

# OK1FPC's microwave shop transverters, power amplifiers and other parts [3/2026]

Ales Jehlicka



[ok1fpc@seznam.cz](mailto:ok1fpc@seznam.cz)

(if address isn't working you can ask [ok1teh@seznam.cz](mailto:ok1teh@seznam.cz))

OK1FPC's post address:

**Ales Jehlicka**  
**Nemcice 35**  
**280 02 Nemcice**  
**Czech Republic**

## The introduction – how to purchase, how to pay

Ales, OK1FPC decided to help boosting local activity on 23cm & UP (especially on 10 GHz for RS) with **as cheap as possible** transverters and solid state power amplifiers. He has for sale transverters for 1296, 3400, 5760 and 10368 MHz, IF 2m or 70cm (on demand). Transverters has similar construction to Kuhne's G2 version, LO around 106,5 (103,5) MHz isn't included but it's designed for direct connection of Leo's Bodnar low jitter GPSDO (eobodnar.com) which is essential for microwave EME. It's also possible to ask Ales for external TCXO. Power output is around 300-500mW, noise figure around 1,0 dB which means no additional LNA for tropo or RS operation is necessary! Ales doesn't want to sell kits. 23cm and 9cm transverter has new design and it's mixer parameters are equal to newest Kuhne/Alaris transverters. Each transverter is measured for power output, phase noise and noise figure at FPC's laboratory.

If you have any problem with transverter like burning out, you can deal with Ales for sending TRSV back for reparation. Price for one unit would be something over 310 Euros +- depends on the band, price can change accordingly therefore ask Ales for actual info. Important note, if you want to write to Ales about purchase, please always specify the requested IF frequency (2m or 70cm, on 23cm 28 MHz is possible too).

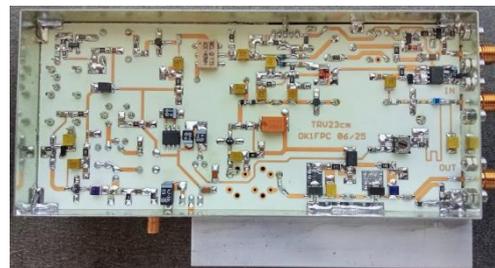
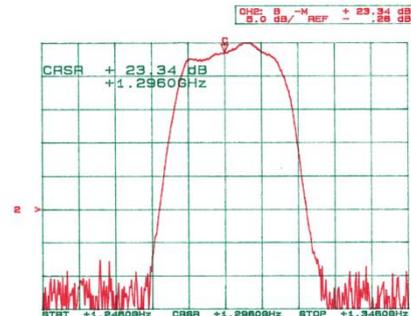
**Ales doesn't want to waste his time to making you full plug and play black-box with transverter and PA, you'll have to connect it yourself.**

Pay: via Paypal or via bank transfer, for more details please ask Ales via email

# Transverter for the 23 cm band

It is a simple transverter for the 1296MHz band with 2m or 28 MHz. The entire design is conceptually based on already well known G2 transverter from DB6NT with several modifications. The ratio of quality to price was decisive. Therefore, a crystal oscillator with J310 is used, but it is very noise-free and suitable for any operation. The main difference is the use of three-circuit ceramic filters from dielectric resonators, which will give the transverter the appropriate selectivity, on attached pictured on right is shown measurement on a scalar analyzer, which will be appreciated mainly by those who have interference from various radars. And a more powerful mixer 13dBm, which no longer overlocks and thus doesn't create additional interference on the band. This results in a very good suppression of unwanted products. For IF 28 MHz, the suppression of the local oscillator is better than 40dB and for 2m it is over 60dB.

The receiving part is protected by a shorting choke at the input against static electricity. The noise figure is around 0.8dB and the gain up to 23dB. The output power is up to 0,5W in P1dB. Linearly 200-300mW. Even 0dBm is enough to excite to maximum power when using the transverter output of some HF transceivers. But the input attenuator must be removed. A mechanical relay is used at the IF input instead of a PIN diode, which was often the biggest problem with malfunctions when a lot of power was applied to the input. During reception, the relay is closed, which guarantees that even when the power is turned off, the transverter will be protected by the load resistor. PTT control is either against ground or via the +5-12V IF cable.



## Specifications

Type	TRV 1296 MHz G1
Frequency range	1296 - 1298 MHz amateur radio band
IF-Frequency range	2m or 10m band (28MHz) – on demand
IF input power	max. 3 W can be tuned
RX-Gain	min. 23 dB can be tuned
Noise figure	max. 0.8 dB NF
TX-Output power	0.5 W RF
Operating voltage	+12...14 V DC approx 1 A @ TX
Dimensions mm	120x55x32mm without heatsink + SMA's
Coaxial connectors	SMA-female

