



Solid State High Power Amplifier

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

Broadband Series: PA1052

FEATURES

Class A GaAsFET design
6.0 – 18.0 GHz
20 Watt output power
43 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. The MtronPTI PA1052 Solid State Power Amp provides up to 20 Watts of CW power across the full bandwidth and less than 4.0 dB_{P.P} gain flatness to meet the needs of broadband spectrum control.

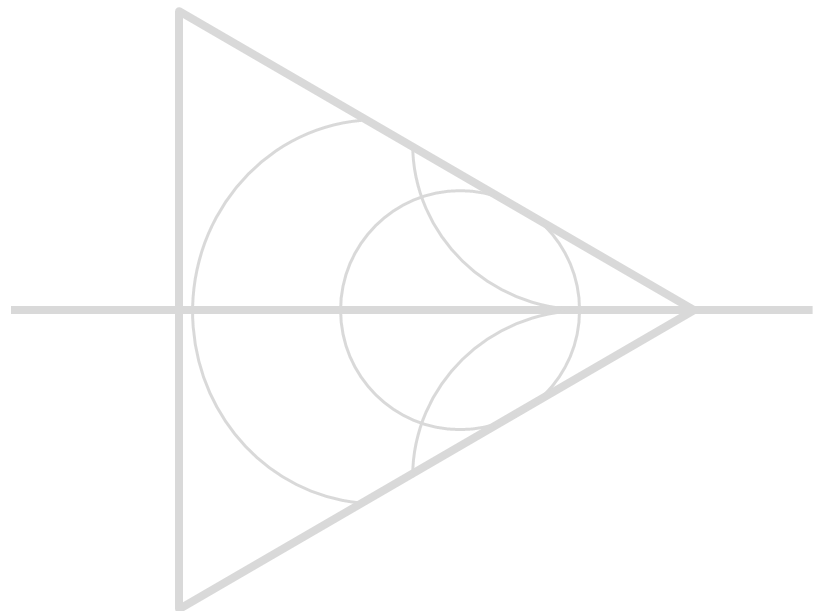
With full power operation from 6.0 GHz to 18 GHz and built in VSWR protection, the PA1052 has 43 dB of gain, perfect for stand-alone, array or TWT driver applications.

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 PA1052 is also available integrated with power supply, cooling and communications interface as a rack mountable unit for laboratory or fixed location applications.



F16CJ – U.S. Air Force photo by Master Sgt. Terry L. Blevins (RELEASED)



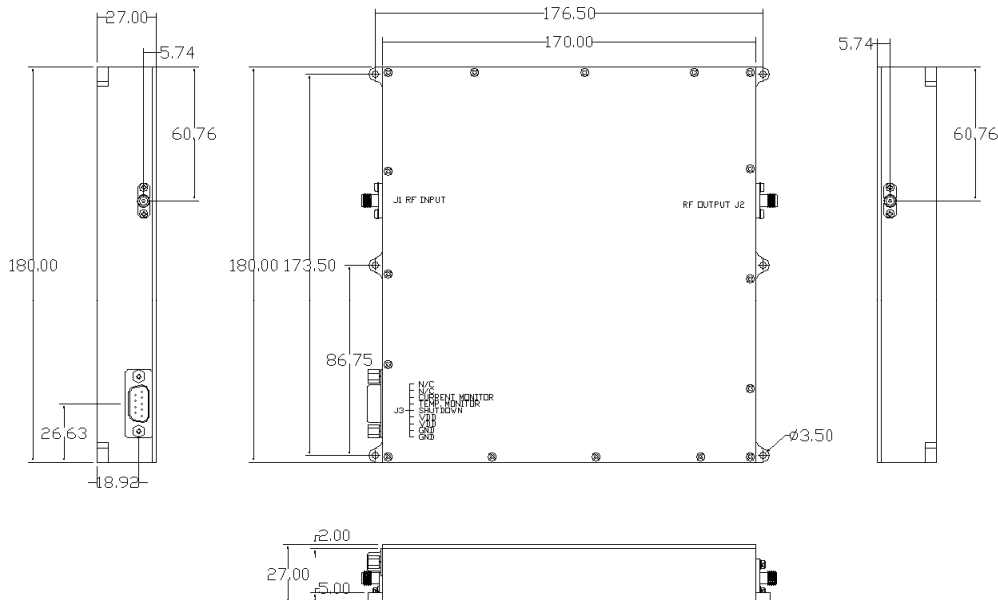
Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Comment
PASSBAND						
Operating Frequency Range	F _{CARRIER}	6		18	GHz	CW A _{RF_MAX} - A _{RF_MIN} Within the F _{SIG} bandwidth into 50Ω At rated P _{OUT}
Power Output	P _{OUT_MIN}	20			Watts	
Small Signal Gain	A _{RF_MIN}	43			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}			22	A	
Max Input Power	P _{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			170 x 180 x 27		mm	Excluding connectors
Weight			TBD			
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	N/C		N/C			
2	N/C		N/C			
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}		12 V _{DC}			
A2	GND		Ground			

Case Outline



Revision History

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

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