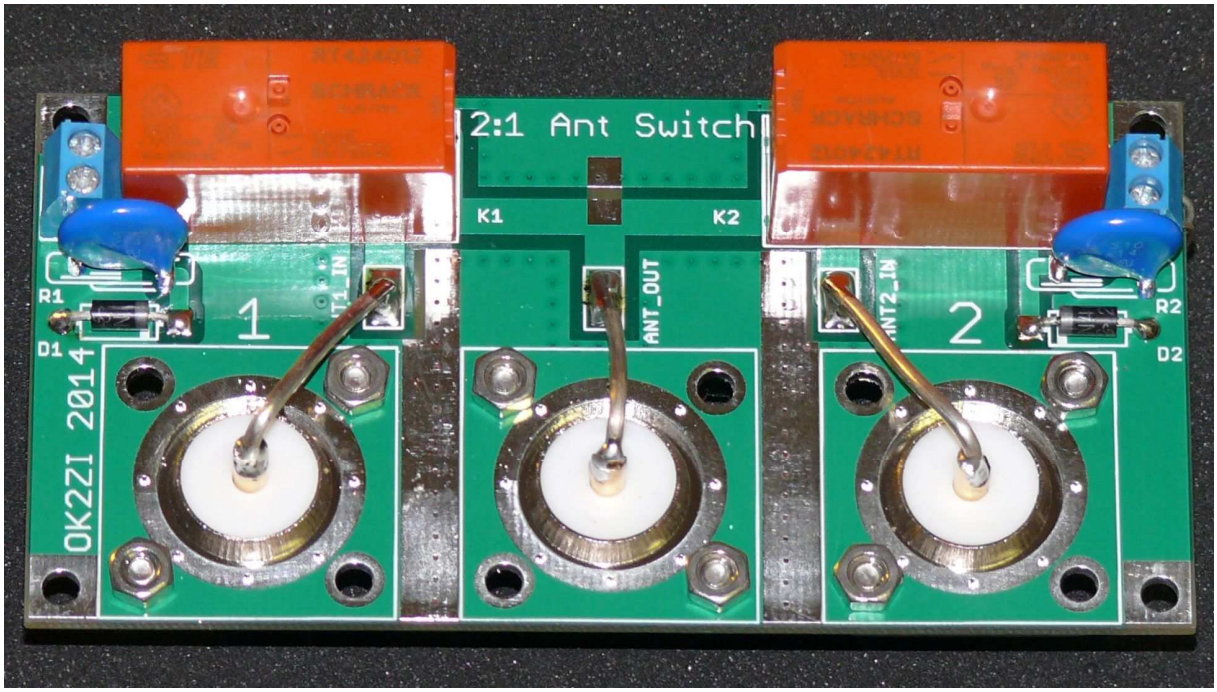
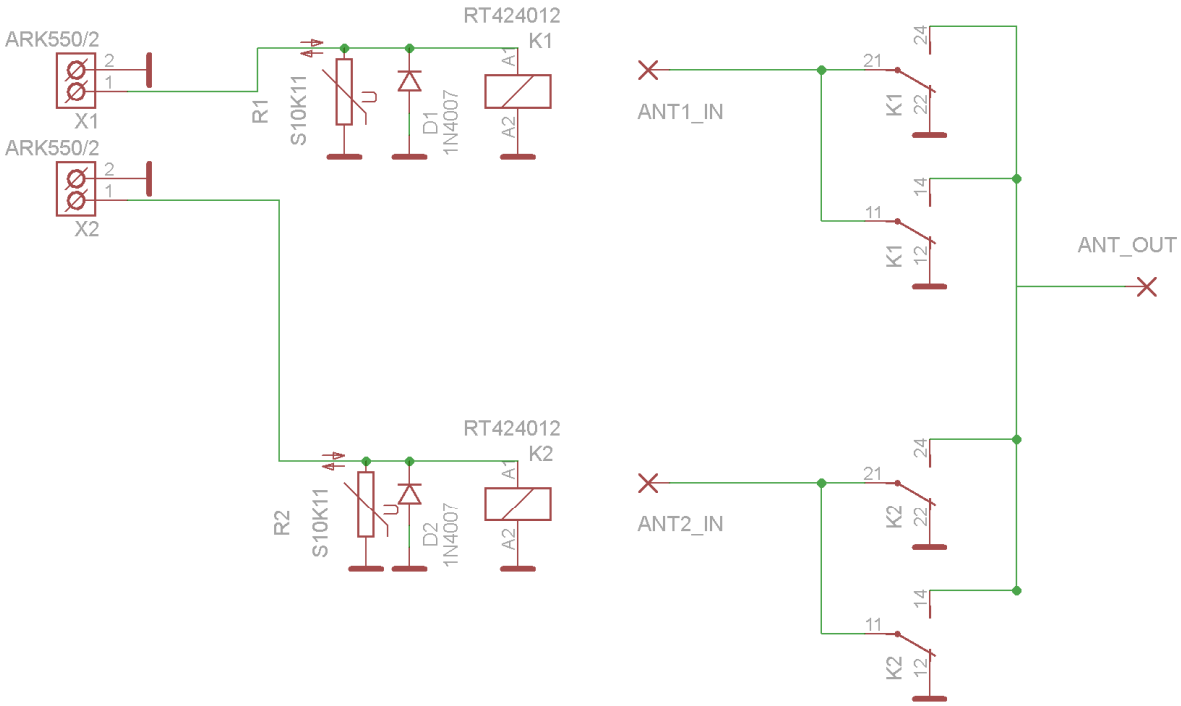
2x1 antenna switch



