PA1319-8KW 69dB SOLID STATE HIGH POWER PULSE AMPLIFIER

FEATURES

High peak power S-Band pulse applications
High power advanced GaN pulse devices
Instantaneous bandwidth
Suitable for linear pulse applications
Built-in control, monitoring and protection circuits
High efficiency, reliability and ruggedness

ELECTRICAL SPECIFICATIONS – 50 Ohm impedance

Parameter	Specification			Notes
Operating Frequency Range	1.3 - 1.9 GHz			
Peak Output Power	8 KWatt Min			
Pulse Characteristics (Max Rating)	Duty	Width	PRF	
	10 %	150 µSec	2KHz	Duty 10%, Pulse Width 150uS requires PRF rating of 660Hz Duty 10%, PRF rating of 2KHz requires Pulse width of 50uS.
Rise / Fall Time	<50 nS Typ / 60 nS Max			10% to 90%
Input Peak Power for Nominal Output	0 dBm ±1.0dB Nom			Power Gain = 69 dB Nom
Harmonics	-20 dBc Max			
Spurious	-50 dBc Max			
Power flatness	≤1.0 dB			Over operating frequency
Pulse Width Variation (Jitter)	<-70 nS			
Amplitude Pulse Droop	≤0.5 dB for 150 µSec Pulse ≤0.1 dB for 10 µSec Pulse			Duty 10% requires Pulse Width of 50uS max.
Amplitude Ripple	≤0.3 dB			
Phase change along the pulse	≤35°, 0 ≤ t ≤ 5 µSec ≤50°, 5 ≤ t ≤ 100 µSec			
Phase ripple along the pulse	≤1°			
Pulse to pulse phase stability	< 0.15°			
Pulse Amplitude Stability	0.05dB			
Input / Output VSWR	1.5 : 1 Min			
Pulse Phase Noise	≤100 dBc/Hz @ 1 KHz from carrier			
System Efficiency	15 % Min			

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions W x H x D	7U + 6U rack chassis	Without cabinet
Weight	-	Including cabinet
RF Connectors In/Out	Type N-F / Waveguide WR284	Front/Rear Panel Standard
RF Output Monitoring FWD / REV	Type N-F	
AC Power	380/220 VAC, 48-64Hz, 3 Phase & Natural	4 Wires
Interface Connector	TBD	
Cooling	Built in forced air	

Quality & Certifications

AS9100 Rev D
ISO9001:2008

Global Service Centers

Orlando, USA
Noida, India

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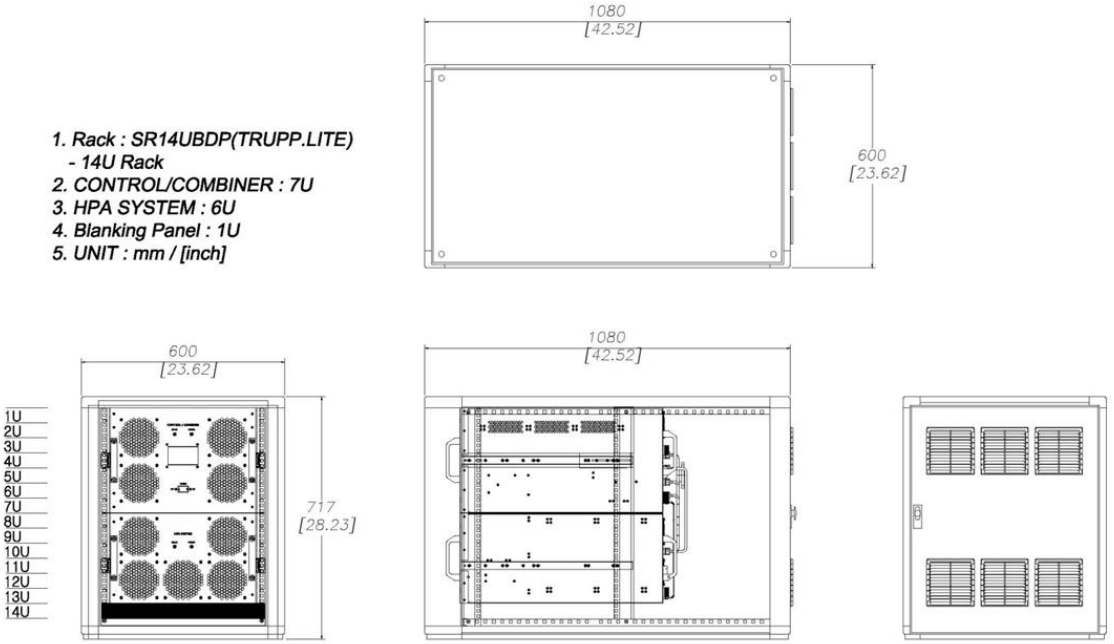
ENVIRONMENTAL CHARACTERISTICS

