

FEATURES

Class AB GaN design
1.0 – 6.0 GHz
Supports all modulation standards
100 Watt output power
50 dB gain
28 Volt operation

Fully protected – load VSWR, input overdrive,
over/under supply voltage, overcurrent

Available as a module or rack mounted

APPLICATIONS

Broadband jamming
LTE laboratory test equipment

Command and control.

Protecting troops and civilians alike from harm.

Controlling the field on the ground often means keeping dangerous trigger signals out of play. The MtronPTI PA1044 Solid State Power Amp provides 100 Watts of CW power and better than 3.0 dB_{P-P} gain flatness to meet the needs of broadband communication suppression.

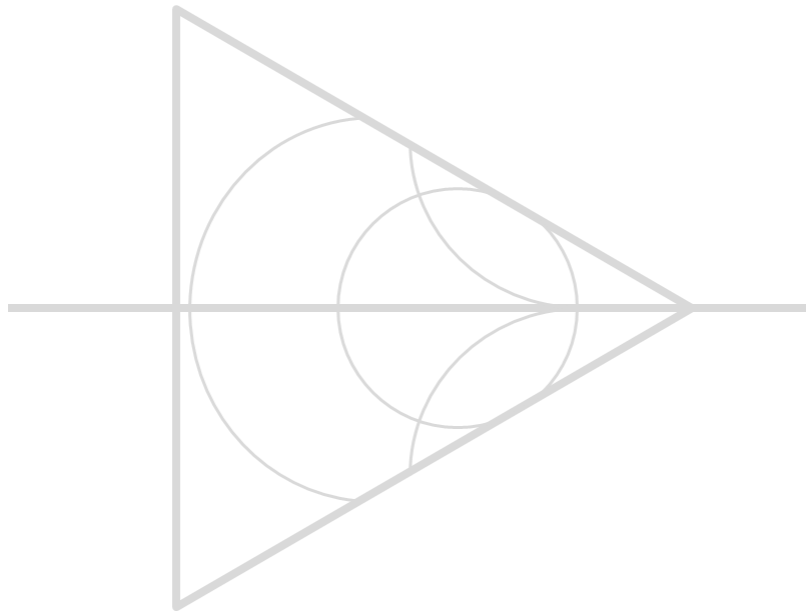
Covering all modulation standards from 1.0 to 6.0 GHz and with built in VSWR protection, the PA1044 has 50 dB of gain, perfect for vehicle mounted applications.

MtronPTI's line of Solid State Power Amplifiers is backed by a multi-national design and manufacturing team with more than 150 years combined PA design experience. MtronPTI's continuing focus on client service ensures full program life engineering support from specification to production to next generation architecture planning.

The PA1044 is available in 48 volt or 28 volt options and can be integrated into custom assemblies with filters or other passive components.



U.S. Army photo by Sgt. Derec Pierson. (RELEASED))



Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Comment
PASSBAND						
Operating Frequency Range	F_{CARRIER}	1		6	GHz	
Power Output	$P_{\text{OUT_MIN}}$	100			Watts	CW
Power Output @ P1dB		TBD			Watts	CW
Power Gain		50			dB	
Power Gain Flatness				3.0	dB _{P-P}	Peak to peak across the band
Input / Output Return Loss	RL_{IN}	10			dB	Relative to 50Ω
2-Tone Intermodulation (IMD)			-30		dBc	40 dBm / Tone, $\Delta = 1$ MHz
Harmonics			-20		dBc	At rated P_{OUT}
Non Harmonic Spurious				-60	dBc	
Power						
Operating Voltage	V_{DD}		48		V_{DC}	28 volt option available
Power Consumption				670	Watt	At rated P_{OUT}
Max Input Power	$P_{\text{IN_MIN}}$			+8	dBm	Without damage
Load VSWR Protection			$\infty : 1$			
Turn On / Off Speed				5	μSec	

