



Power Amplifier

Model: PA-0G1-4G-12.5

0.1-4GHz 12.5W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 0.1-4GHz
- High output power at saturation, 12.5W Typ.
- High gain, 45 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-0G1-4G-12.5 is a power amplifier with a typical small signal gain of 45 dB and a nominal P_{sat} of 12.5W across the frequency range of 0.1 to 4GHz. The DC power requirement for the amplifier is +28 VDC/2.5 A. The input and output port configuration offers coax adapter structure with SMA female.



Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	0.1		4	GHz
Small Signal Gain		45		dB
Small Signal Gain Flatness		±3		dB
Output P1dB	@0.1-1GHz	38		dBm
	@1-4GHz	40		dBm
Output Psat		41		dBm
Input VSWR			1.8	:1
DC Voltage		+28		V DC
DC Supply Current		2.5		A
Impedance		50		Ohms

Mechanical Specifications:

ParameterKg	Value	Notes
Operating Temperature*	-40°C to +50°C	
Non-operating Temperature*	-50°C to +60°C	
Relative humidity	95%	
RF Input/Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Altitude	10,000	feet
Shock / Vibration(MIL-STD-810F)	20g,11ms,saw-tooth	
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions	
Dimensions W x H x D	140*80*12	mm
Weight	260	g

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

Absolute Maximum Ratings:

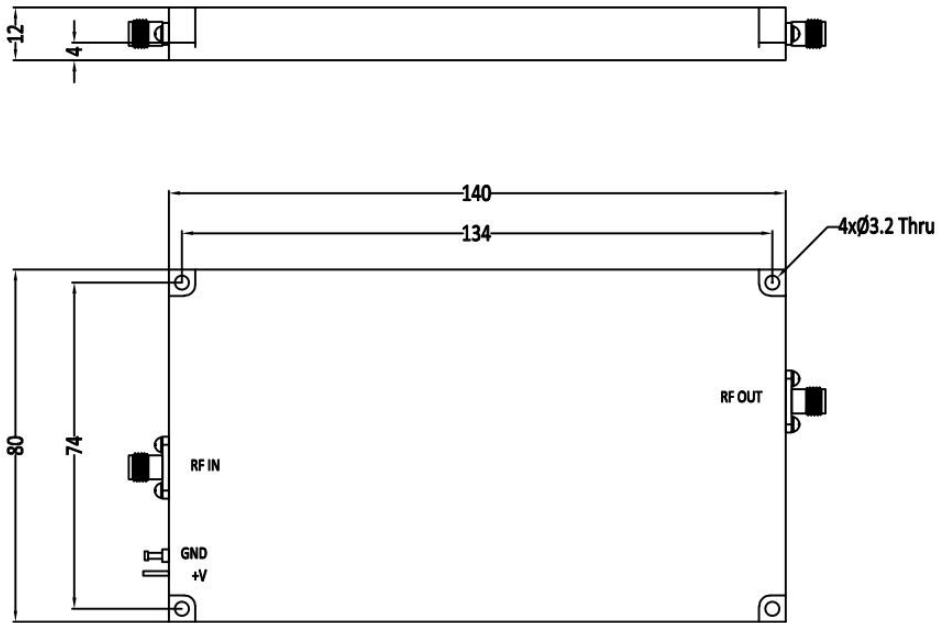
Parameter	Value
Supply Bias Voltage	+28 V
RF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

PA-0G1-4G-12.5



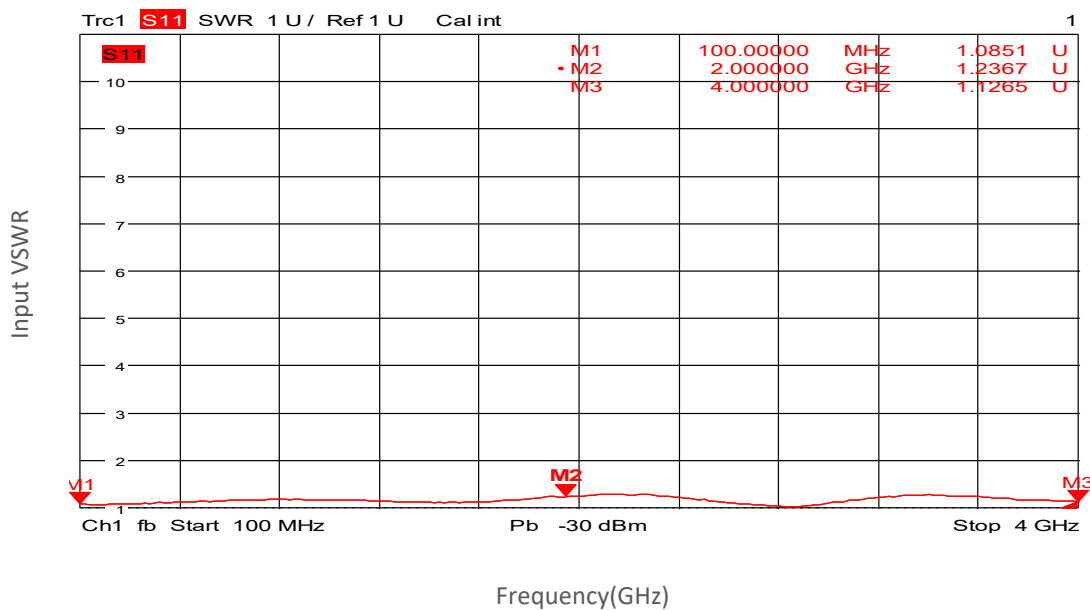
Ordering Information:

