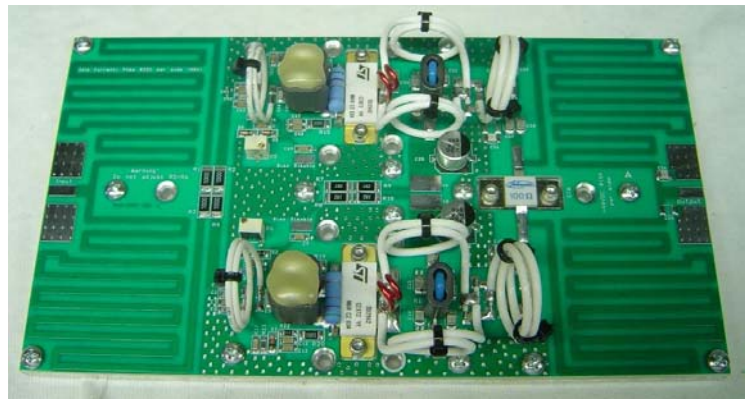


## Model FM700SX FM Pallet Amplifier Module

This amplifier module is ideal for driver and final output stages in analog and digital FM broadcast equipment.

- **86 – 110MHz**
- **48 Volts**
- **Input/output 50 ohms**
- **Pout: 700W minimum**
- **19dB Gain (700W)**
- **Class B**
- **SD2942 Devices**

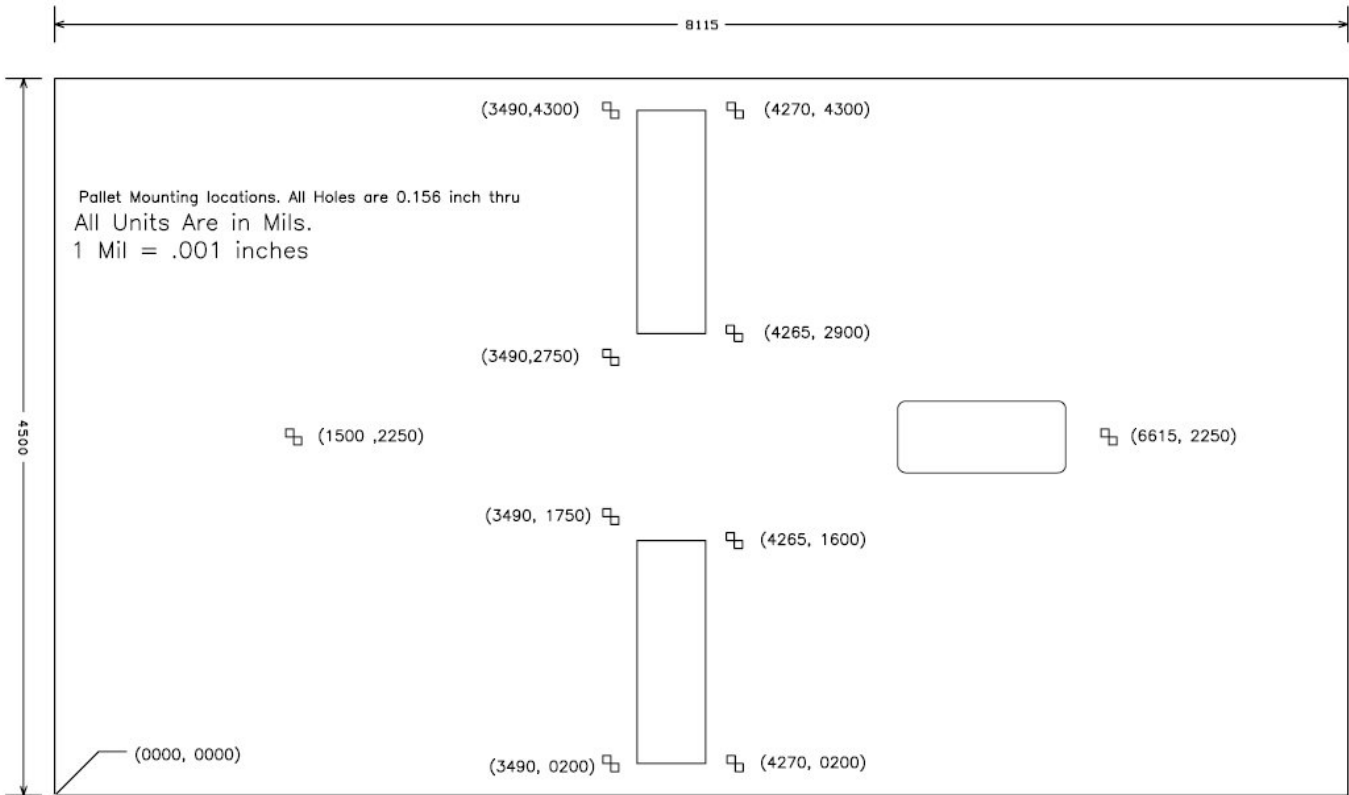


Dimension (L x W x H inch) [8.115" x 4.5" x 1.2"]

Absolute Maximum Ratings (T case = 25C)			
Symbol	Parameter	Value	Unit
Vs	Drain voltage supply	50	V DC
Is	Supply Current	24	A dc
VSWR	Load Mismatch (All phase angles, Id=22A, TC=+55C)	3 to 1	
Tstg	Storage temperature range	-40 to +85C	Celsius
Tc	Base plate operating temperature	-40 to +55C	Celsius
RF IN	RF Input	12.0	Watts
RF OUT	RF Output	725	Watts

