

PA5052-100WP1

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	5.0 – 5.2 GHz	
Power Output CW	200 Watt Min	
Power Output @ P1dB GCP	>100 Watt Typ	
Power Gain	53 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)	-30 dBc Typ	43dBm/Tone, $\Delta = 1$ MHz
Harmonics	-20 dBc Typ	At rated Pout
Non-Harmonics Spurious	-60 dBc Max	
Operating Voltage	32 VDC Nom	
Current Consumption	43 Amp Max	At rated Pout
Max Input Power Protection	+3 dBm Max	Without damage
Load VSWR Protection	5 : 1 Max	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +65 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non Condensing

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	250 x 200 x 27 mm	Excluding Connectors
Weight	2 Kg.	
RF Connectors In/Out	SMA / Type-N female	
DC Power / Interface Connector	Hybrid 9-Pin D-Sub	9W4
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	FWD	OPTION 101 - Forward power detect
2	VVA	OPTION 103 - Variable Voltage Attenuator
3	CURRENT SENSOR	$I_D @ 20mV/100mA$ Typ
4	TEMP SENSOR	$V_T @ 10mV/^\circ C + 500mV$ Typ
5	SHUTDOWN	TTL
A1, A2	VDD	32VDC
A3, A4	GND	Ground

Applications

Test and Measurement

Electronic Warfare

Radar

Broadband Jamming

Public Safety

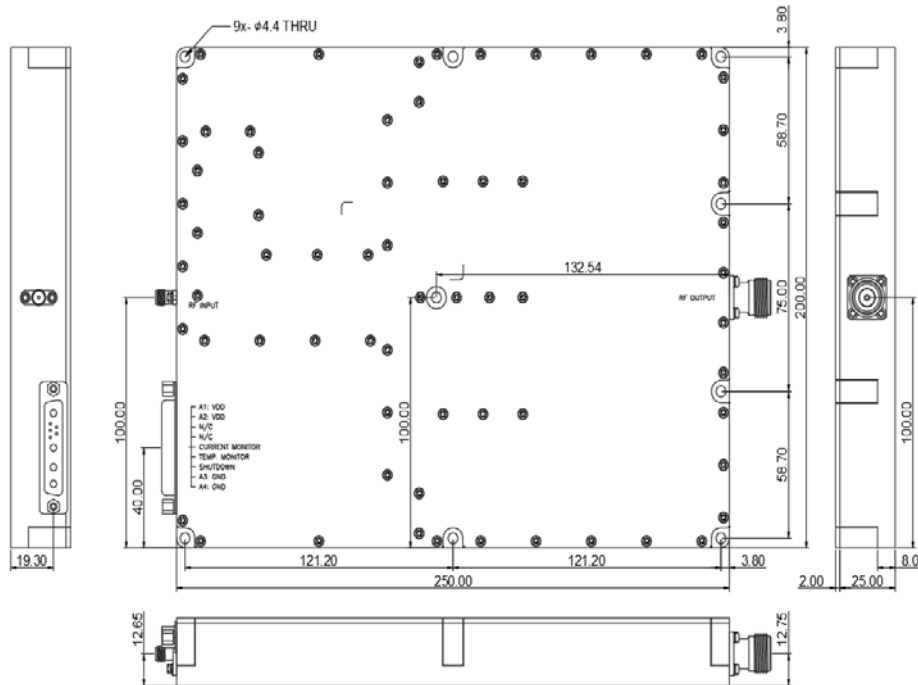
Quality & Certifications

AS9100 Rev C

ISO9001:2008



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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 OEMs.

Vertically integrated

MtronPTI provides High reliability, High Power Solid State Power Amplifier and TWT solutions for demanding applications. Our design and manufacturing capabilities cover 250KHz 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.