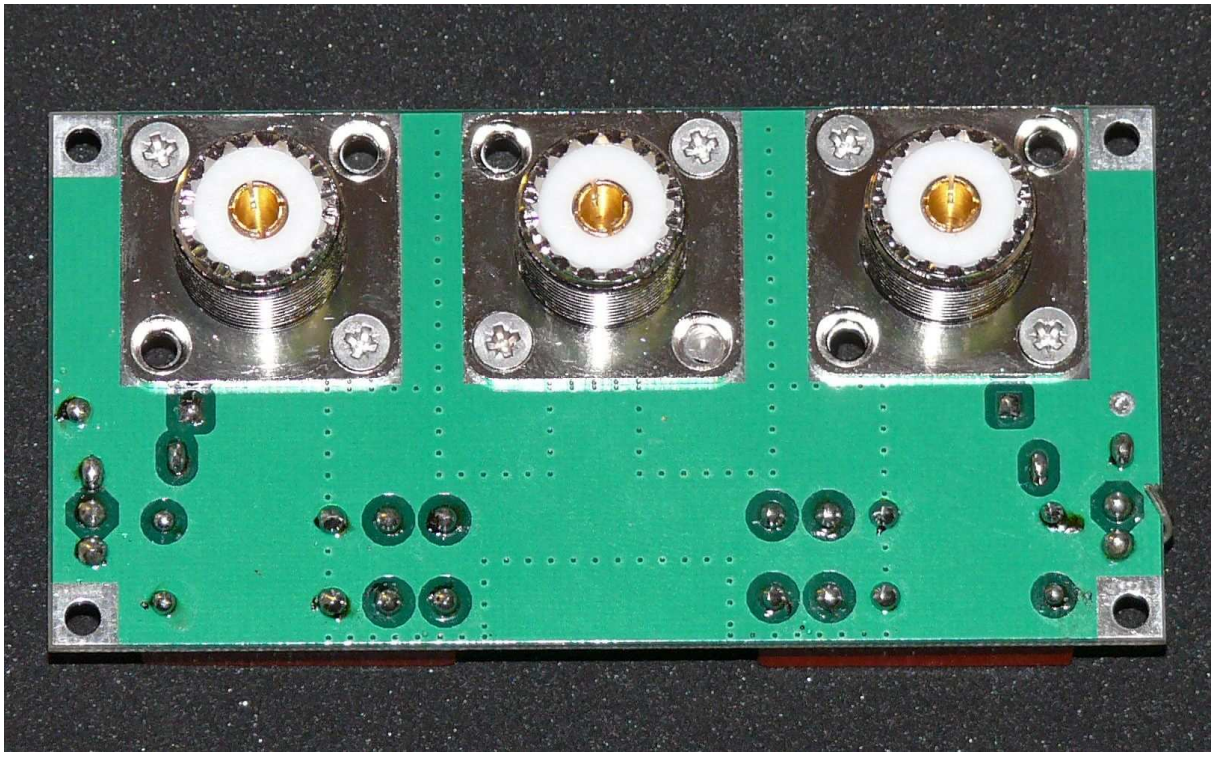
Bare PCB, the size is 49x100 mm



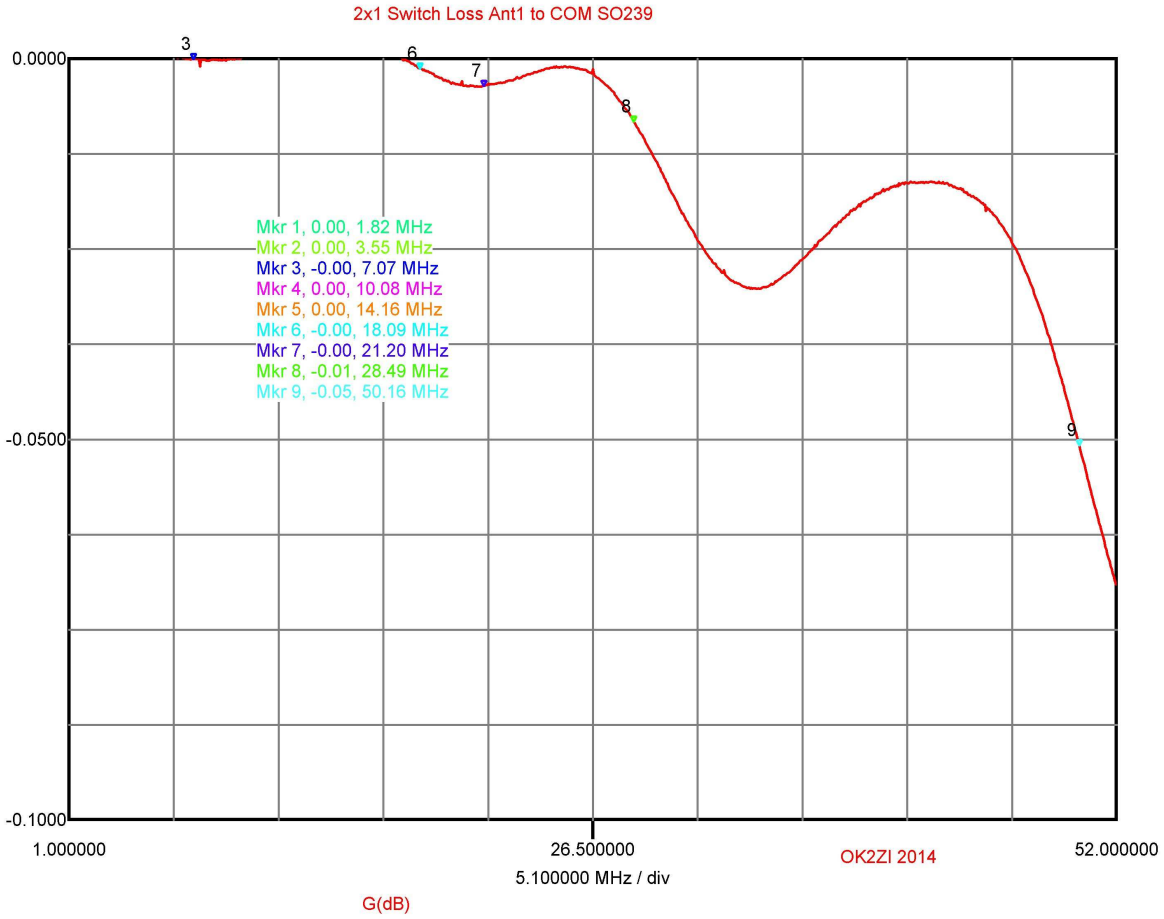
All components mounted