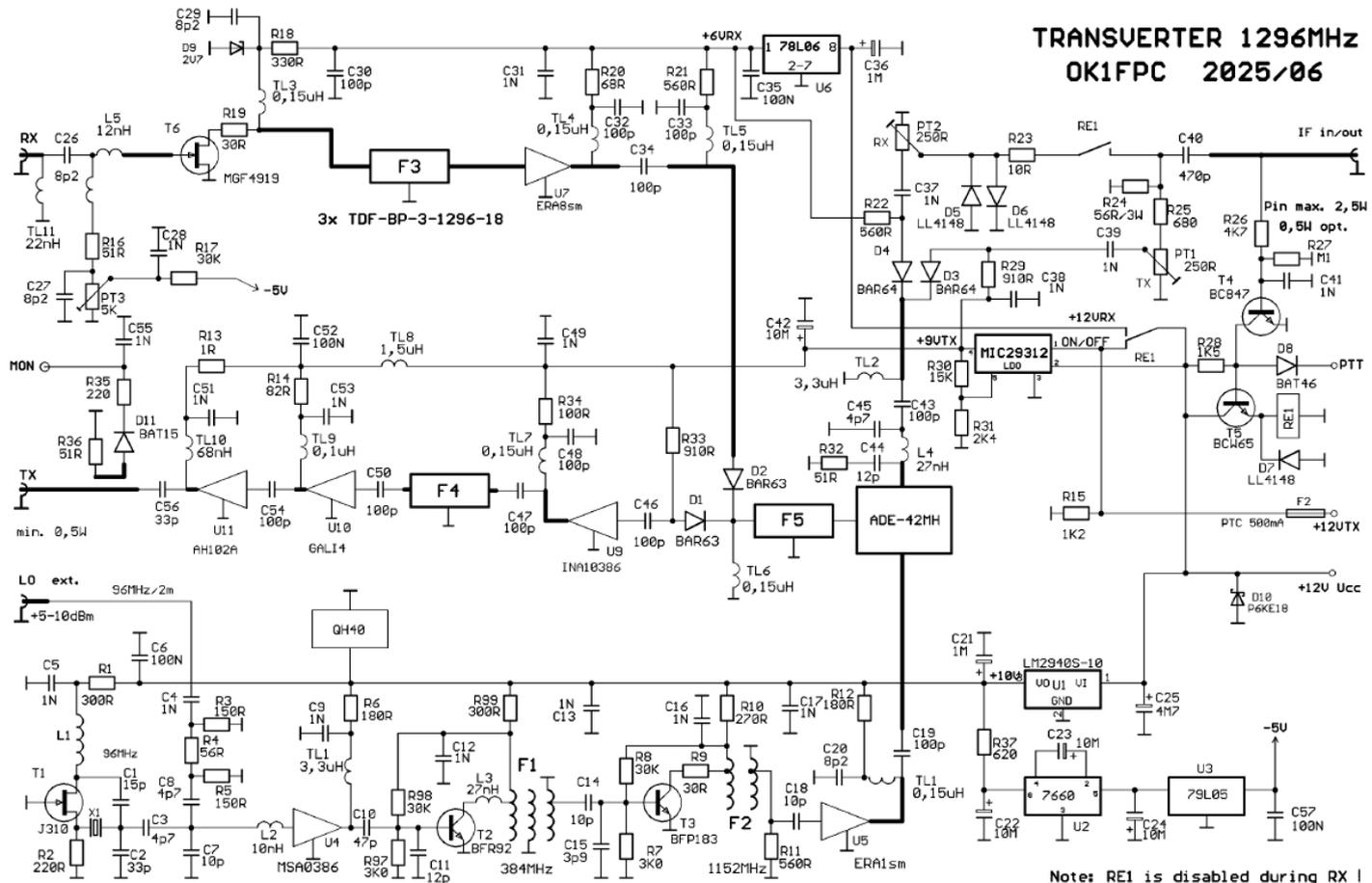
## Price

**310 Eur** without internal LO  
(340 Eur with internal LO with QH40)



Transverter with 28...30 MHz IF = external interdigital filter necessary

# Transverter for the 23 cm band – full diagram



# Transverters for 9cm and 6cm band

Two 9 cm / 6cm Transverters were developed using of modern components, with outstanding technical specifications despite their small mechanical dimensions. The circuits are implemented using MMICs, Helical-filters and ring mixers in SMD. The Transverter-version with 144 MHz IF uses silver tuned high Q cavity resonators for selection. With the version with 432 MHz IF a multipolar stripline filter is used. These modules are suitable for the setting up of a small portable station as well as a basic transverter for a high performance home station. With the power amplifier FPC 4W the power can be increased to 4,5 Watts RF Power.



## Specifications

**Type**  
**Frequency range RF**  
**Frequency range IF**  
**2 m IF input power**  
**RX - Gain**  
**Noise figure**  
**TX - Output power**  
**Operating voltage**  
**Dimensions mm**  
**Coaxial connectors**  
**Case**

**TRV 9 CM G2**  
3400 - 3402 MHz  
2m or 70cm (on demand)  
max. 3 Watt adjustable  
min. 20 dB adjustable  
max. 0.9 dB NF  
min. 0.3 Watt RF  
+12 - 14 V DC <0.4 A @ TX  
147 x 55 x 32 without connectors  
SMA-female  
silver case

**Price**

**310 Eur** without internal LO  
(340 Eur with internal LO + QH40)

## Specifications

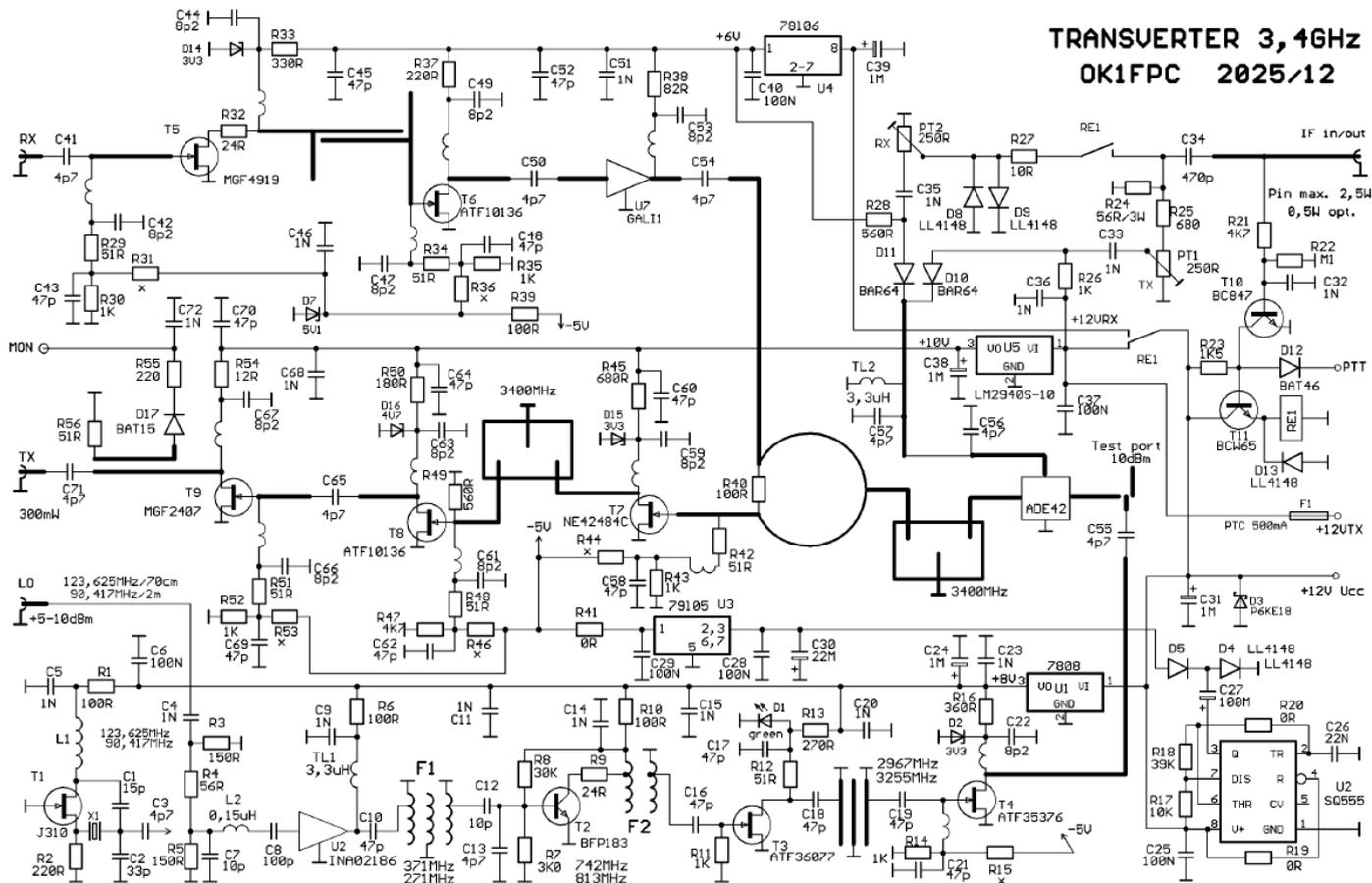
**Type**  
**Frequency range RF**  
**Frequency range IF**  
**70 cm IF input power**  
**RX - Gain**  
**Noise figure**  
**TX - Output power**  
**Operating voltage**  
**Dimensions mm**  
**Coaxial connectors**  
**Case**

**TRV 6 CM G2**  
5760 - 5762 MHz  
2m or 70cm (on demand)  
max. 3 Watt adjustable  
min. 20 dB adjustable  
max. 0.9 dB NF  
min. 0.3 Watt RF  
+12 - 14 V DC <0.4 A @ TX  
147 x 55 x 32 without connectors  
SMA-female  
silver case

