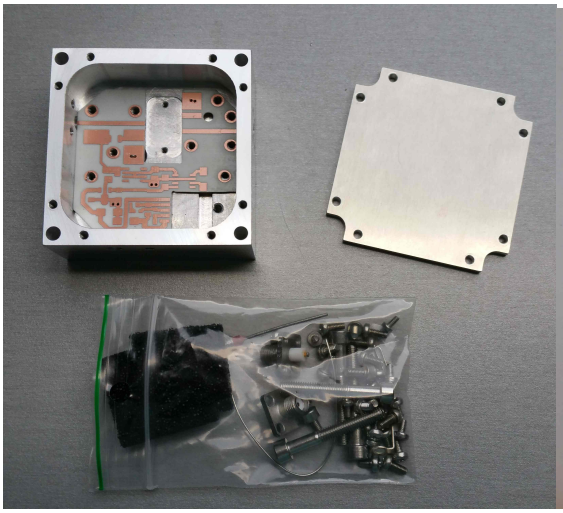
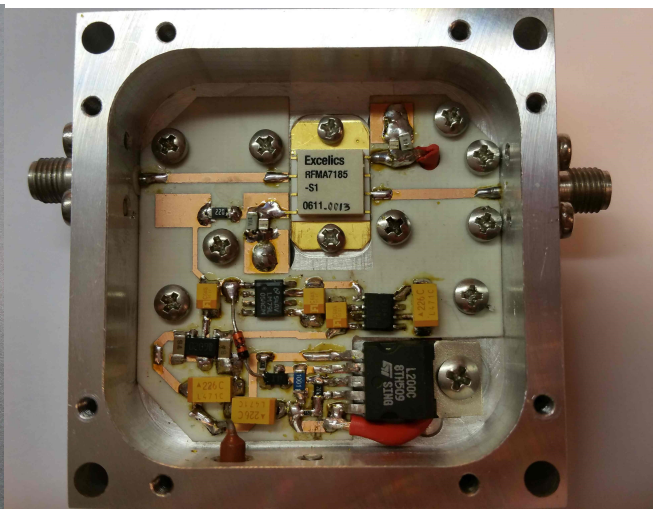
1Watt RF Amplifier for 10GHz

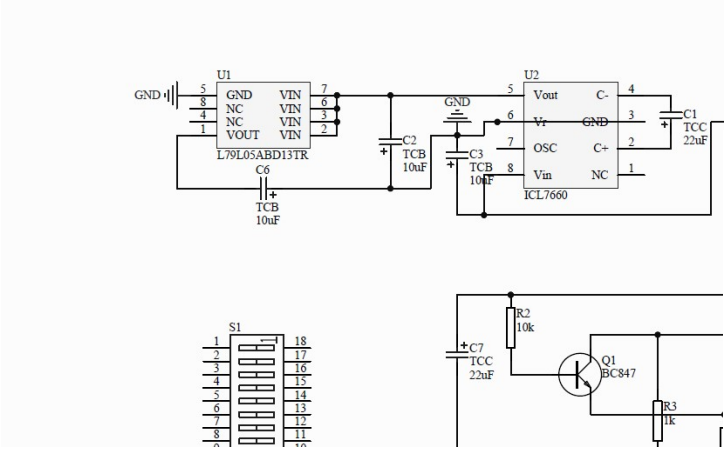
In order to raise the RF output power of my 10GHz portable station I bought an MMIC type RFMA7185 from RF Microwave (Italy).

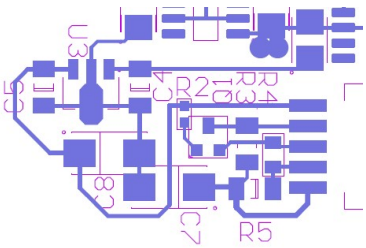
For the various components, I opt for a complete kit of Bert, PE1RKI





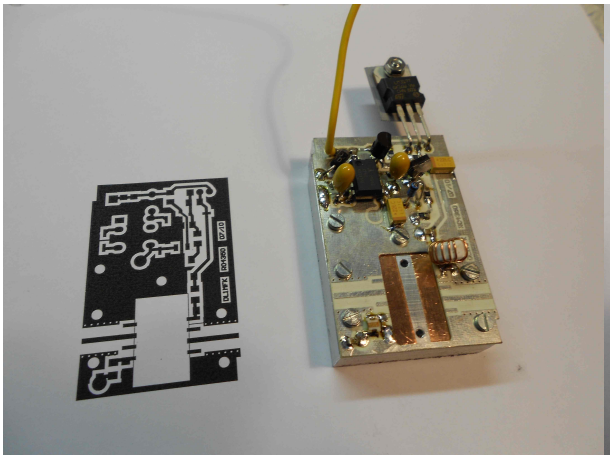
The kit is mechanical very nice and complete with all the electrical components.
After installation of all the components the two supply voltages for the MMIC are checked for correct and then the MMIC was installed.
With 12Vdc a current of approximately 1 Amp confirms the MMIC is correctly installed.

