



## PA085122-100W 50dB SOLID STATE HIGH POWER AMPLIFIER MODULE

### FEATURES

- Class AB linear design
- Instantaneous wide bandwidth
- Suitable for all single channel modulation standards
- Small form factor & light weight
- Built-in protection circuits
- High reliability and ruggedness



### ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	850 - 1220 MHz	
Power Output @ Psat	100 Watt Min	CW
Power Gain	50 dB Min	
Power Gain Flatness	2.0 dB p-p Max	Constant input power
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
Noise Figure	8 dB Max	
2-Tone Intermodulation (IMD)	-30 dBc Typ	40dBm/Tone, $\Delta = 1\text{MHz}$
Harmonics	-30 dBc Typ	At rated Pout
Spurious	-60 dBc Max	Non-harmonics
Operating Voltage	28 VDC Nom	
Current Consumption	10 Amp Max	At rated Pout
Max Input Power	+8 dBm Max	<10 Sec without damage
Load VSWR Protection	$\infty : 1$	<1 minute at rated Pout
Turn On / Off Speed	5 $\mu\text{Sec}$ Max	

### ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non-condensing

### MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	200 x 100 x 27 mm	Excluding connectors
Weight	-	Max Weight
RF Connectors In/Out	SMA Female/Type N Female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required

### D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	-	-
2	-	-
3	CURRENT SENSOR	$I_D @ 20\text{mV}/100\text{mA}$ Typ
4	TEMP SENSOR	$V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV}$ Typ
5	SHUTDOWN	TTL
6, 7	VDD	28VDC
8, 9	GND	Ground

MtronPTI SSHPA Products: <http://www.mtronpti.com>

mtronpti.com

407-298-2000 MtronPTI 2525 Shader Road Orlando, FL 32804

### Quality & Certifications

AS9100 Rev D

ISO9001:2008

### Global Service Centers

Orlando, USA

Noida, India

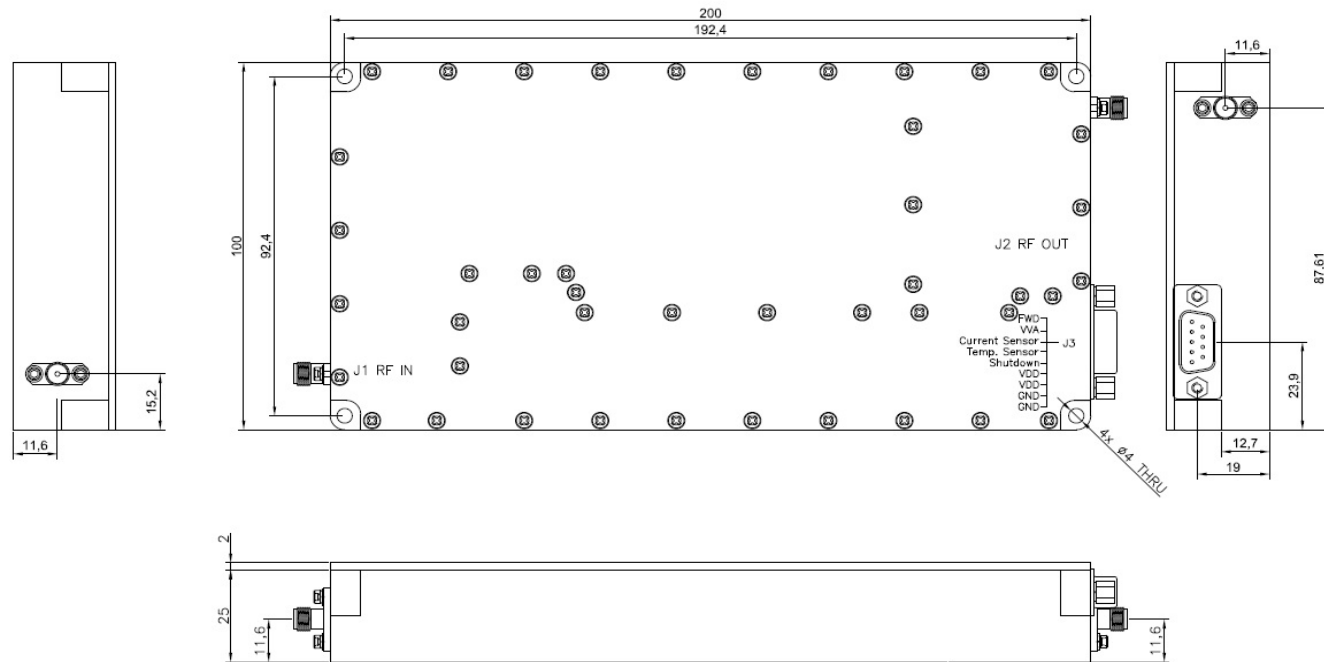




**Connect with MtronPTI**  
**mtronpti.com**

**Orlando**

2525 Shader Rd  
Orlando, FL 32804 USA  
Phone: 407-298-2000  
Fax: 407-293-2979



**Experienced**

**MtronPTI** continues nearly fifty years of service to aerospace, defense communication and control, Internet and mobile infrastructure, lab and field instrumentation EMs.

**Vertically integrated**

**MtronPTI** provides High reliability, High Power Solid State Power Amplifier solutions for demanding applications. Our design and manufacturing capabilities cover 50KHz to 47GHz frequency range with power levels of 1W to 4kW for CW & Pulse application modules and over 10kW for such systems. Synergy between our engineering manufacturing— from concept, simulation, electrical & mechanical layouts to assembly & testing capabilities allow for quick engineering & manufacturing responses to customer requests.

**One-on-one technical relationships**

Each project is unique in design, environmental, schedule and cost requirements. **MtronPTI** engineers work with your designers to select the best approach. Six sigma and AS9100 Rev C quality systems ensure reliable solutions.

**Long term support**

**MtronPTI** uses Rapid Process Feedback, Lean Manufacturing and Demand Flow Technology for right product, right time, on specification. **MtronPTI** also manages the supply chain: aligning forecasts, qualifying purchased component suppliers and working with distributors, hubs and portals to make sure every time the production line reaches for an **MtronPTI** part, it'll be there.