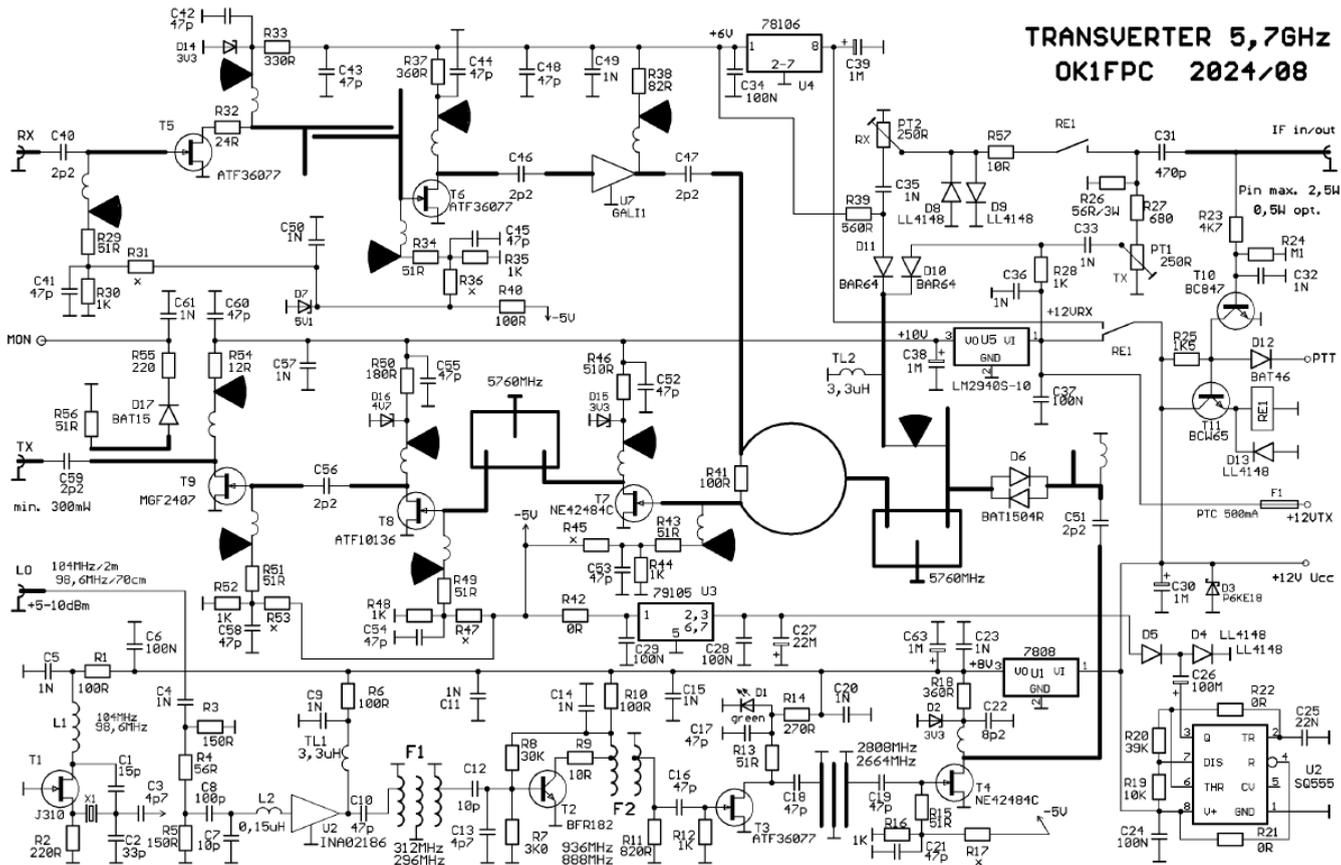
**Price**

**310 Eur** without internal LO  
(340 Eur with internal LO + QH40)

# Transverter for the 9 cm band – full diagram



# Transverter for the 6 cm band – full diagram



# Transverter for the 3 cm band

This transverter with its outstanding specifications is the result of circuit design using state of the art components. The module is useful for a high performance EME-station, but due to its small mechanical dimensions, may also be used for portable operations.

Attention: transceivers like TS2000, FT847, FT897, IC7300 suffers from initials power peaks which can destroy transverter input. Therefore you should consider use some 8dB IF power attenuators.

This transverter with 4,5W SSPA was used by OM4EX for his first Q65 EME QSO!

## Specifications

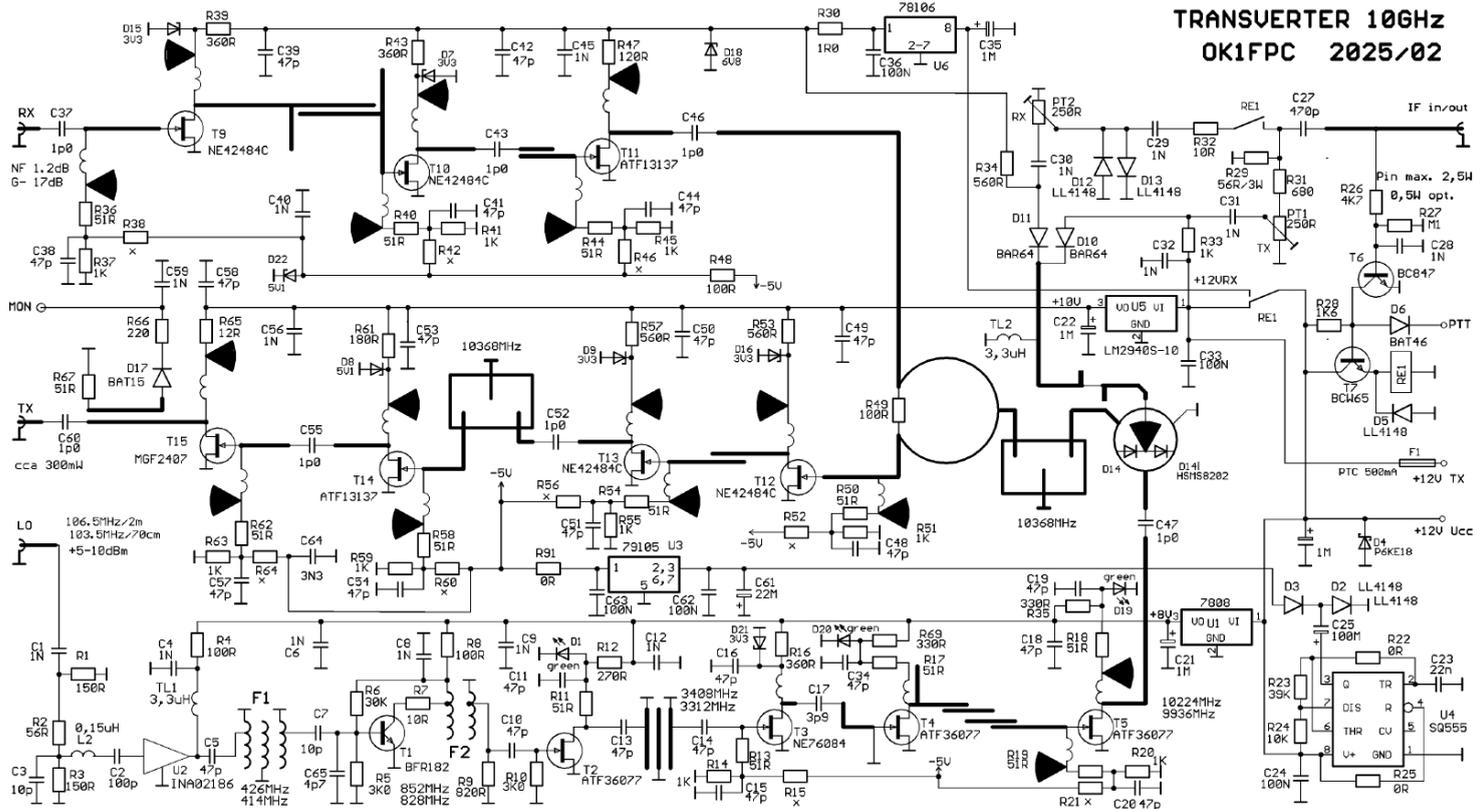
<b>Type</b>	<b>MKU 10 G2</b>
<b>Frequency range RF</b>	10368 - 10370 MHz (JA band on demand)
<b>Frequency range IF 2m / 70cm</b>	2m or 70cm (on demand)
<b>Input power</b>	max. 3 Watt (be careful with TRX ALC!)
<b>RX-Gain</b>	typ. 20 dB - can be tuned
<b>Noise figure</b>	typ. 1.2 dB NF
<b>TX-Output power</b>	min. 300 mW RF
<b>Spurious frequency suppression</b>	min. 40 dB, typ. 50 dB
<b>Harmonic wave suppression</b>	typ. 30 dB
<b>OCHO can be coupled in</b>	106.5 MHz / 1 mW or 103.5 MHz
<b>PTT input</b>	via IF-cable or contact to ground
<b>12 V - output</b>	max. 0.6 A
<b>Monitor output</b>	output power monitoring approx. +1.2 V out (it's written on each box)
<b>Operating voltage</b>	+12...14 V DC typ. 350 mA/TX
<b>Dimensions mm</b>	147 x 55 x 32 without connectors SMA-female
<b>Coaxial connectors</b>	

