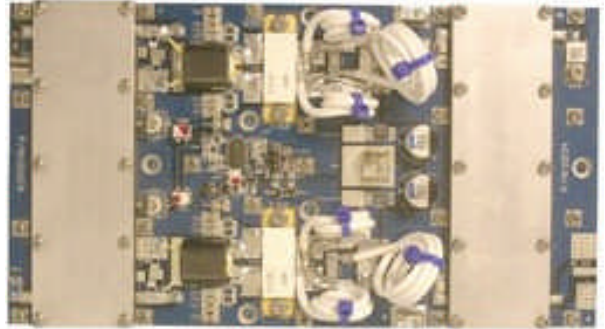




PP88-108-400 VHFTV – FMHD – 400W Solid State Broadband High Power Pallet Amplifier

The PP88-108-400 is a 400W pallet amplifier for the 88-108 MHz band. Superior performance is provided offering high gain, efficiency and power in a small pallet footprint using Gold MOSFET transistors available on the market today. Matched for 50 ohms input and output, the PP88-108-400 provides 19 dB typical Gain with NTSC Full-Field Red Power output in excess of 400 Watts at -54 dBc IMD operating at +32VDC.



Specifications (Vsupply=+28V Vdc, Idq=.8A,Freq=88-108MHz)				
Parameter	Min.	Typ	Max.	Unit
Frequency	88		108	MHz
Pout P1dB	400			Watts
Gain	18	19		dB
Gain Variation		± 1.0		dB
Power In		6	11	dBm
Drain Current		17		Amps
Efficiency	30	42		%
Input VSWR		1.2:1	1.5:1	
2 nd Harmonic		-30		dBc
3 rd Harmonic		-13		dBc
Baseplate Operating Temp.	0		+60	°C
Size	6.5" x 4" x 1.5"			

Features

- 400 Watts Pk-Synk @32V
- 19 dB Gain
- No circuit tuning or RF assembly
- Amplifier disable input
- Combined Aural/Visual Operation at full rated power

Maximum Ratings	
Parameter	Value
Input Voltage	+34 VDC
Bias Current	3.0 Amp
Drain Current	24 Amp
Load Mismatch	
All Phase angles,	5:1
Baseplate Temp	+60°C
Storage Temp	-40° - +105°C

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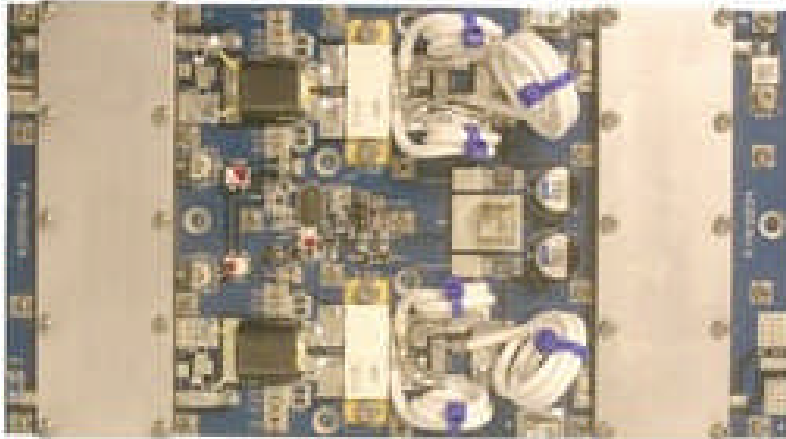
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PP88-108-400 VHFTV – FMHD – 400W Solid State Broadband High Power Pallet Amplifier

Reference Circuit

Reference circuit size (not to scale)



RF OUT

Tips for Mechanical Mounting:

- 1 All holes are clear for #6 Screw. Stainless Steel mounting hardware is recommended, grade 18-8 or better. A lock washer of same material should also be used.
- 2 Ensure mounting surface is flat to better than 0.003" / "
- 3 Use a thin layer of thermal compound on the backside of the PA - no more than 0.001" - 0.002" thickness!
- 4 Torque all screws to 10-12 in-lbs

Considerations for Mechanical Mounting:

Considerations for proper thermal design include

Total power dissipated = Total DC Power Consumed x (1-Efficiency)

Ambient Airflow

Thermal Resistance of Heat Sink

For this PA, typical DC efficiency is 40%. At 400W Pk power output, 200W Average, +32.0V DC operation, 544 total watts are consumed, which leaves 344W dissipated power. If we assume an input air temperature of +25°C, and a maximum desired baseplate temperature of 55°C, this leaves a temperature differential between baseplate and ambient air of 30°C. The desired thermal resistance for heatsink mounting surface to air is therefore $30^{\circ}\text{C}/344\text{W} = 0.09^{\circ}\text{C}/\text{W}$. Since the baseplate is aluminum, it is important to find a heat sink that is sized at the same outline as the PA which can give this thermal resistance. For example, a 230mm x 127mm heat sink with serrated fins, 70mm in length, (40 fins across 127mm dimension) with an air velocity of 4 m / s achieves this value.

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Solid State Broadband
High Power Pallet Amplifier

Revision History:	1/1/07	Data Sheet
Previous Versions:	-	
Page	Subjects (major changes since last revision)	
Rev. 2	Change Part Number	3/9/09

We Listen to your comments

If there is any information within this document that you feel is wrong, unclear or Missing, please give us your feedback as it will help us to continuously improve The quality of this document. Please send your suggestions (including a reference To this document) to:

Bob.Todd@PMTRF.com

To request other information please call 1-775-883-1122

Attention please:

The information herein is given to describe certain components and shall not be Considered as a guarantee of characteristics. Terms of delivery and rights to Technical change reserved.

For further information on technology, delivery terms, conditions and prices, please Contact the sales department at PMT headquarters at 1-775-883-1122

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