



## PA4252-50W 47dB SOLID STATE HIGH POWER AMPLIFIER MODULE

### FEATURES

Class AB linear GaN 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	4.2 - 5.2 GHz	
Power Output	50 Watt Min	CW
Power Output @ P1dB	40 Watt Min.	CW
Power Output OFDM	10 Watt Min	7dB Peak to Average
Power Gain	47 dB Min	
Power Gain Flatness	1.5 dB p-p Max	Constant input power
Input / Output Return Loss	-10 dB Max	Relative to 50Ohm
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 -30 VDC	
Current Consumption	10 Amp Max	At rated Pout
Input Power Protection	+8 dBm Max	<1 minute without damage
Load VSWR Protection	$\infty : 1$	<10 Sec at rated Pout
Turn On / Off Speed	5 $\mu\text{Sec}$ Max	

### ENVIRONMENTAL CHARACTERISTICS

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

### MECHANICAL SPECIFICATIONS

Parameter	Specification	Value
Dimensions	285 x 106 x 20 mm	Excluding connectors
Weight	900 gr.	
RF Connectors In/Out	SMA 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>

### Quality & Certifications

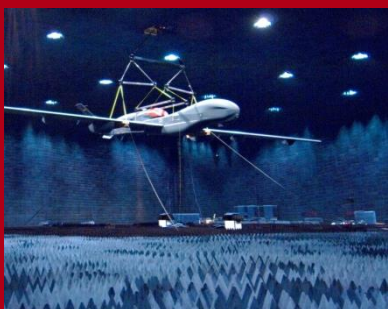
AS9100 Rev D

ISO9001:2008

### Global Service Centers

Orlando, USA

Noida, India

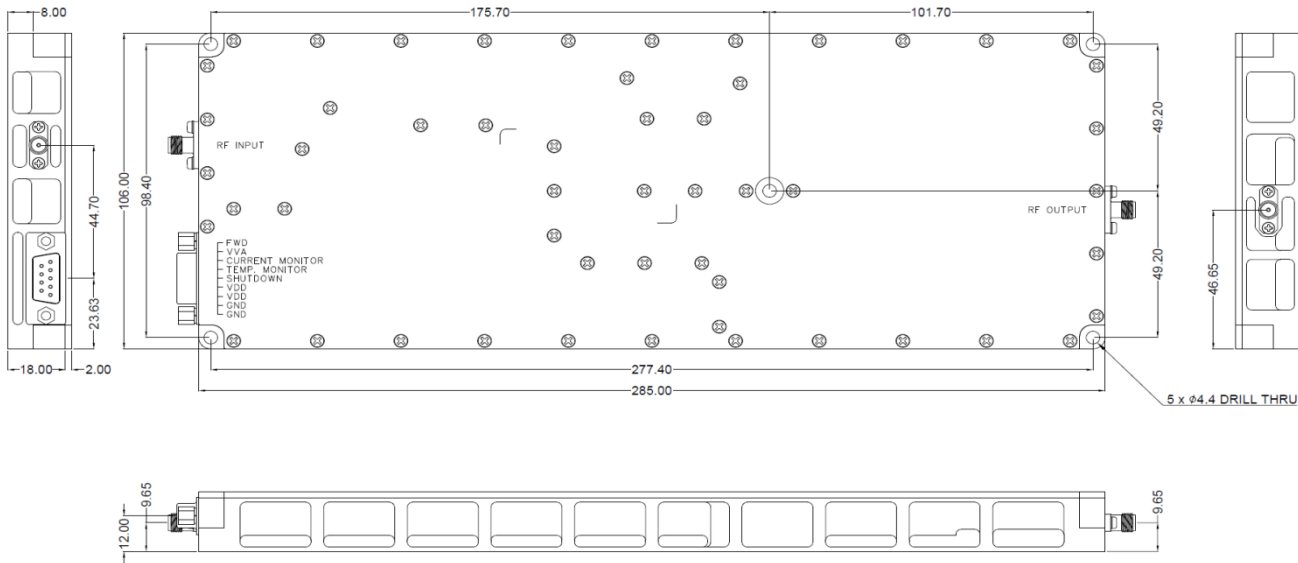




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**Experienced**

**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.