## Price

**320 Eur** without internal LO

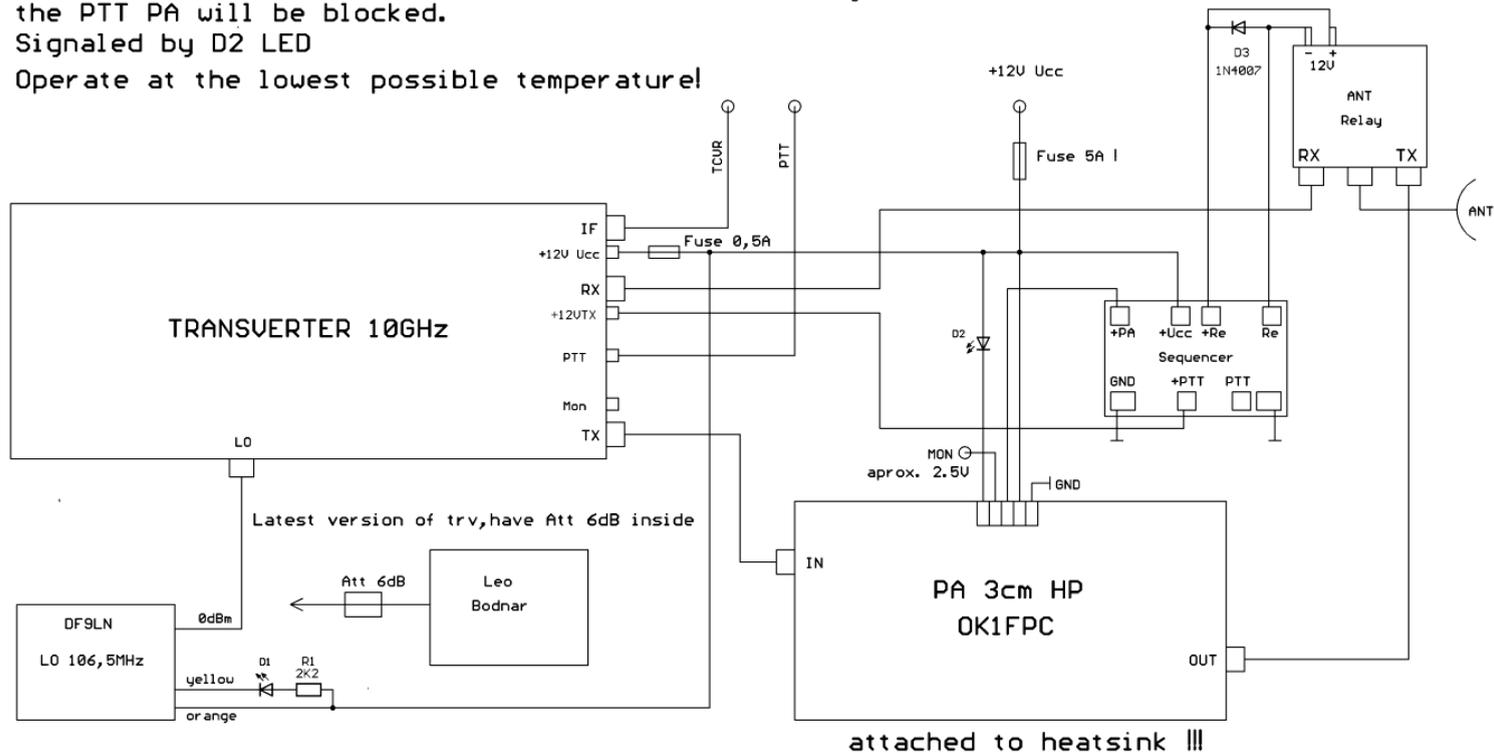


# Transverter for the 3 cm band – full diagram



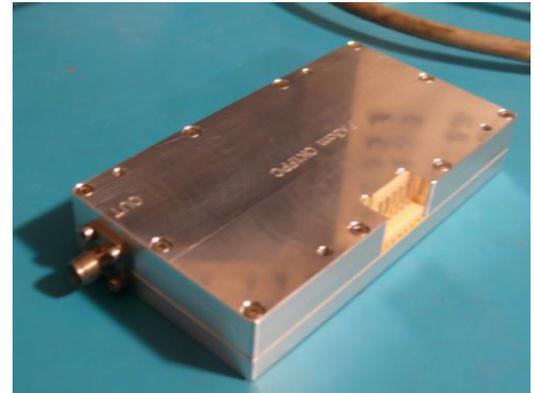
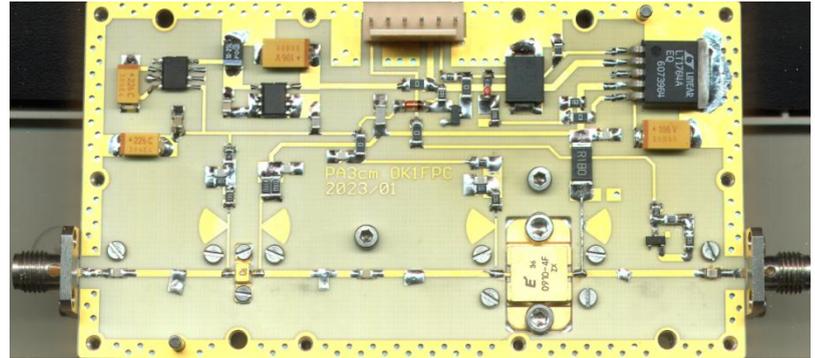
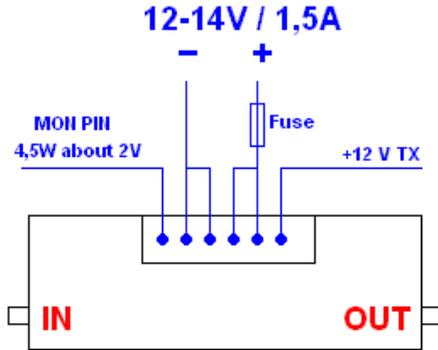
When the temperature exceeds +55 degrees,  
the PTT PA will be blocked.  
Signaled by D2 LED  
Operate at the lowest possible temperature!