Electrical Specifications (T case = 25C, 50 ohm loaded, VS=48V bias=90ma x 2)				
Characteristics	min	typ	max	unit
Operating Frequency range	86		110	MHz
Fundamental output power	700			W
Power Input	n/a	8.0	12.0	W
Power Gain (700w output)	18.0	19.0	n/a	dB
Collector Efficiency	68	70	n/a	%
Collector Current (700w output)		21.5	23.0	A dc
Insertion Phase variation (unit to unit)		+/-3.5		degrees
Power gain (unit to unit)		+/-1.0		dB
F2 Second Harmonic		-40dB		dB
F3 Third Harmonic		-20dB		dB
Transistor Bias Current: Factory set to 90ma @48V. Adjustment is not recommended	85	90	100	ma dc

Mechanical Drawing



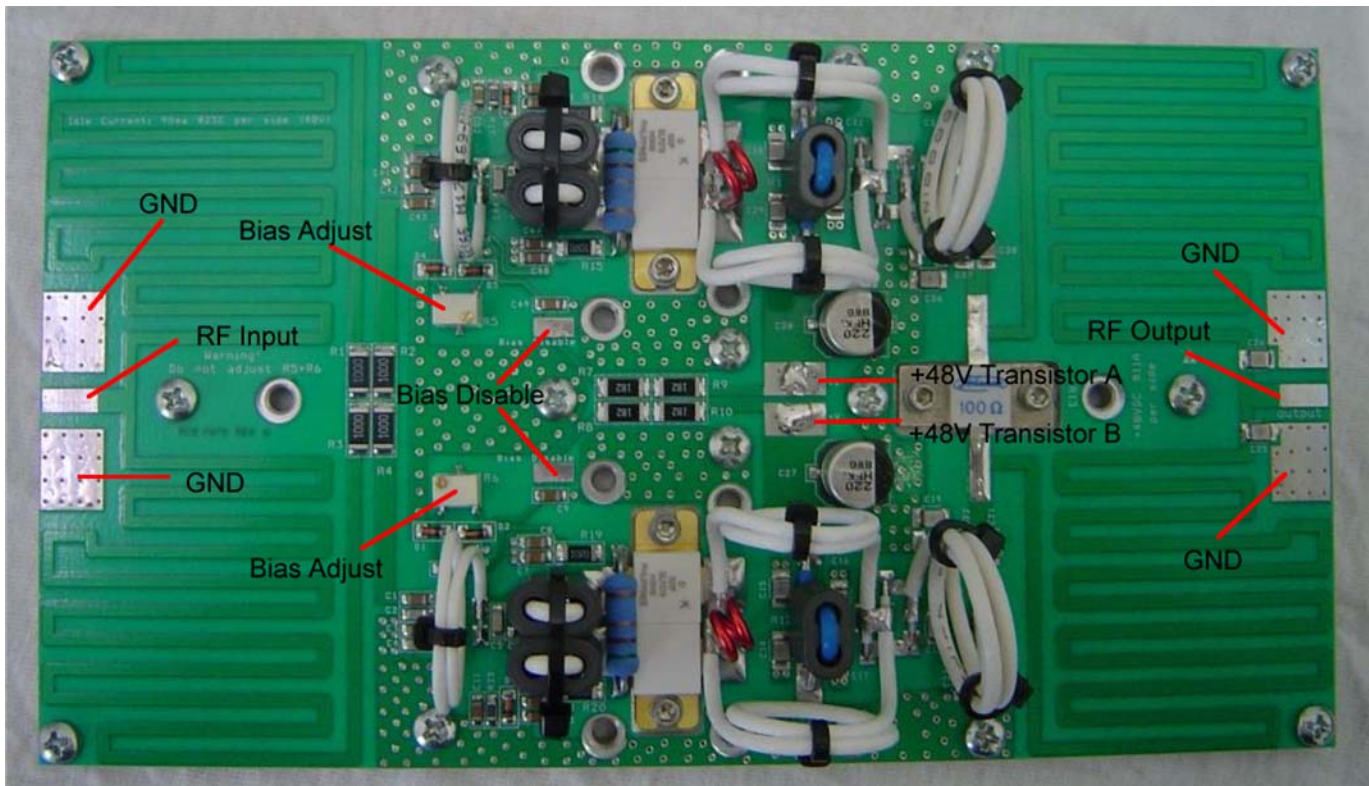
## Heatsink Mounting/Hardware

### 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

Use of cooling air on top of pallet to keep output transformers cool is recommended. Output transformers are rated for continuous operation at 150C, ceramic resistors 180C. Keep any external circuitry away from input and output combiners to avoid any interference - give at least 1.5" clearance to avoid creating feedback paths.

Warning: Failure to use a proper heat sink will cause the transistors to burn out. This type of failure is not covered by warranty. This product can be ordered with a custom heat sink. Please contact factory for more information.



Electrical Connections:

This amplifier has 2 electrical connections. Both pads “+48V Transistor A” and “+48V transistor B” require 48V DC supply. We suggest a 12A supply per transistor to allow for margin. 1 common 48V supply at 24A can also be used. In this case 1 wire can be connected across both pads.

**Warning: Solid state amplifiers can be easily destroyed! Pay attention to these precautions.**

- Do not over drive the amplifier. Exceeding 700 watts can destroy the transistors.
- Do not run the amplifier into an open circuit. Do not run the amplifier when the SWR is unknown. System integrator must foresee adding VSWR protection if there is a risk that the amplifier will be subjected to high VSWR conditions.
- Do not allow the amplifier to overheat. Do not let the base plate temp exceed 55C.
- Don't attach anything to the bias disable pad if you don't plan to use this control line. Grounding these pads will remove bias voltage from the transistors.
- Do not adjust the bias settings.