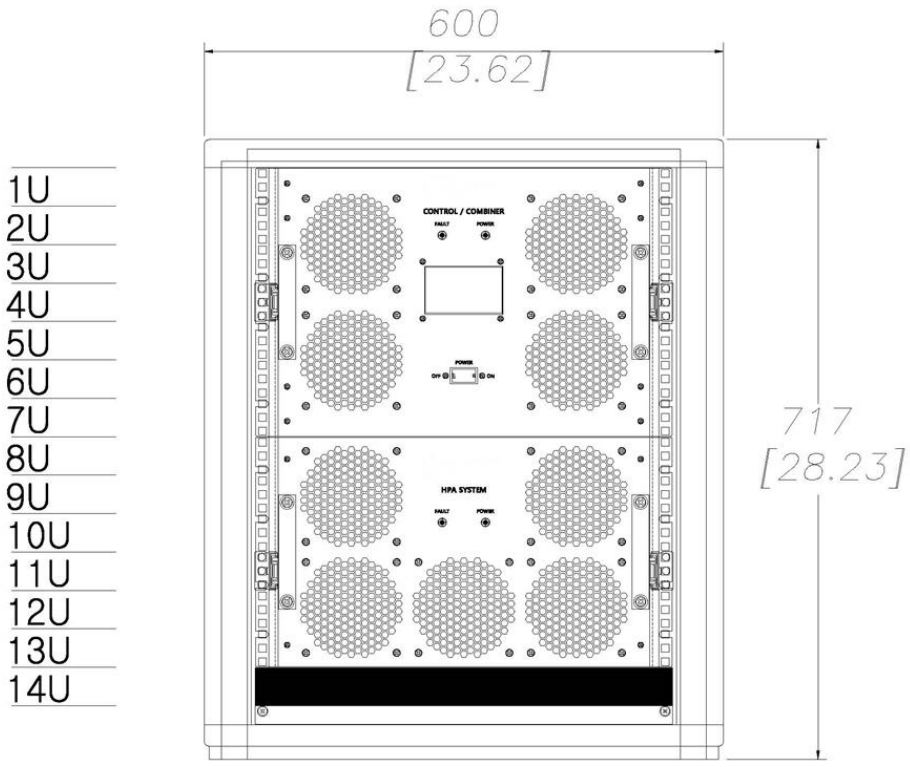
Parameter	Specification	Notes
Operating Ambient Temperature	-20 to +55°C	
Storage Temperature	-40 to +70°C	
Relative Humidity	95% @ 40°C	Non-condensing
Shock & Vibrations	MIL STD 810E	
EMI/EMC	MIL STD 461E	
Cabinet Emitted Radiation	Residual RF radiation < 5mW/cm^3	Continuous 8 hours exposure

System Outline

1. Rack : SR14UBDP(TRUPP.LITE)
   - 14U Rack
2. CONTROL/COMBINER : 7U
3. HPA SYSTEM : 6U
4. Blanking Panel : 1U
5. UNIT : mm / [inch]