### TRU and SSPA by OK1FPC



# Linear Power Amplifier for 3,4 / 5,7 / 10 GHz – 4,5W OUT

12V SSPA, full power 4,5W (with 1dB compression) with 1,6 A, robust milled aluminum case, dimensions: 10,0 x 15,3 x 1,7cm, 2<sup>nd</sup> part of controlling connector is included for free. Attention, PA doesn't contain temperature sensor, due to its low efficiency good heatsink and cooling is mandatory! Otherwise said on damage caused by temperature you can't apply Warranty. **Price 390 Eur**



# High power Linear Power Amplifiers for 10 GHz

Ales has currently for sale more power amplifiers version for 9+6+3cm, all are designed to be connected with FPC's transverters. Smaller (older) one with 4,5W output (on 9/6/3cm). Bigger 10 GHz version for 9W output on 3cm (all powers are noted with 1dB compression). Ales is actually finishing 13W version (same case). All power amplifiers are for sale in professionally milled Al case. The don't have circulator or isolator however at 9 and 13W version has thermal protection. Input/outputs on SMA. For more actual details please ask to Ales.



## Specifications

**Type**  
**Center frequency**  
**Input power**  
**Output power**  
**Operating voltage**  
**Current consumption**  
**Dimensions mm**  
**Case**  
**Coaxial connectors**  
**Coaxial connectors**  
**PTT-Circuit incl.**  
**Temperature range**

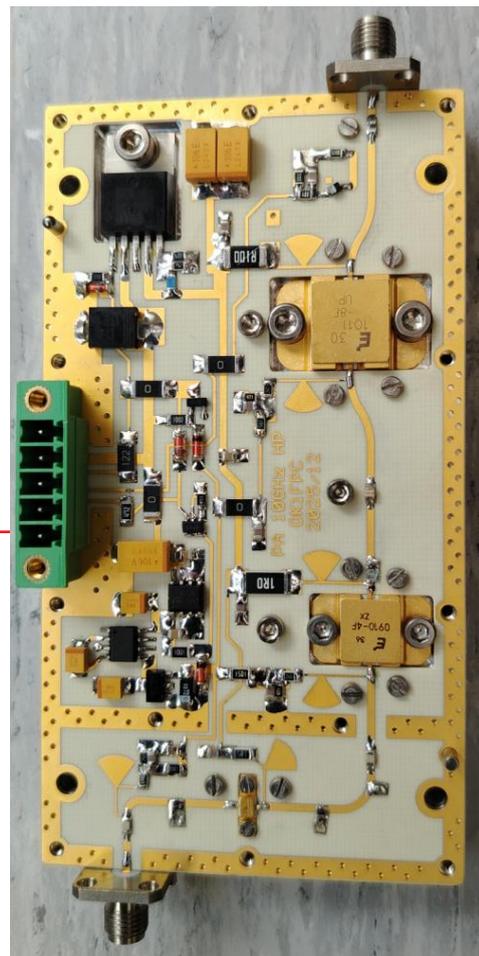
**PA 10G**  
10368 MHz  
max. 200 mW  
**typ. 8 Watts**  
+ 12 V DC  
typ. 3,5 A  
110 x 60 x 21  
milled aluminium case  
SMA -female  
SMA -female  
+ 12 V @ TX  
-20 ... + 55°C Case temperature

**PA 10G HP**  
10368 MHz  
tmax. 200 mW  
**typ. 12 Watts**  
+ 12 V DC  
typ. 6,5 A  
110 x 60 x 21  
milled aluminium case  
SMA-female  
SMA-female  
+ 12 V @ TX  
-20 ... + 55°C case temperature

**Price**

**600 Eur**

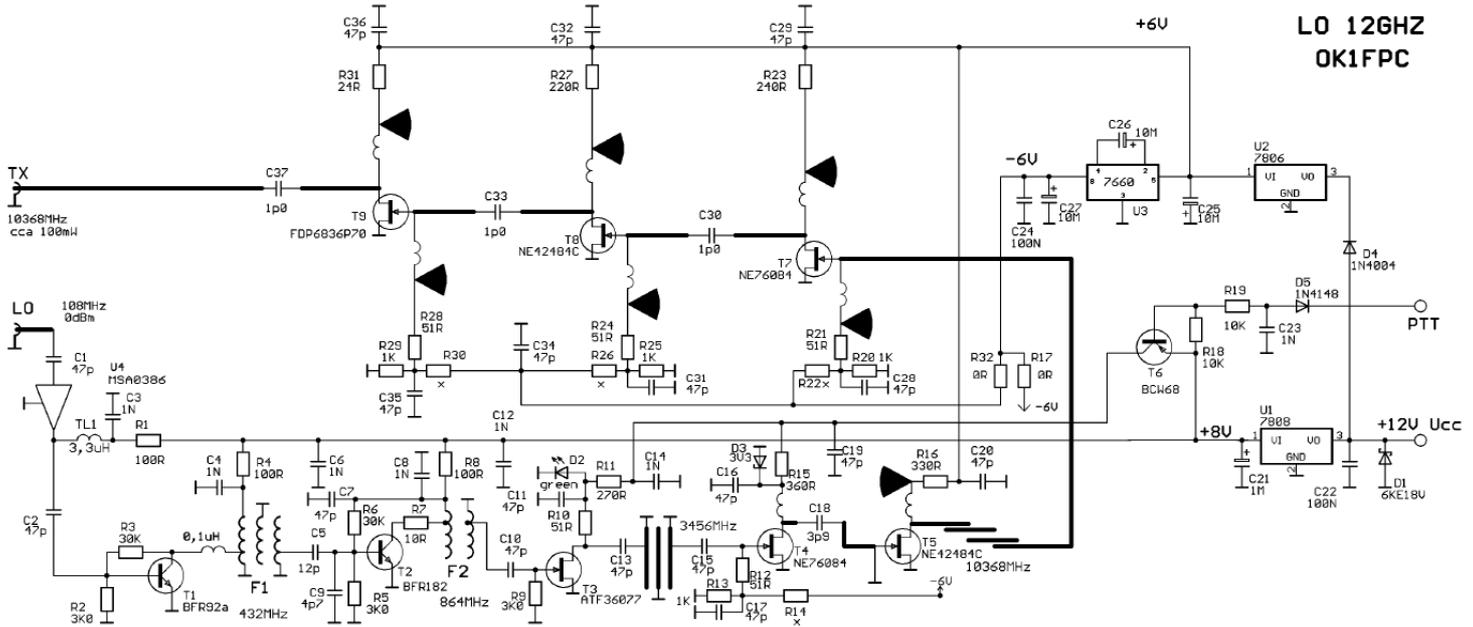
**650 Eur**



# Local oscillator - 96x multiplier

This is 96x multiplier (9-15 GHz on demand) is perfectly suitable for LO of DB6NT's 24/47/76 GHz transverter or further multipliers like CMA 382400. It's delivering about 100mW on 10 GHz and can be used as beacon too. It's designed to be driven by GPSDO from Leo Bodnar or DF9LN's OCXO.

Price 120 Eur



## **Preamplifiers and further accessories:**

Ales doesn't want to make LNAs at the moment, he produced limited serie of 3cm 1dB NF LNAs but if there is a interested, he can make some. Ales has for sale also tuned SMA to WR90 transitions. He has also for sale 96x multiplier working up to 15 GHz so you can use it to connect Leo Bodnar's GPSDO to you 24/47/76 GHz transverter, more details via email.