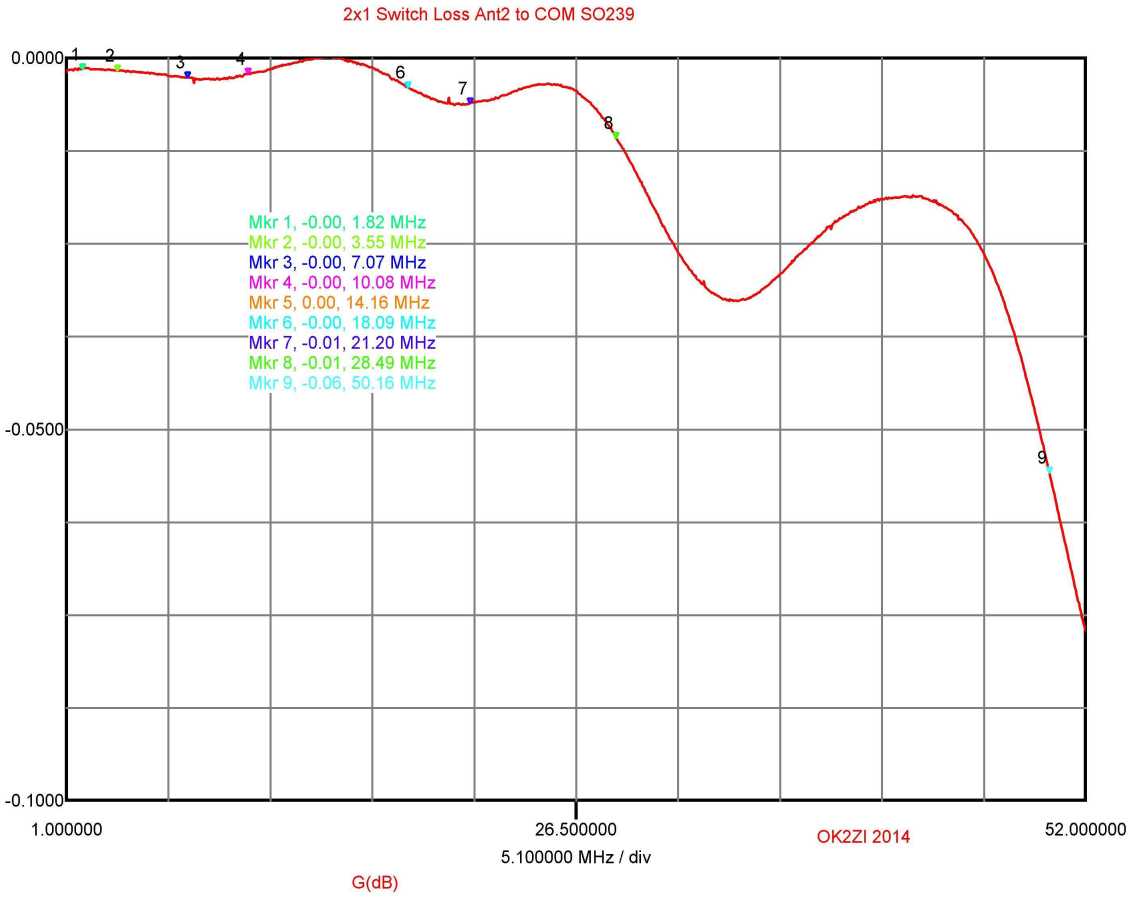
Schematic is simple……



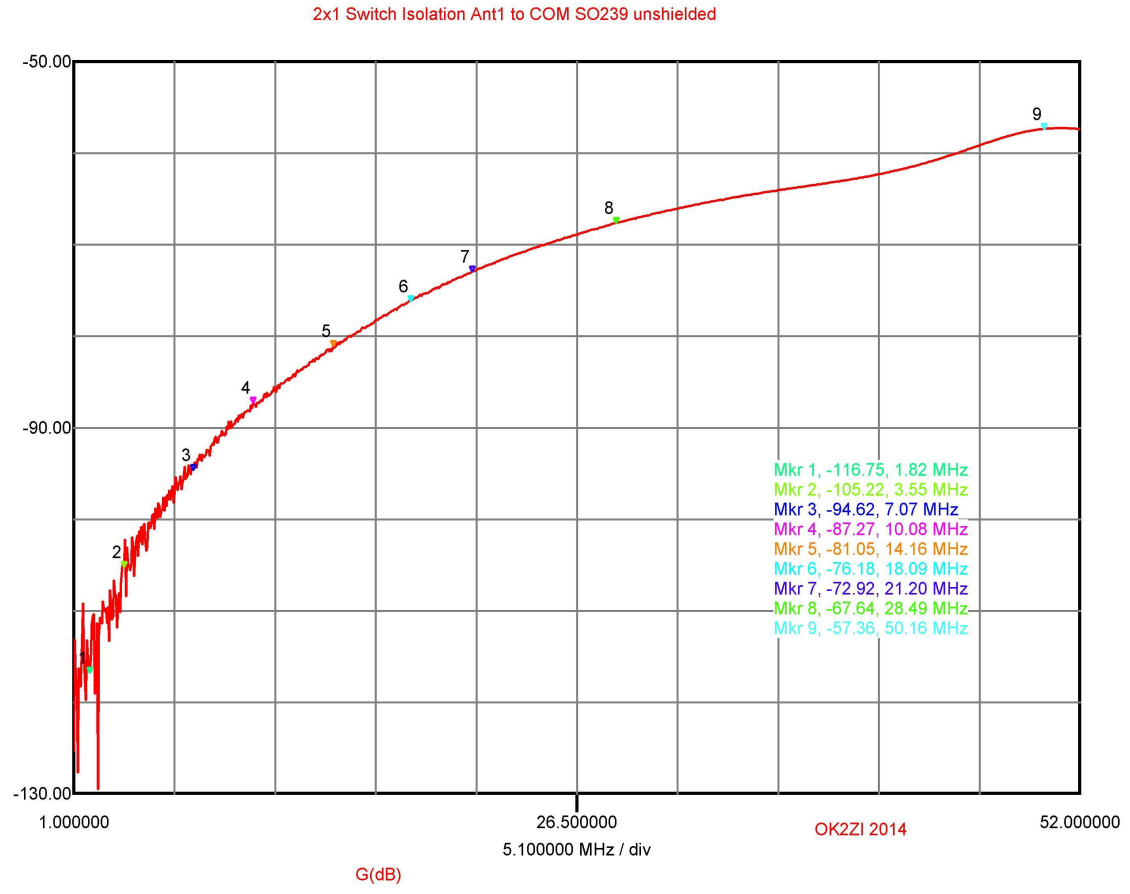
