



Power Amplifier

Model: PA-1G-2G-100

1-2GHz 100W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 1-2GHz
- High output power at saturation, 100W Typ.
- High gain, 50 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-1G-2G-100 is a power amplifier with a minimum small signal gain of 50 dB and a nominal P_{sat} of 100W across the frequency range of 1 to 2 GHz. The DC power requirement for the amplifier is +28 VDC/12 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N Female.



Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	1		2	GHz
Small Signal Gain	50	53		dB
Gain Flatness		±1	±2	dB
Output P1dB	45	46		dBm
Output Psat	49.5	50		dBm
Input VSWR		1.5	2.0	:1
DC Voltage		+28	+30	V DC
Static Current		3		A
Saturation Current		12	13	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature*	-20°C to +50°C	
Non-operating Temperature*	-30°C to +65°C	
Relative humidity	95	%
RF Input/Output Connector	SMA Female/N Female	
DC Bias	D-SUB15	
Altitude	10,000	feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis	
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions	
Dimensions W x H x D	200*130*24	mm
Weight	1200	g

*Note: For a wider temperature range, please consult the manufacturer.

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



DC Supply Connector(DSUB-15 Female):

Pin	Name	Function
1	VCC	Power supply positive,+26.0-30.0VDC
2	VCC	Power supply positive,+26.0-30.0VDC
3	RESET	Resets PA when logic LOW is applied and released (Internally Pulled-High)
4	Over Voltage	Voltage FAULT:(TTL High= Fault, TTL Low =Normal)
5	Over Current	Current FAULT:(TTL High= Fault, TTL Low =Normal)
6	Over Temperature	When the temperature of the case exceeds 75 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
7	NC	Not connected
8	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High)
9	VCC	Power supply positive,+26.0-30.0VDC
10	VCC	Power supply positive,+26.0-30.0VDC
11~15	GND	Ground

Ordering Information:

Base Number	Description	Optional
PA-1G-2G-100	Power Amplifier, 1-2GHz, Gain:50dB,Psat:100W,+28V DC	Without Heatsink
PA-1G-2G-100-HS	Power Amplifier, 1-2GHz, Gain:50dB,Psat:100W,+28V DC	With Heatsink