## **Laboratory possibilities:**

If you need any measurements, Ales has fully equipped laboratory with Noise Figure, Power, SWR, scalar, VNA and other possibilities up to 76 GHz.

**...more pictures of transverters and PAs at next pages ->**

**TRANSVERTER 23cm**  
**OK1FPC**

+12V

IF

+12V TX

RX

Ptt

TX

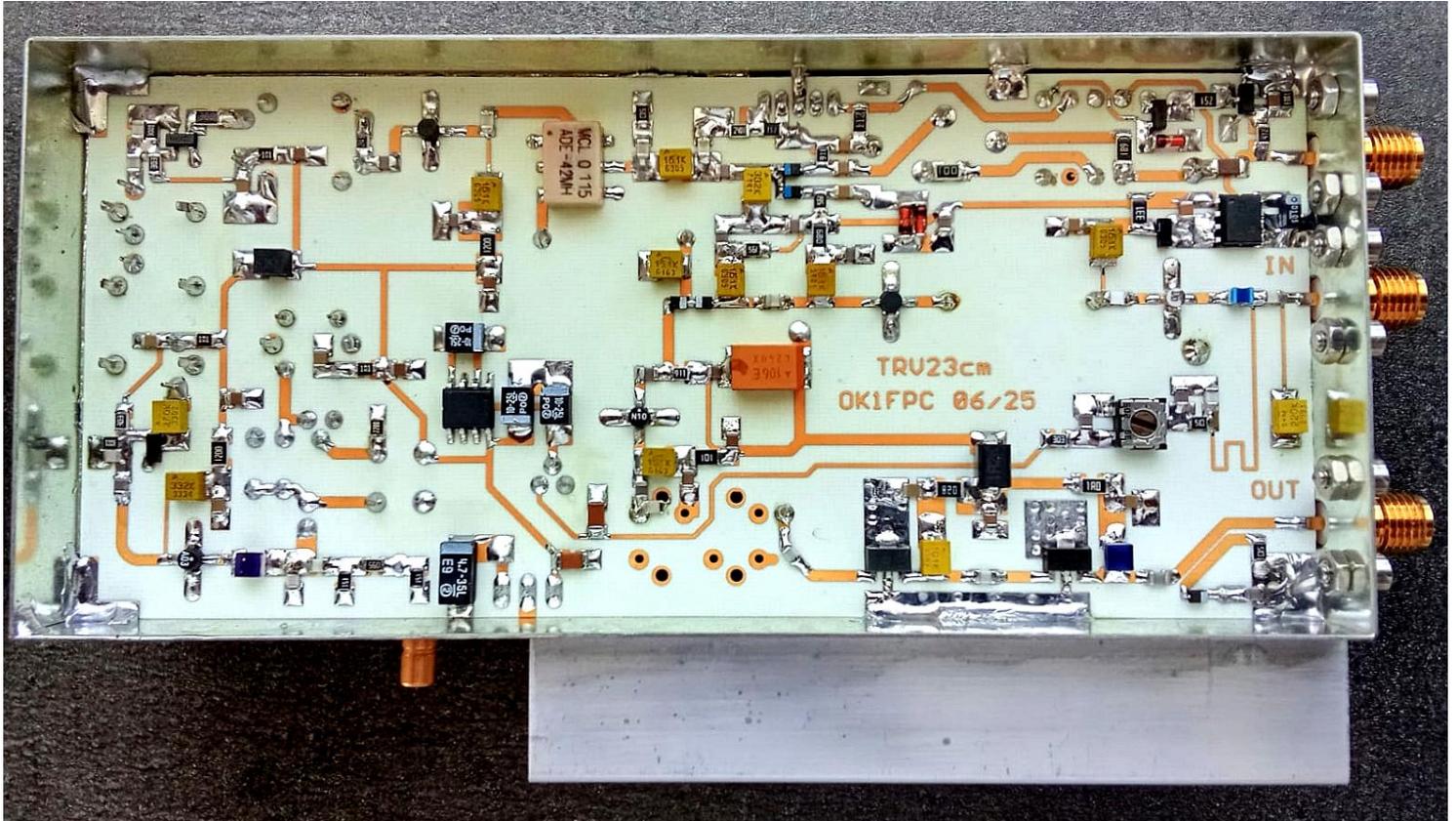
MON







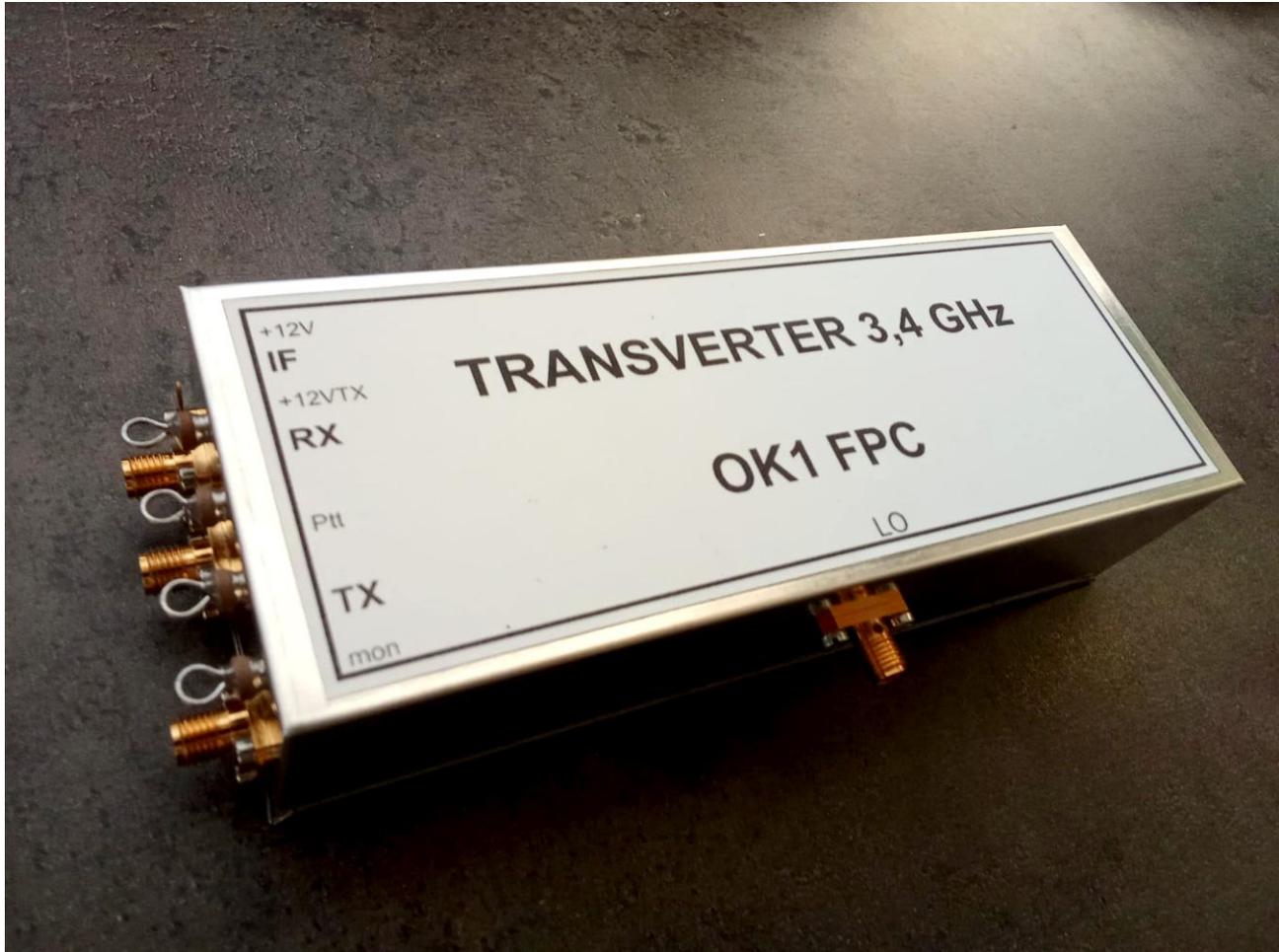
# Transverter for the 23 cm band



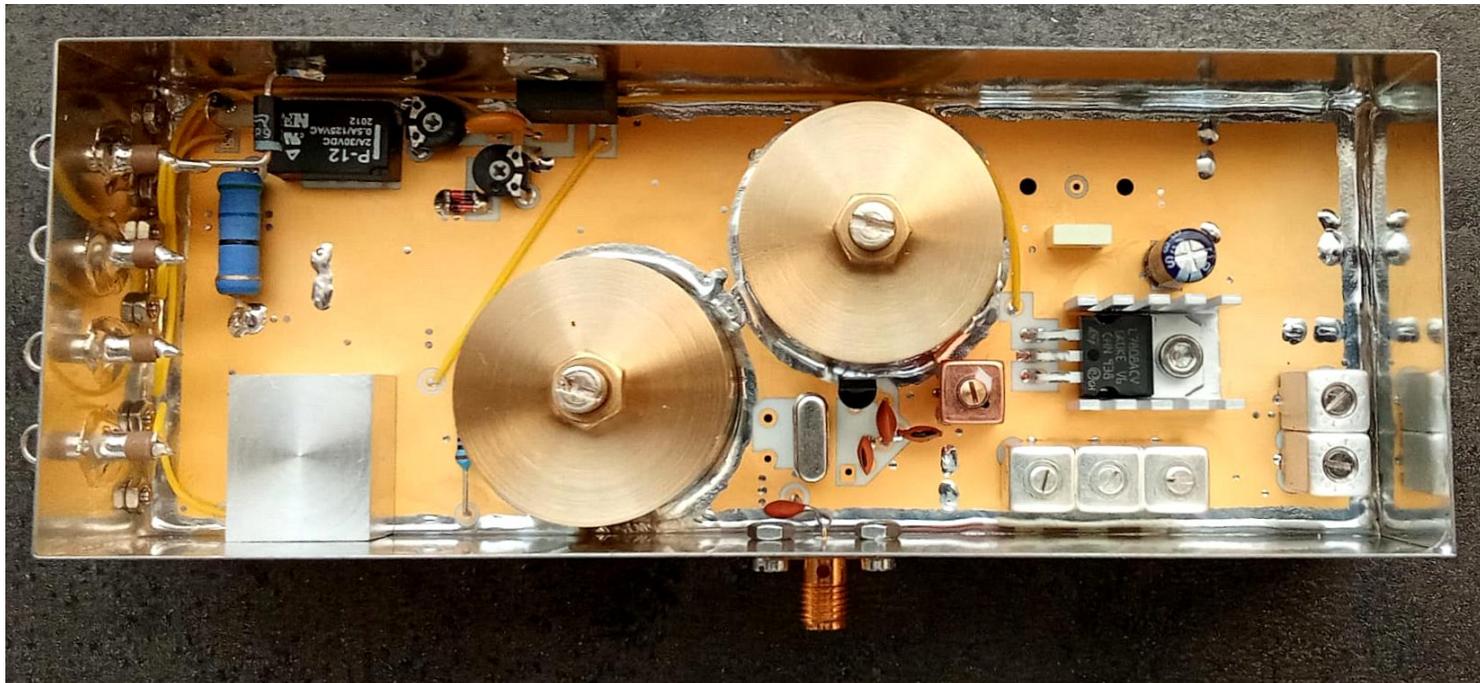
CH2: B -M + 23.34 dB  
5.0 dB/ REF - .28 dB



