

### FEATURES

Class AB GaN design  
2.0 – 6.0 GHz  
Supports all modulation standards  
50 Watt output power  
47 dB gain  
28 – 30 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 PA1049 Solid State Power Amp provides 50 Watts of CW power and better than 3.0 dB<sub>P.P</sub> gain flatness to meet the needs of broadband communication suppression.

Covering newer modulation standards from 2.0 to 6.0 GHz and with built in VSWR protection, the PA1049 has 47 dB of gain, perfect for vehicle mounted or lab test 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 SSPAs, the PA1049 is available integrated with power supply, cooling and communications interface as a rack mountable unit for laboratory or fixed location applications.



U.S. Marine photo by Cpl. Paul Peterson. (RELEASED))



**Electrical Characteristics**

Parameter	Symbol	Min.	Typ.	Max.	Units	Comment
PASSBAND						
Operating Frequency Range	$F_{CARRIER}$	2		6	GHz	
Power Output	$P_{OUT\_MIN}$	50			Watts	CW
Power Output @ P1dB		35			Watts	CW
Power Gain		47			dB	
Power Gain Flatness				3.0	dB <sub>P-P</sub>	Peak to peak across the band
Input / Output Return Loss	$RL_{IN}$	10			dB	Relative to 50Ω
2-Tone Intermodulation (IMD)			-30		dBc	37 dBm / Tone, Δ = 1 MHz
Harmonics			-20		dBc	At rated $P_{OUT}$
Non Harmonic Spurious				-60	dBc	
Power						
Operating Voltage	$V_{DD}$	28	29	30	$V_{DC}$	28 volt option available
Current Consumption	$I_{DD}$			12	A	At rated $P_{OUT}$
Max Input Power	$P_{IN\_MIN}$			+8	dBm	Without damage
Load VSWR Protection			∞ : 1			
Turn On / Off Speed				5	μSec	

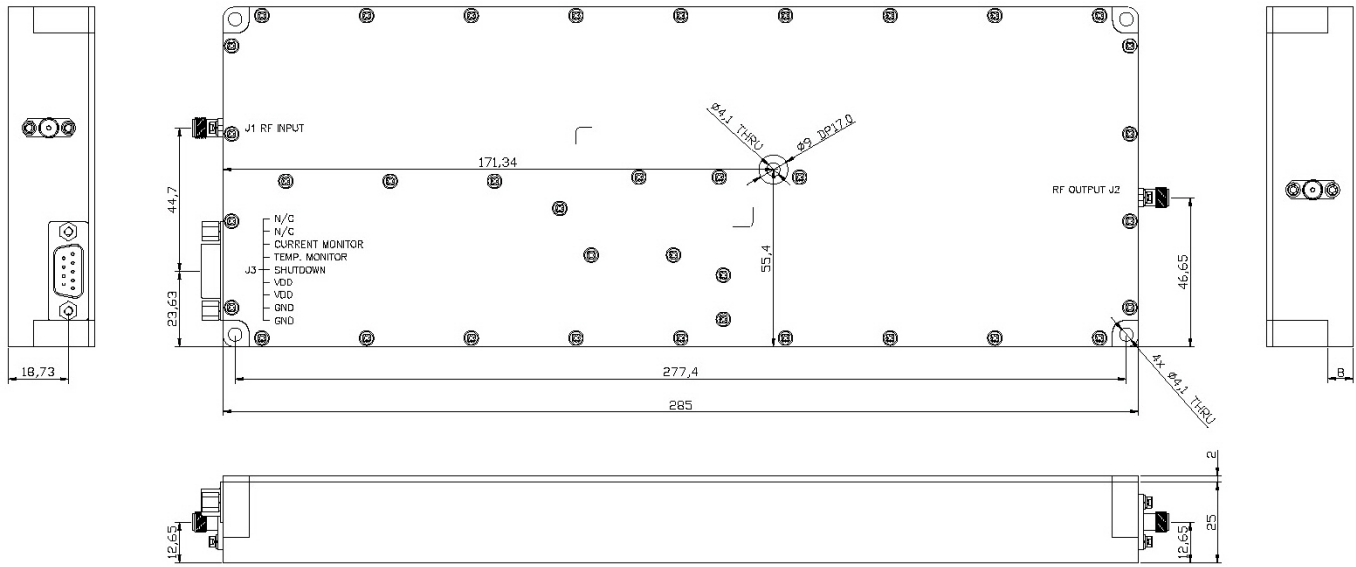
**Environmental & Physical**

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			285 x 106 x 27		mm	Excluding connectors
Weight			0.95		Kg	
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			FWD			OPTION 101 – Forward power detect
2			VVA			OPTION 103 – Variable Voltage Attenuator
3			Current Sensor			$I_b$ @ 20 mV / 100 mA typ.
4			Temperature Sensor			$V_T$ @ 10 mV / °C + 500 mV typ.
5			Shutdown			TTL
6, 7			$V_{DD}$			29 $V_{DC}$
8, 9			GND			Ground

**Ordering Information**

Option	Function	Description
101	FWD	Forward power detect
103	VVA	Variable Voltage Attenuator

Case Outline



Revision History

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

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