

HIGH GAIN WIDEBAND 35W PALLET AMPLIFIER (30-63V)

Manual

IMPORTANT NOTE

- Upon receiving your order inspect the packaging material and unit for any damage. Any damage should be reported immediately at the time of delivery so we can make a claim with the shipping company. Take photos and have delivery personnel fill out a report and sign it, these can be used as proof.

IMPORTANT! Before you power up an amplifier/transmitter please first make sure that the drive power is set correctly and does not exceed absolute maximum (for amplifier). Also ensure proper heat dissipation and do not exceed rated maximum supply voltage. Make sure all fans are running (they could be damaged during transit).

- Mains cables are typically not included with our mains power supplies and units. Since these cables vary from country to country and we had trouble finding the exact type we decided against including them, especially since finding them is so easy and cheap locally. They can be obtained in any radio/computer/hardware shop. It is the type used in your PC for mains power.

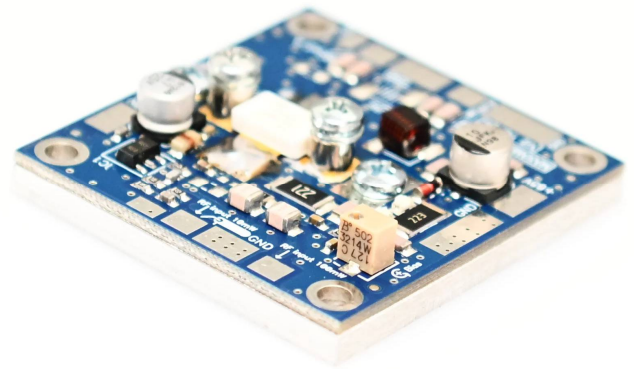
- Study local regulations and ensure you are always operating in compliance.

- Do not open the unit or attempt service yourself. Deadly mains voltage may be present inside. There are also high RF voltage points that can cause burns and discomfort if touched.

- Finally, never ever operate any transmitter or amplifier without a properly tuned antenna!

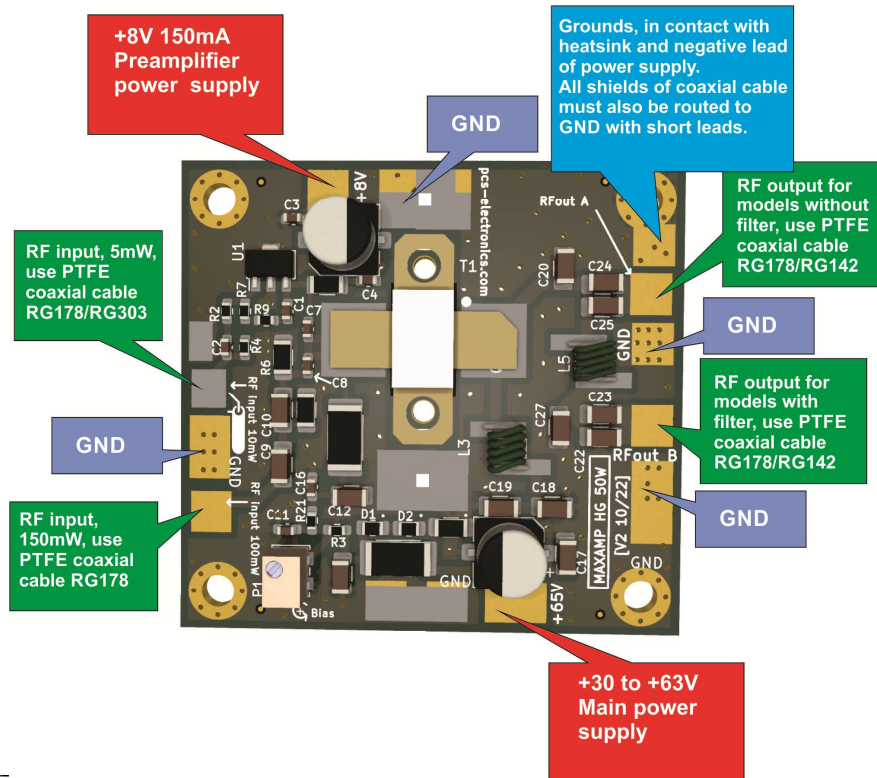
The 35W pallet has been designed for applications requiring low distortion, wideband response, and high gain. It can produce full output power from just a few milliwatts of drive power, a small VCO is already sufficient.