Reverse side with SO-239 panel connectors



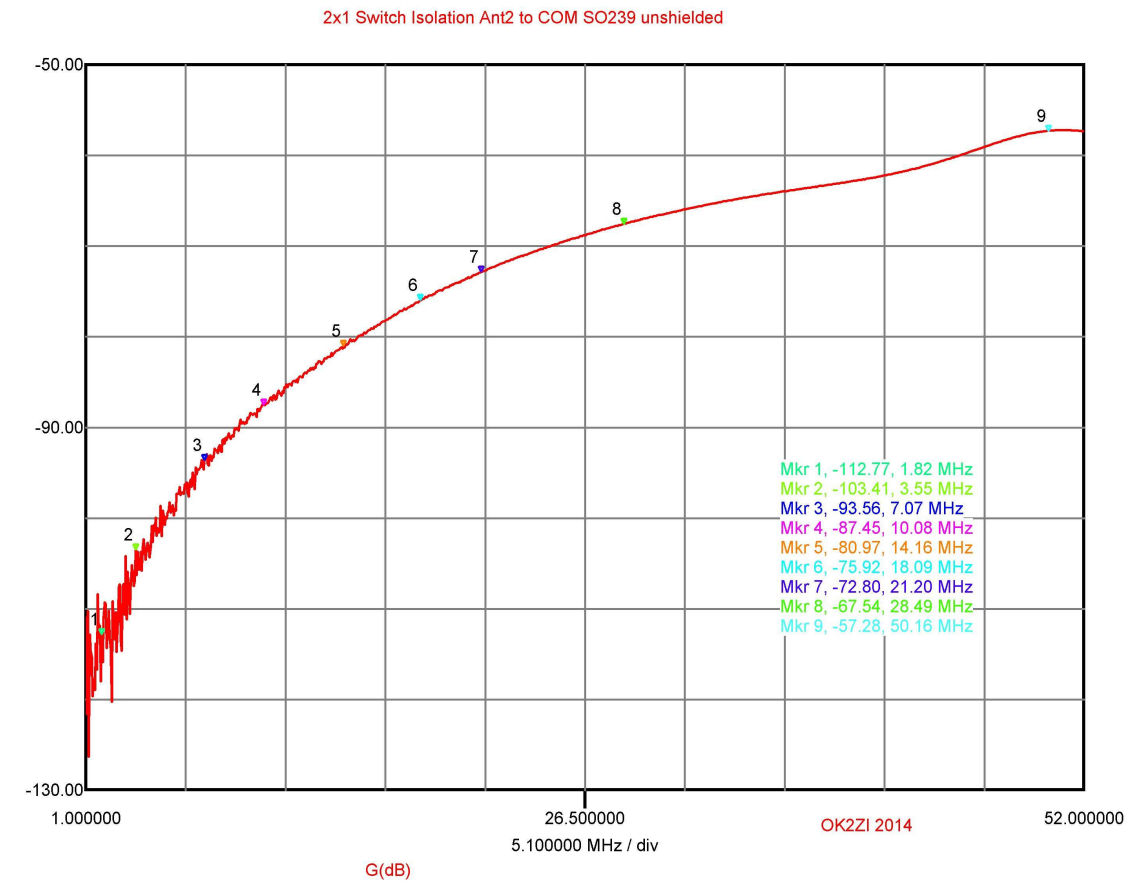
Transfer loss from ANT1 to COM port (**50MHz only -0.05dB!!**)



