



Solid State High Power Amplifier

24.0 – 31.0 GHz, 6 W, Wide Instantaneous Bandwidth, K/Ka-Band

Ultra Broadband Series: PA3033

FEATURES

Class AB linear GaAsFET hybrid design
24.0 – 31.0 GHz
6 Watt output power
38 dB gain
9 Volt operation
Monitoring and remote shutdown

High data rate. Line of sight. K-Band.

Millimeter wave power.

Demand for more data bandwidth is pushing operating frequencies up and modulation toward more complex constellations. The MtronPTI PA3033 Solid State Power Amp provides 6 Watts across the K/Ka-Band border from 24.0 to 31.0 GHz off a 9 volt power supply.

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.

APPLICATIONS

Complex modulation standards applications
Point-to-point digital
K/Ka-Band satellite communications

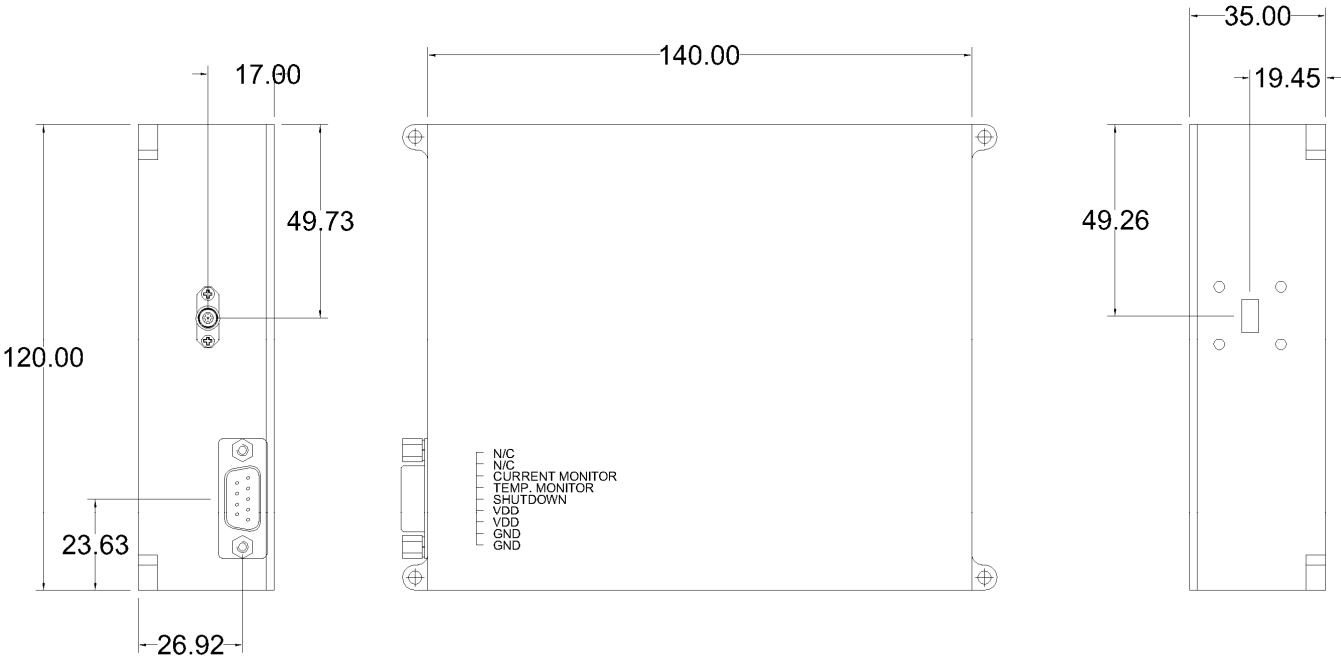
Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Comment
PASSBAND						
Operating Frequency Range	F_{CARRIER}	24.0		31.0	GHz	
Power Output	P_{OUT}	6			Watts	CW
Small Signal Gain	$A_{\text{RF_MIN}}$	38			dB	
Power Gain Flatness				4.0	dB _{P-P}	$A_{\text{RF_MAX}} - A_{\text{RF_MIN}}$
Input Return Loss	RL_{IN}	10			dB	Within the F_{SIG} bandwidth into 50Ω
Harmonics			-20		dBc	At rated POUT
Non Harmonic Spurious				-60	dBc	
Power						
Operating Voltage	V_{DD}	8.5	9.0	9.5	V _{DC}	
Current Consumption	I_{DD}			8	Amps	
Max Input Power	$P_{\text{IN_MIN}}$			+5	dBm	At rated POUT
Load VSWR Protection			5 : 1			Without damage

Environmental & Physical

Parameter	Symbol	Min.	Typ.	Max.	Units	Comment
Operating Case Temperature	T_{OC}	-20		+65	°C	
Storage Temperature	T_{STR}	-40		+85	°C	
Relative Humidity		5		95	%	Non-condensing
Dimensions			140 x 120 x 35		mm	Excluding connectors
Weight				0.8	kg	
RF Connectors IN / OUT			k-type female / WR28			
DC Power / Interface Connector			9-Pin D-Sub			
Cooling			External Heat Sink			Forced air required
D-Sub Connector Pin Assignments						
1	N/C		Reserved			
2	N/C		Reserved			
3	Current Sensor		I_{D} @ 100 mV / 100 mA typ.			
4	Temperature Sensor		V_{T} @ 10 mV / °C + 500 mV typ.			
5	Shutdown		TTL			
6,7	V_{DD}		9 V _{DC}			
8,9	GND		Ground			

Case Outline



Revision History

Date	Rev.	Orig.	Details of Revision
20150317	A	DPD	Initial

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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.