System Front



Quality & Certifications

AS9100 Rev D

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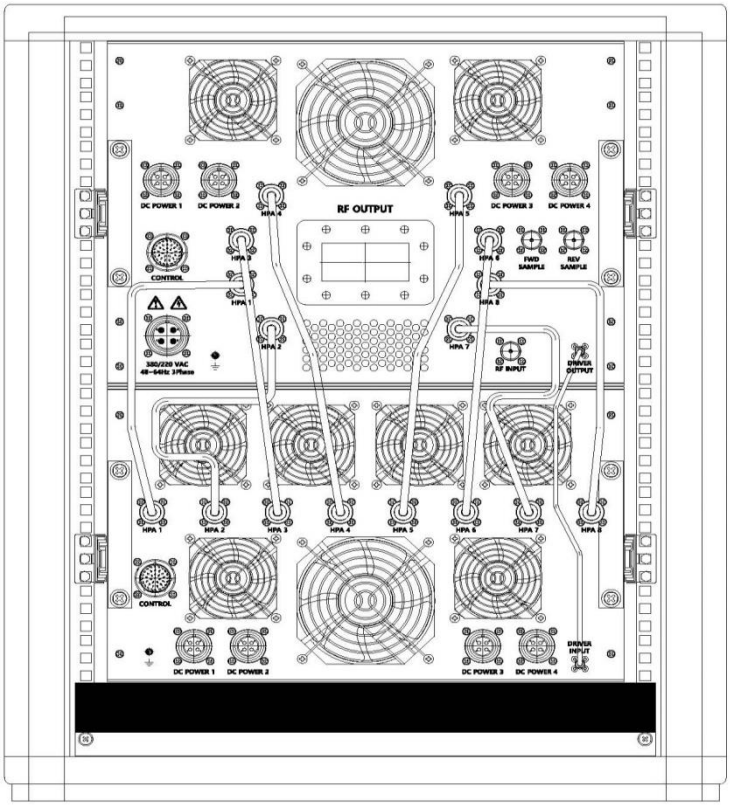
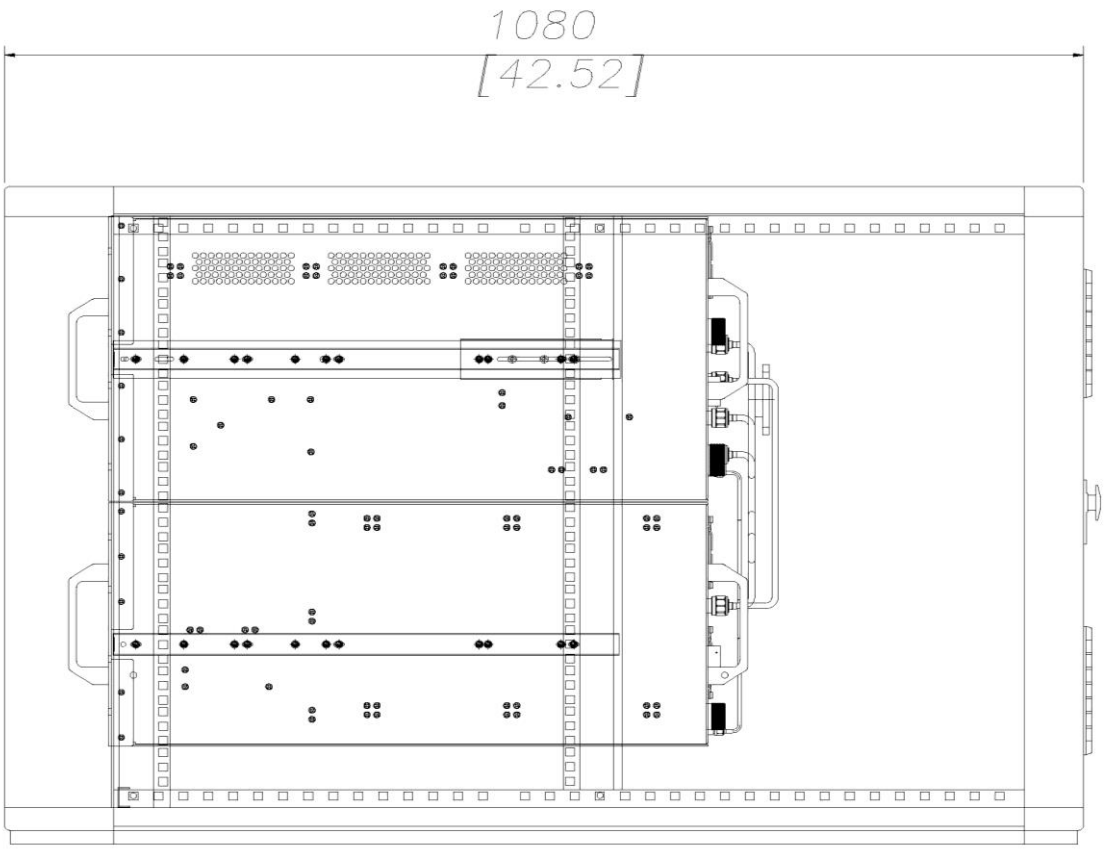
System Rear

1U
2U
3U
4U
5U
6U
7U
8U
9U
10U
11U
12U
13U
14U



System Front



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– fro 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.