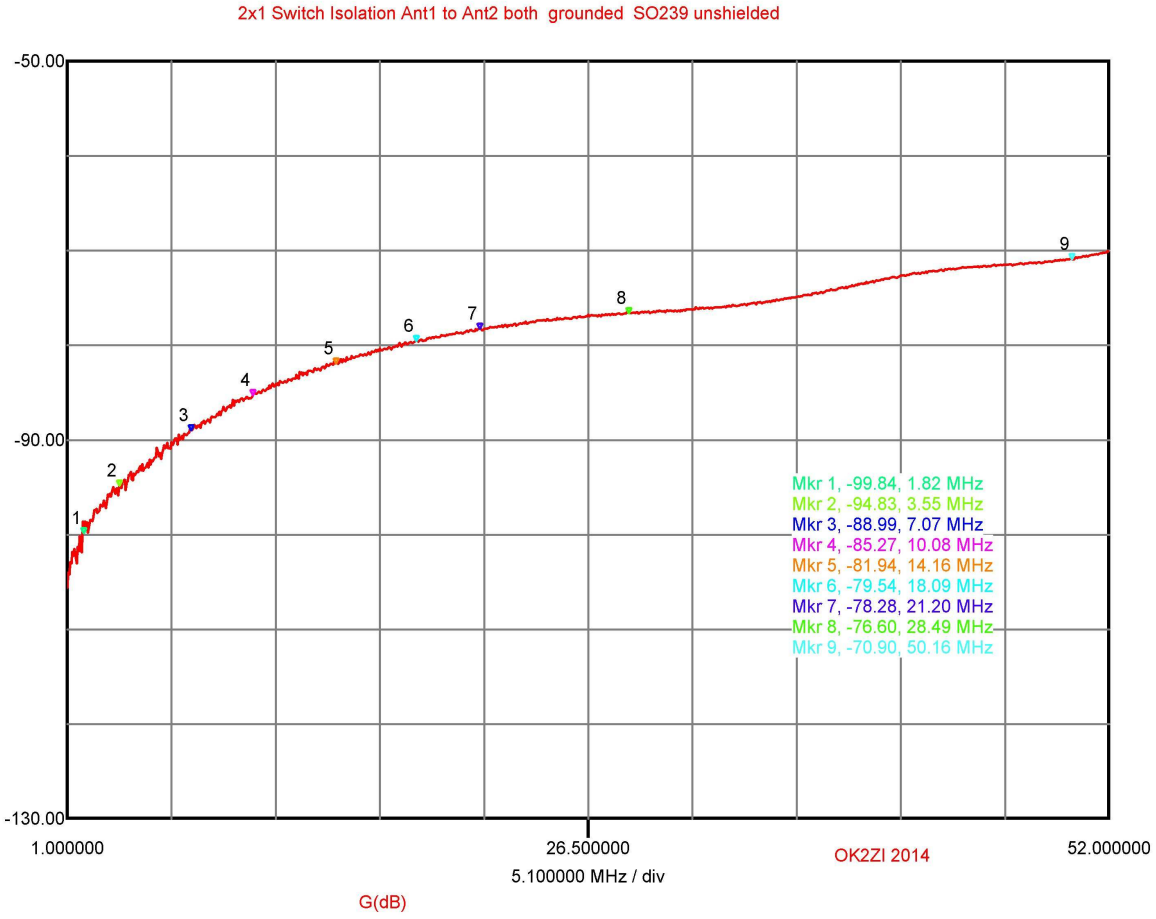
Transfer loss from ANT2 to COM port (**50MHz only -0.06dB!!**)



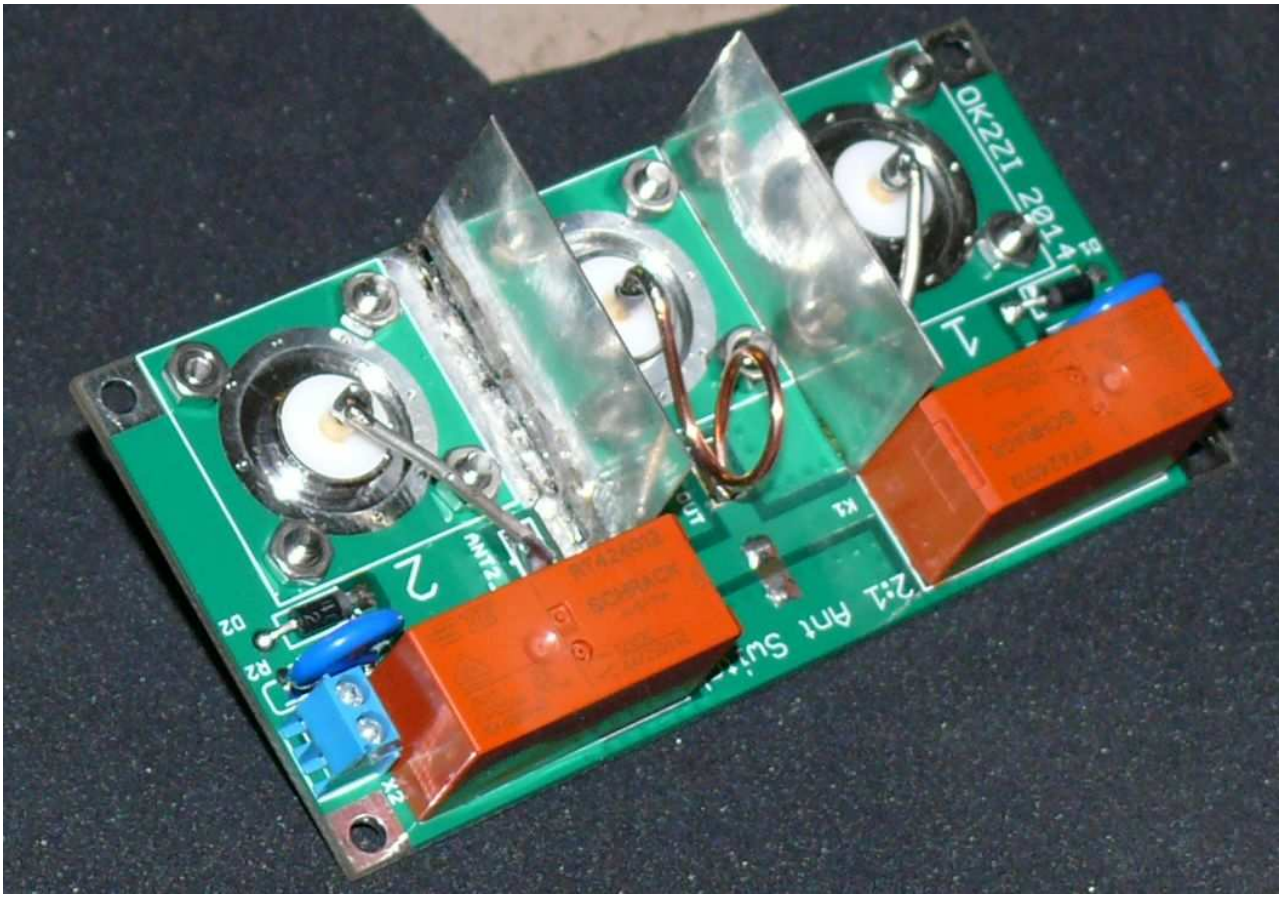
Isolation between ANT1 and COM **(>110dB@160m, >55dB@50MHz)**