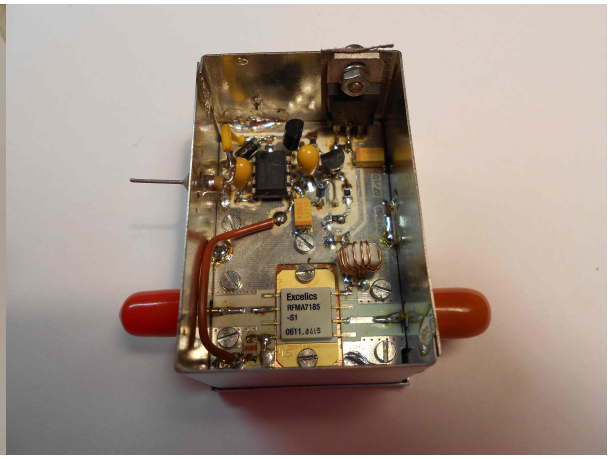


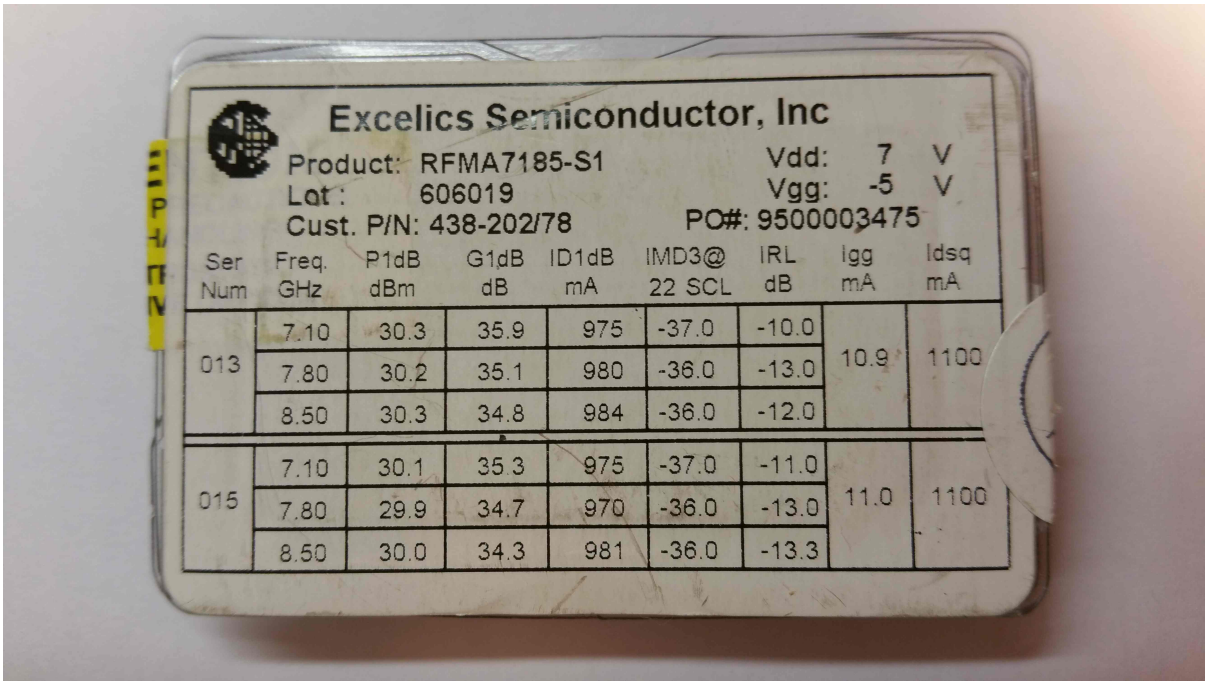


After initial testing an easy 800mW output was found with 4.5mW input.
The decouping of the main supply voltage was not quite correct and solved by adding a copperstrip to the housing.

Using the same MMIC, I also constructed the same SSPA with a PCB from DL3MFK.
No further components were delivered and had to be collected from the local electronics shop.
The final results were identical to the version of PE1RKI.







Ser Num	Freq. GHz	P1dB dBm	G1dB dB	ID1dB mA	IMD3@ 22 SCL	IRL dB	Igg mA	Idsq mA
013	7.10	30.3	35.9	975	-37.0	-10.0	10.9	1100
	7.80	30.2	35.1	980	-36.0	-13.0		
	8.50	30.3	34.8	984	-36.0	-12.0		
015	7.10	30.1	35.3	975	-37.0	-11.0	11.0	1100
	7.80	29.9	34.7	970	-36.0	-13.0		
	8.50	30.0	34.3	981	-36.0	-13.3		