



## PA2040-100W 50dB SOLID STATE HIGH POWER AMPLIFIER MODULE

### FEATURES

Class AB linear GaN design  
Instantaneous wide bandwidth  
Suitable for all modulations standards  
Built-in protection circuits  
High reliability and ruggedness



### ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	2.0 - 4.0 GHz	
Power Output	100 Watt Min	CW
Power Output @ P1dB GCP	40 Watt Min	CW
Power Gain	50 dB Min	
Power Gain Flatness	3.0 dB p-p Max	Constant input power
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	>30dBc Typ	40 dBm/Tone, $\Delta = 1\text{MHz}$
Harmonics	>20 dBc Typ	At rated Pout
Non Harmonics Spurious	>60 dBc	
Operating Voltage	30 - 32 VDC Nom	
Current Consumption	16 Amp Max	At rated Pout
Max Input Power	+10 dBm	Without damage
Load VSWR Protection	$\infty : 1$	
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	220 X 144 X 27 mm	Excluding Connectors
Weight	1 Kg.	
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	32VDC
8, 9	GND	Ground

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

### Quality & Certifications

AS9100 Rev D

ISO9001:2008

### Global Service Centers

Orlando, USA

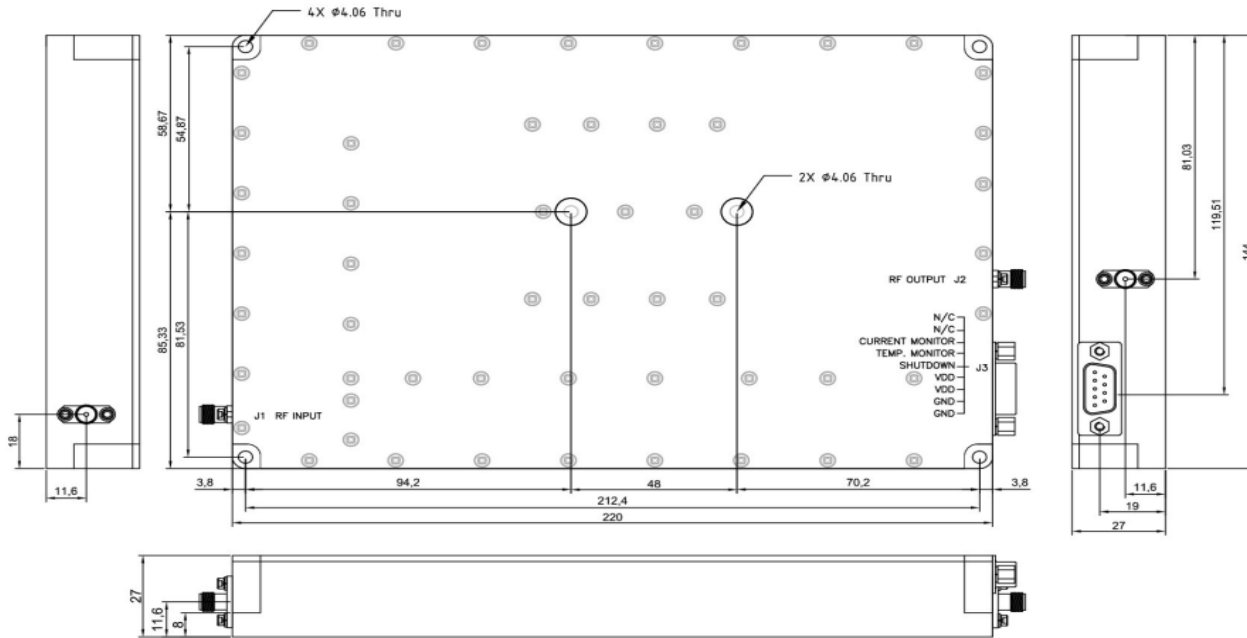
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## Orlando

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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.

