



Solid State High Power Amplifier

2.0 – 6.0 GHz, Wide Instantaneous Bandwidth, Built-in protection

Broadband Series: PA1049

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_{P.P} 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))





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Electrical Characteristics

Parameter	Specification	Notes
Operating Frequency Range	2.0 - 6.0 GHz	
Power Output	50 Watt Min / 70 Watt Typ	CW @ Pin = 0dBm Nom
Power Output @ P1dB	25 Watt Typ	CW
Power Gain	47 dB Min	
Power Gain Flatness	3.0 dB p-p Max	Constant input power
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	>30 dBc Typ	37 dBm/Tone, $\Delta = 1$ MHz
Harmonics	>20 dBc Typ	At rated Pout
Non Harmonics Spurious	>60 dBc	
Operating Voltage	28 - 30 VDC	
Current Consumption	10 Amp Max	At rated Pout
Max Input Power	+8 dBm	10 Sec without damage
Load VSWR Protection	$\infty : 1$ @ any Phase & Angle	1 Min @ rated output

Environmental & Physical Specifications

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non Condensing

Parameter	Specification	Notes
Dimensions	285 x 106 x 27 mm	Excluding Connectors
Weight	1.5 Kg.	
RF Connectors In/Out	SMA female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	FWD	OPTION 101 - Forward power detect
2	VVA	OPTION 103 - Variable Voltage Attenuator
3	CURRENT SENSOR	I_D @20mV/100mA Typ
4	TEMP SENSOR	V_T @10mV/°C + 500mV Typ
5	SHUTDOWN	TTL - Optional 5 μ S switching speed
6, 7	VDD	28VDC
8, 9	GND	Ground

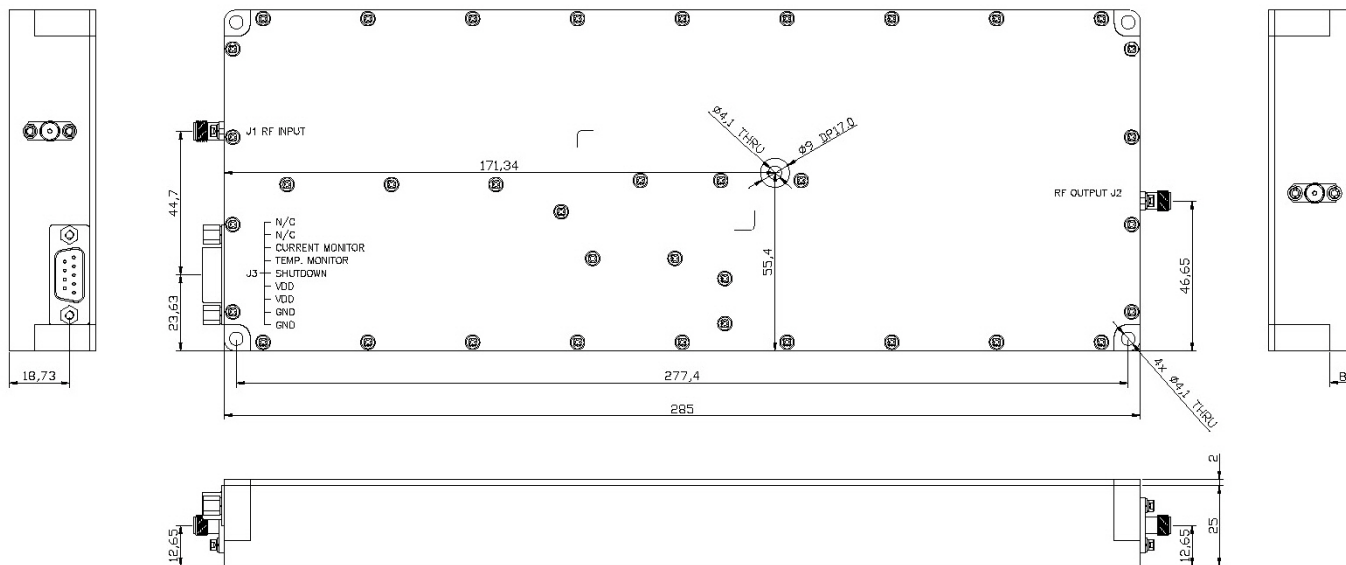


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Case Outline



Revision History

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

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