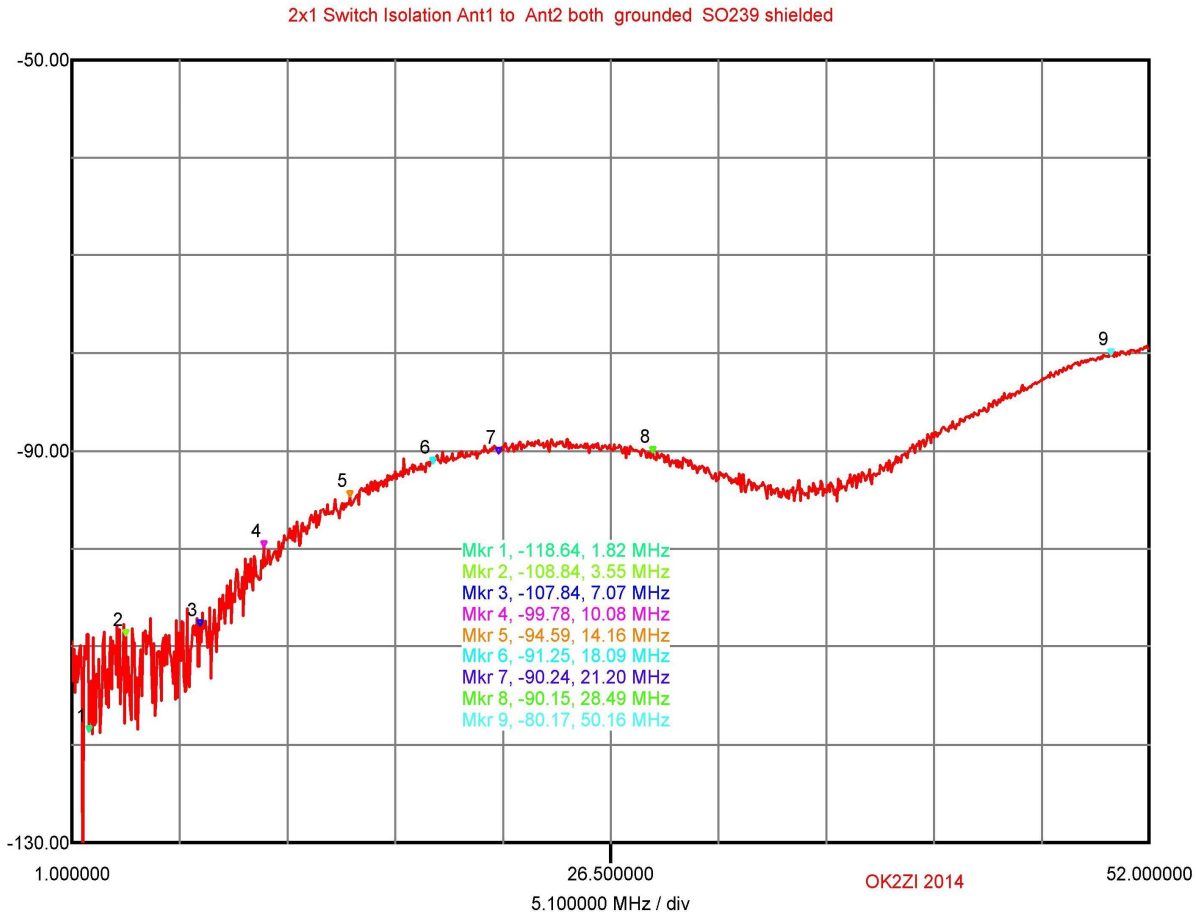
Isolation between ANT2 and COM **(>110dB@160m, >55dB@50MHz)**