- 87,5-108MHz, will work from 80-250MHz with reduced power (ask for other bands)
- Max output power: >50W @100MHz @63V
- Rated output power: 35W
- Supply voltage/current: 30-63V DC, ~1,2A max
- Absolute maximum voltage: 65V (more will cause damage)
- Input: 50 ohm, SWR 2:1 max
- Output: 50 ohm
- Drive power required: 5-10mW (high gain model)
- No bias adjustment or tuning is necessary
- Size: 49x46mm, 20mm high with headroom
- NOTE: Version with LPF has reduced output power

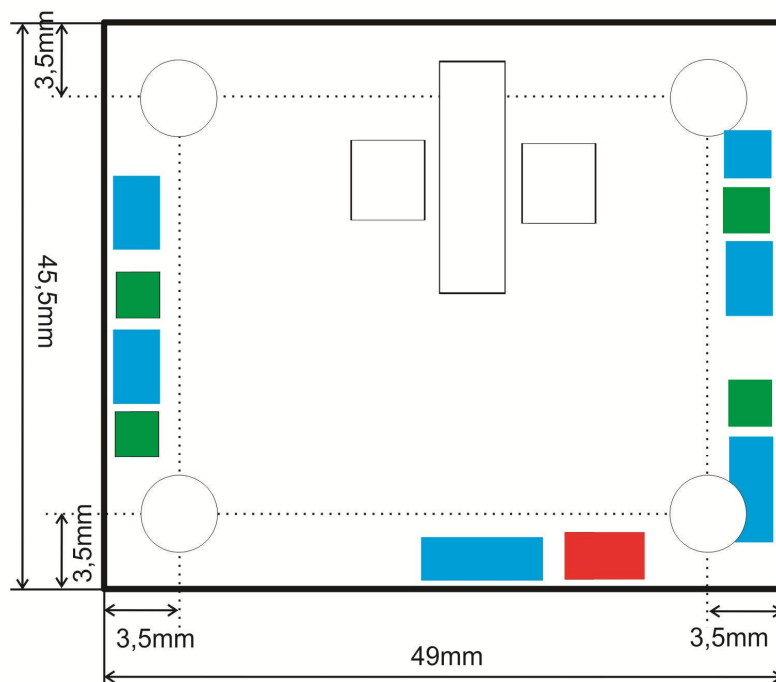


Dimensions: 49x46x20mm (LxWxH)

Specifications				
Parameter	Min	Typ	Max	Unit
Operating frequency range	80	100	250	MHz
Power input (high gain)	5	8	15	dBm
Input return loss		>-20		dB
Power gain (high gain model)		~35-40dB		dB
Supply voltage	30		63	V
Output power		35	50	W
Output power with LPF		30		W
Current draw		0.8@50V		A
Current draw (no drive)		~50		mA
F2 (no LPF)		-18		dB
F2 (with LPF)		-26		dB



Board layout and connections



Dimensions

Warning: Do not exceed maximum supply voltage of 63-65V or damage will occur to the on-board operational amplifier and final transistor.

Note 1: Please use PTFE coaxial cable for RF input (RG178 is perfect) and output (RG178 or RG142 are perfect) connections, this makes it possible to have very short leads without burning the coax. Keep the coax leads as short as possible (few mm at most). Also keep leads short on connectors, this N female flange for RG142 or .141 semirigid – easy install is perfect!

Note 2: A small heatsink is needed!

Revisions and errata

V1.0 (Dec 2023): Release version of new manual format

Please report any errors you see in this manual; you will be helping us and many other users out there.
Thank you.

Made in EU by PCS elektronik d.o.o.

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Model: HIGH GAIN 25W FM PALLET AMPLIFIER