## Transverter for the 9 cm band



# Transverter for the 9 cm band

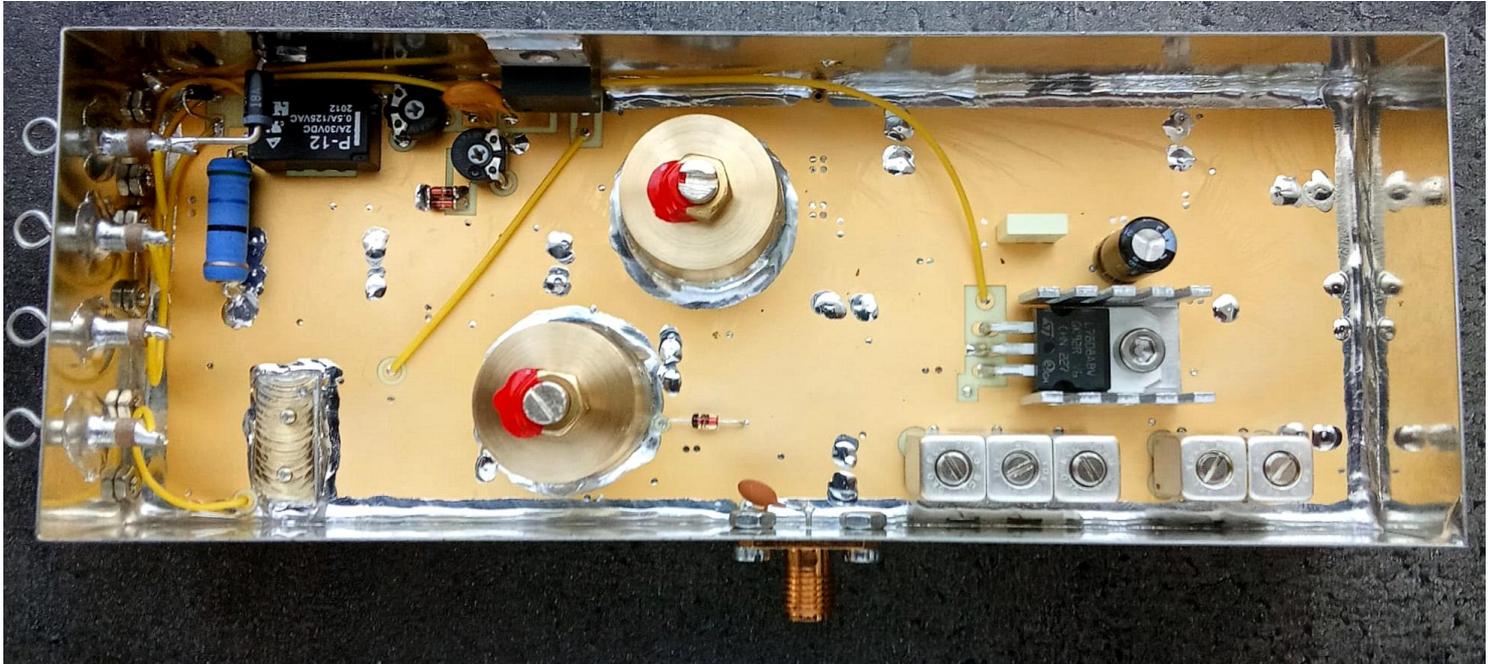




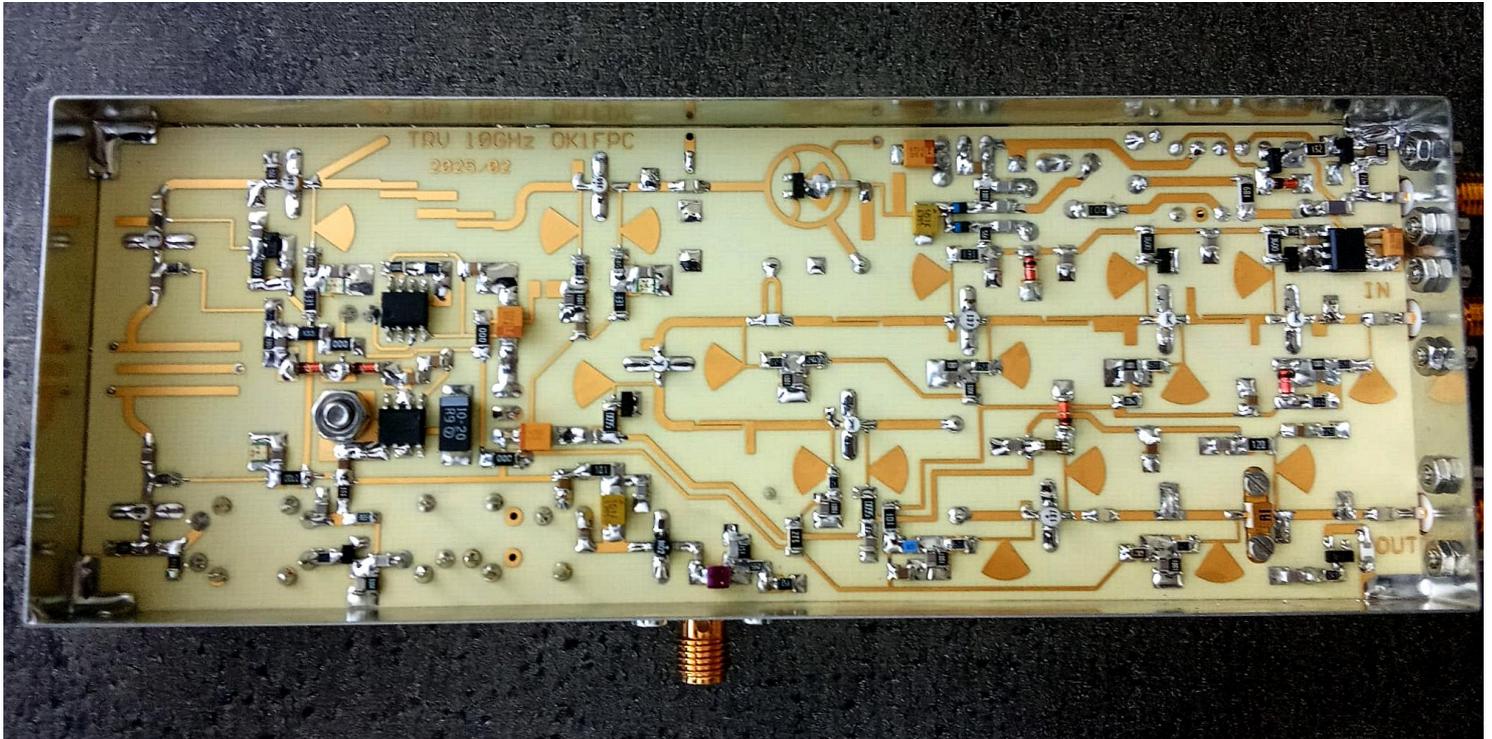
## Transverter for the 3 cm band



# Transverter for the 3 cm band



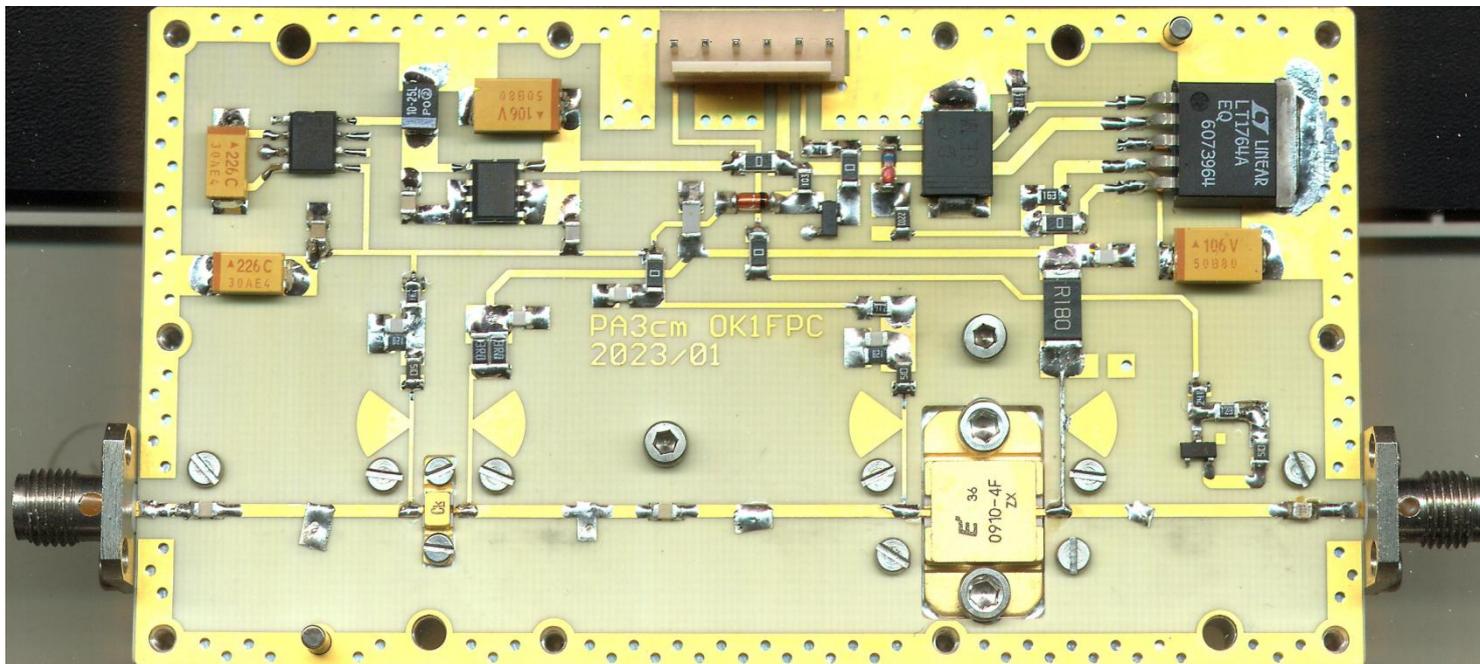
# Transverter for the 3 cm band



# Solid State Amplifier for 10 GHz – 4,5W out



# Solid State Amplifier for 10 GHz – 4,5W out



# Solid State Amplifier for 10 GHz – 12W out





# 96x frequency multiplier 12 GHz



FREQUENCY MULTIPLIER 12 GHz

OK1FPC

Opt.  
LP

OUT

+12V DC  
IN

# 96x frequency multiplier 12 GHz



# 96x frequency multiplier 12 GHz