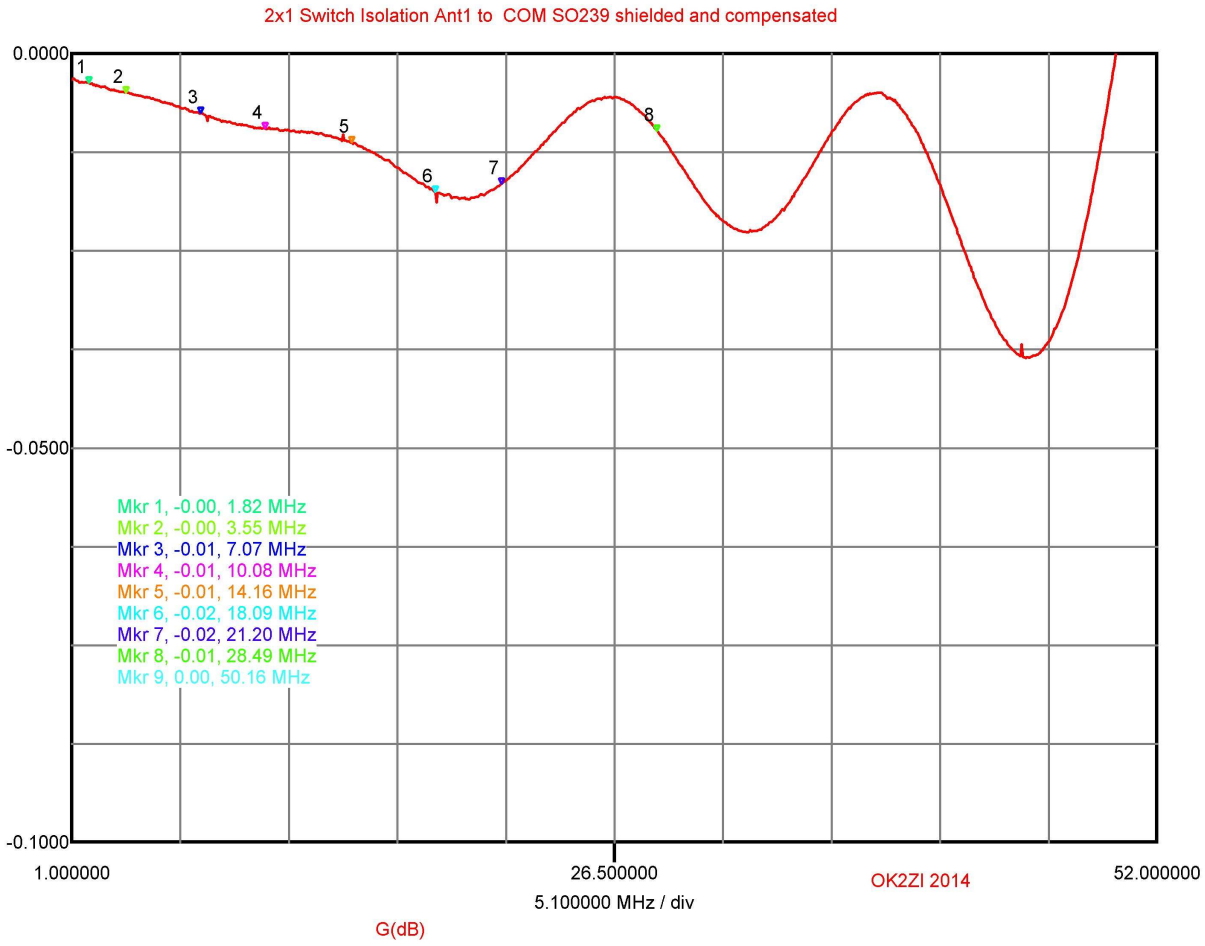
Isolation between ANT1 and ANT2, both antennas grounded



Added metallic shield between ANT1, ANT2 and COM and compensation coil at COM port.