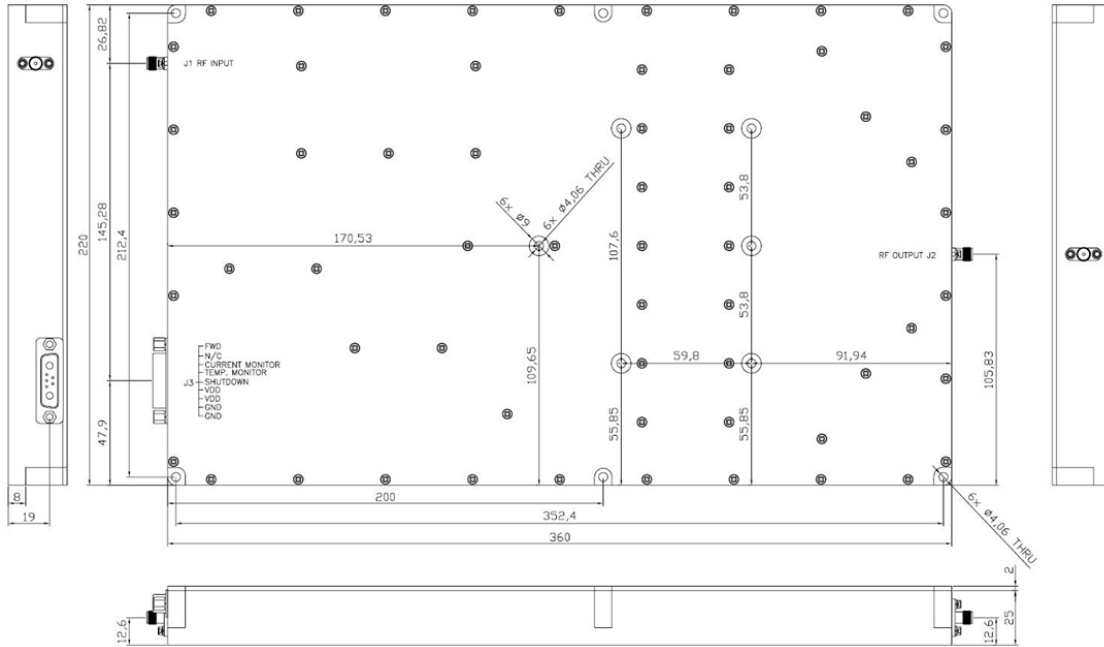
Environmental & Physical

Parameter	Symbol	Min.	Typ.	Max.	Units	Comment
Operating Case Temperature	T_{OC}	-20		+75	°C	
Storage Temperature	T_{STR}	-40		+85	°C	
Relative Humidity		5		95	%	Non-condensing
Dimensions			360 x 220 x 27		mm	Excluding connectors
Weight			TBD		Kg	
RF Connectors IN / OUT			SMA Female			Cover Flange
DC Power / Interface Connector			7-pin Hybrid D-Sub			
Cooling			External Heat Sink			Forced air required
D-Sub Connector Pin Assignments						
1			FWD			OPTION 101 – Forward power detect
2			VVA			OPTION 103 – Variable Voltage Attenuator
3			Current Sensor			I_{D} @ 20 mV / 100 mA typ.
4			Temperature Sensor			V_{T} @ 10 mV / °C + 500 mV typ.
5			Shutdown			TTL
A1			V_{DD}			28 V_{DC}
A2			GND			Ground

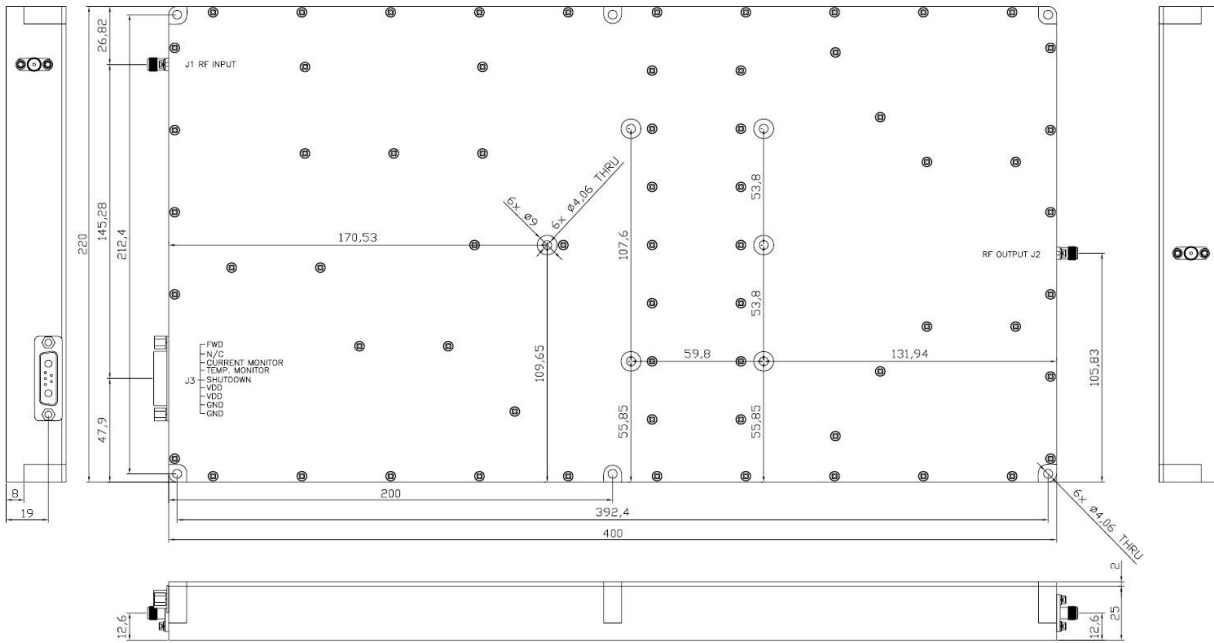
Ordering Information

Option	Function	Description
101	FWD	Forward power detect
103	VVA	Variable Voltage Attenuator
108	V28	+28 V_{DC} Operation

Case Outline – Standard Module



Case Outline – Option 108 (28 V Operation)



Revision History

Date	Rev.	Orig.	Details of Revision
20141118	A	DPD	Initial release in 2015 format

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