



Solid State High Power Amplifier

6.0 – 18.0 GHz, Wide Instantaneous Bandwidth, Built-in protection

Broadband Series: PA1068

FEATURES

Class A GaAsFET design

6.0 – 18.0 GHz

10 Watt output power

40 dB gain

12 Volt operation

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

Available as a module or rack mounted

APPLICATIONS

Broadband jamming

Electronic warfare

EMI / EMC test equipment

Wideband. Agile. Powerful. Compact.

Control, use or deny the spectrum.

The first task is to get your message through. The second is to prevent the other guy from getting *his* message through. MtronPTI's PA1068 Solid State Power Amp provides up to 10 Watts CW across the full bandwidth with better than 4.0 dB_{P.P} gain flatness to meet the needs of broadband spectrum control.

With full power operation from 6.0 GHz to 18 GHz and built in VSWR protection, the PA1068 has 40 dB of gain, perfect for stand-alone, array or TWT driver 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.

Like all MtronPTI's SSPAs, the PA1068 may be custom integrated with power supplies, cooling and communications interface as a rack mountable unit for laboratory or fixed location applications.



Euro Hawk EMC testing – U.S. Air Force photo by Edward Cannon (RELEASED)



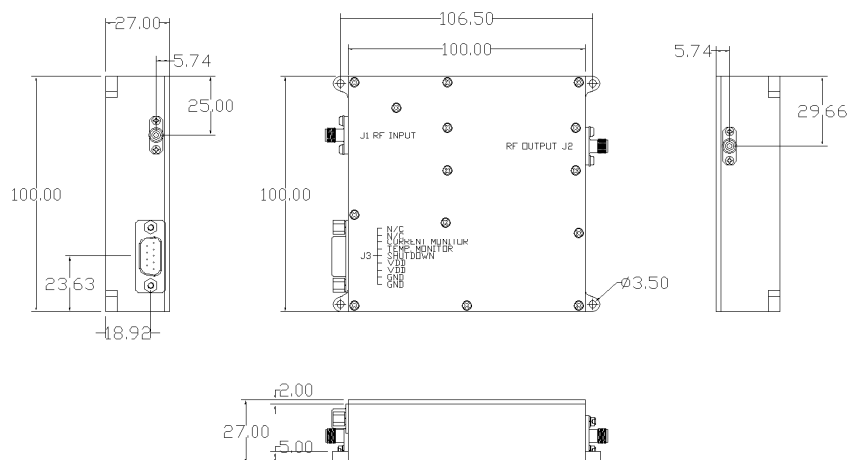
Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Comment
PASSBAND						
Operating Frequency Range	F_{CARRIER}	6		18	GHz	CW $A_{\text{RF_MAX}} - A_{\text{RF_MIN}}$ Within the F_{SIG} bandwidth into 50Ω At rated P_{OUT}
Power Output	$P_{\text{OUT_MIN}}$	10			Watts	
Small Signal Gain	$A_{\text{RF_MIN}}$	40			dB	
Power Gain Flatness				4.0	dB _{P-P}	
Input Return Loss	RL_{IN}	10			dB	
Harmonics				-20	dBc	
Non Harmonic Spurious				-60	dBc	
Noise Figure	NF			8.0	dB	
Power						
Operating Voltage	V_{DD}	11.5		12.5	V_{DC}	Without damage
Current Consumption	I_{DD}			11	A	
Max Input Power	$P_{\text{IN_MIN}}$			+8	dBm	
Load VSWR Protection			∞ : 1			

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			100 x 100 x 27		mm	Excluding connectors
Weight			TBD			
RF Connectors IN / OUT			SMA Female			Cover Flange
DC Power / Interface Connector			9-pin D-Sub			
Cooling			External Heat Sink			Forced air required
D-Sub Connector Pin Assignments						
1	N/C		N/C			
2	N/C		N/C			
3	Current Sensor		$I_D @ 20 \text{ mV} / 100 \text{ mA typ.}$			
4	Temperature Sensor		$V_T @ 10 \text{ mV} / ^\circ\text{C} + 500 \text{ mV typ.}$			
5	Shutdown		TTL			
6, 7	V_{DD}		12 V_{DC}			
8, 9	GND		Ground			

Case Outline



Revision History

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

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MtronPTI may change specifications without notice to improve end application performance or product manufacturability.

Contact MtronPTI for the most up-to-date information.