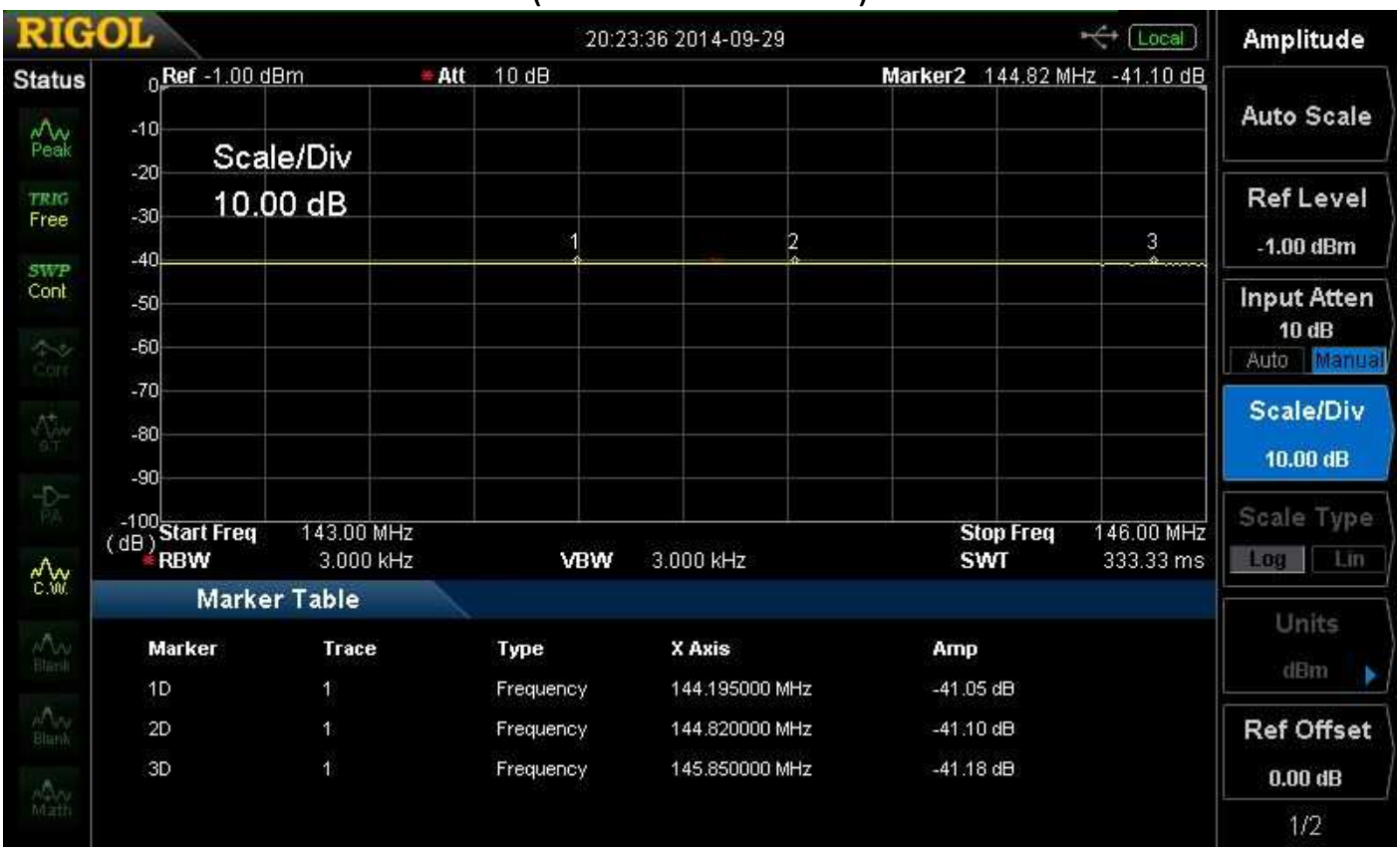


Isolation between ANT1 and ANT2, both antennas grounded and port shielded

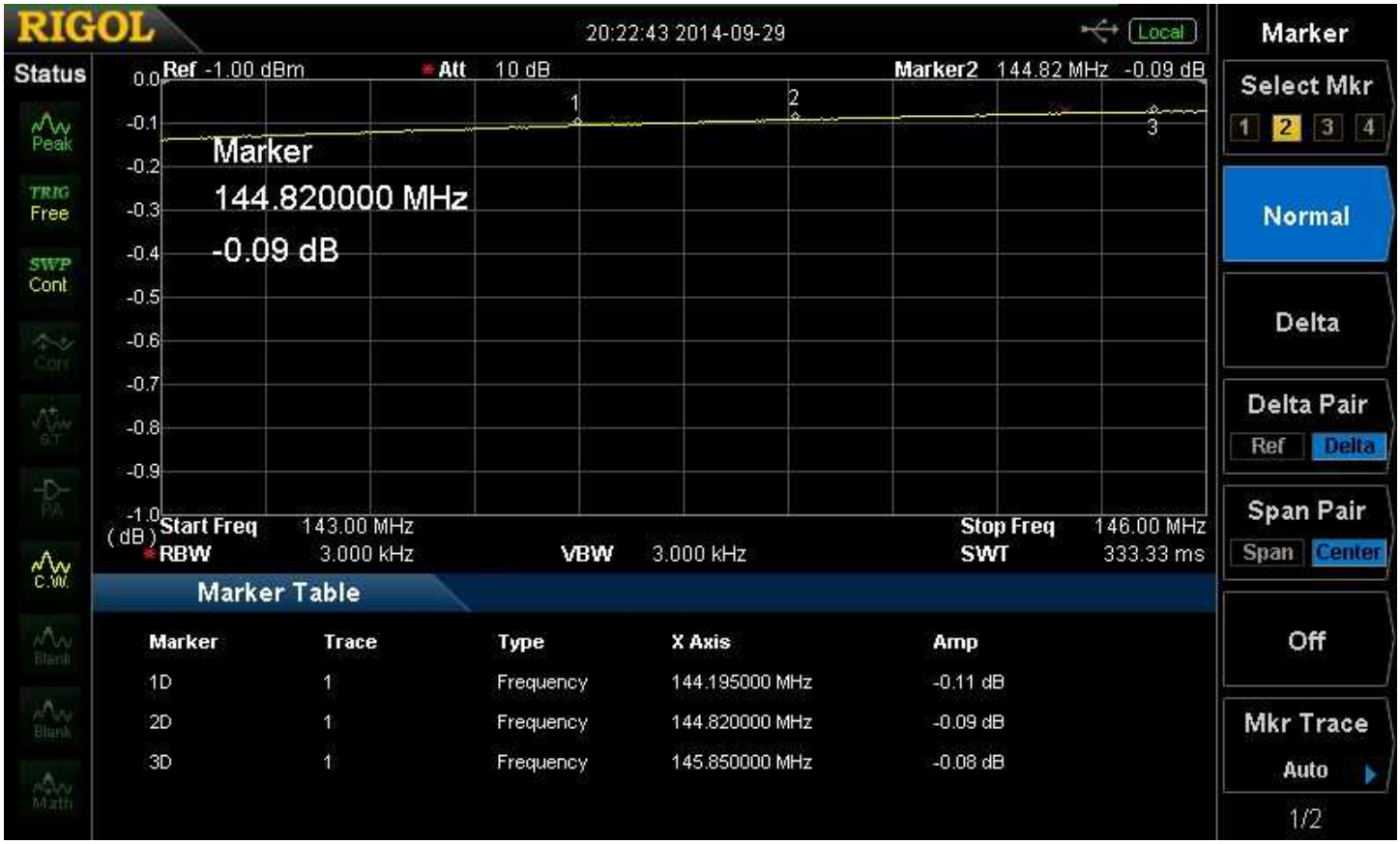


Transfer loss from ANT1 to COM port with the compensation coil and shielding

(**50MHz = 0.00dB!!**)



144MHz ANT2 to com isolation is about -40dB



144MHz ANT1 to COM transfer loss is about -0,11dB

Switch is usable at 144MHz too, but only as switch between antennas! The isolation between ports is small (-40dB) so I do not recommend this switch as TX/RX relay, especially in case of switching high power. Or you have to use another separate small switch before the RX port to short the RX input to the ground during transmit.

All HF measurements were done by N2PK VNA. 144MHz measurements were done by RIGOL DSA815TG spectrum analyzer with the tracking generator.

Karel Odehnal, OK2ZI October 2014