

4M Hi Gain Amplifier 65W PEP

A very high gain amplifier, designed for use with Low RF power 4M (70-72MHz) transmission equipment, like software defined radio sets and/or frequency up/down converters. It is a complete working product, easy to use and boxed in a very solid brushed aluminium enclosure. This amplifier is designed for high linearity for use with all types of modulation used on this frequency band.

Features:

- Designed for 12V or 13.8V operation (with Anderson power connector with DC loop through)
- Rock solid brushed aluminium enclosure with large heat sink
- Small dimensions L160 x W85 x H105 (mm) L = 195mm incl. connectors.
- Build-in input and output relays
- Build-in relay sequencer board, PTT operated
- Build-in Low Pass Filter
- Only 10dBm (=10mW) required for 65W PEP
- Receive loop through, when PTT is not active
- High linearity, supports SSB and digital modes
- VSWR mismatch protected
- All ATC-B & microwave capacitors on RF-circuit.

ELECTRICAL SPECIFICATIONS (Base Plate T. = 45 °C, 50Ω loaded, Vdd = 13.8 V idq=1000ma)

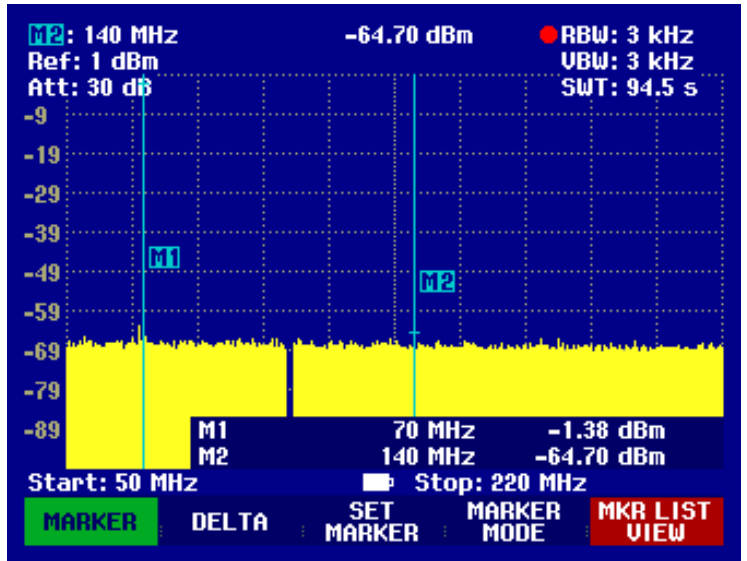
Characteristics	Min	Typ	Max	
Operating Frequency Range	69		72	Mhz
Power Output	60	65		W
Power Input	10			dBm
Power Gain	36			dB
Drain Efficiency (Load 50Ω)	50	55		%
Input VSWR			1.8	
Insertion Phase Variation (Unit to Unit)		< 10		degrees
Power Gain Variation (Unit to Unit)		+/- 1		dB
F2 Second Harmonic suppression (140MHz)	-62	-70		dB
F3 Third Harmonic suppression (210MHz)	-66			dB

ABSOLUTE MAXIMUM RATING (T case = 70 °C.)

Symbol	Parameter	Value	Unit
Vs	Voltage	16	V DC
	RF input	250	mW
Is	DC Current	10	A dc
VSWR	Load Mismatch (all phase angles, Tc=45°C)	65:1	
Tstg	Storage Temperature Range	-20 / +70	°C
Tc	Operating Temperature	65	°C

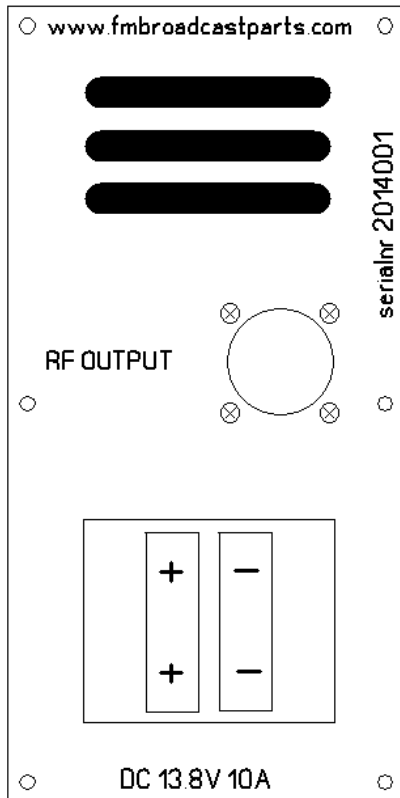
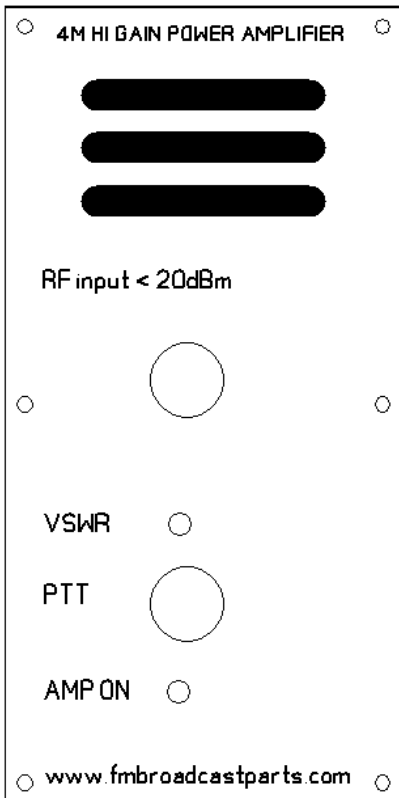
EXAMPLE OF MEASURED VALUES FROM ONE AMPLIFIER* 13.8V operation

MHZ	P input	P output	Ampère
70	10dBm	62W	8.8
71	10dBm	65W	8.6
72	10dBm	62W	8.3



* The above data is purely indicative; Fmbroadcastparts is not responsible for changes in values

Connections



RF input = BNC Female maximum 20dBm

PTT switch = RCA connector, connect to ground for amplifier on, open = amplifier off, receive loopthrough.

RF output = N connector female to arial / antenna

DC input via Anderson power connector, input is a loop through up to 30A DC. Amplifier is internally limited to 10A by Fast Fuse.

Product and environmental safety - toxic materials

The RF Power Mosfet Transistor contains beryllium oxide. The product is entirely safe provided that the BeO disc is not damaged. All persons who handle, use or dispose of this product should be aware of its nature and of the necessary safety precautions. After use, dispose of as chemical or special waste according to the regulations applying at the location of the user. It must never be thrown out with the general or domestic waste. **WARNING! BERYLLIUM OXIDE IS DEADLY**

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