

PA1440R83 SOLID STATE HIGH POWER AMPLIFIER MODULE

FEATURES

Solid-State High Power GaN hybrid design
 Ku Band high power applications
 Suitable for all single channel modulation standards
 Built-in protection circuits
 High reliability and ruggedness

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	14.40 - 14.83 GHz	
Power Output @ P1dB GCP	20 Watt Min	CW
Power Gain	43 dB Min	
Power Gain Flatness	1 dB p-p Max	
Power Gain Variation Over Temperature	1 dB p-p Max	
Input / Output Return Loss	12 dB Min	Relative to 50 Ohm
Harmonics	-60 dBc Typ	At rated Pout
Spurious	-60 dBc Max	Non-harmonics
Operating Voltage	28VDC Nom	
Current Consumption	9 Amp Max	At rated Pout
Input Power Protection	0 dBm Max	<10 Sec without damage
Load VSWR Protection	10 : 1	Output isolator

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-25 to +55 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non-condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	152 x 102 x 23 mm	Target dimensions
Weight	-	
RF Connectors In/Out	Hi Freq. SMA female	
DC Power / Interface Connector	Hybrid D-Sub	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	FWD	N/C
2	REV	N/C
3	CURRENT MONITOR	I _D @ 20mV/100mA Typ
4	TEMP SENSOR	V _T @ 10mV/°C + 500mV Typ
5	SHUTDOWN	TTL
6, 7	VDD	28VDC
8, 9	GND	Ground

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

Applications

Test and Measurement
 Electronic Warfare
 Radar
 Broadband Jamming
 Public Safety

Quality & Certifications

AS9100 Rev C
 ISO9001:2008
 RoHS compliance
 Conflict Minerals Compliant





Connect with MtronPTI

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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.