Base Number	Description	Optional
PA-0G1-4G-12.5	Power Amplifier,0.1-4GHz, Gain:45dB,Psat:12.5W,+28V DC	Without Heatsink
PA-0G1-4G-12.5-HS	Power Amplifier,0.1-4GHz, Gain:45dB,Psat:12.5W,+28V DC	With Heatsink

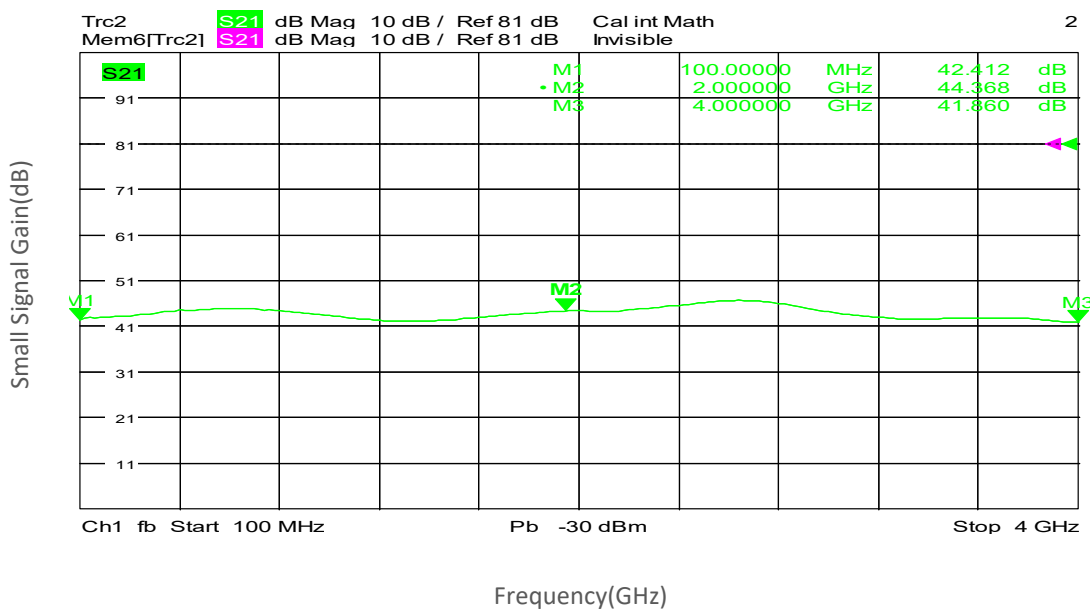


Typical Performance Data:

Input VSWR vs Frequency



Small Signal Gain vs Frequency

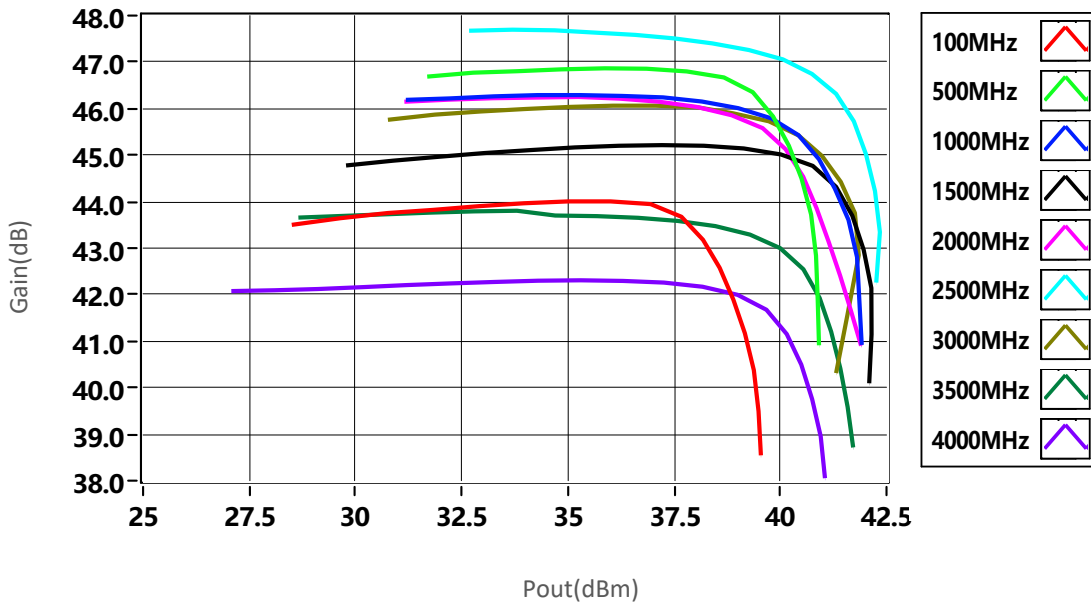


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

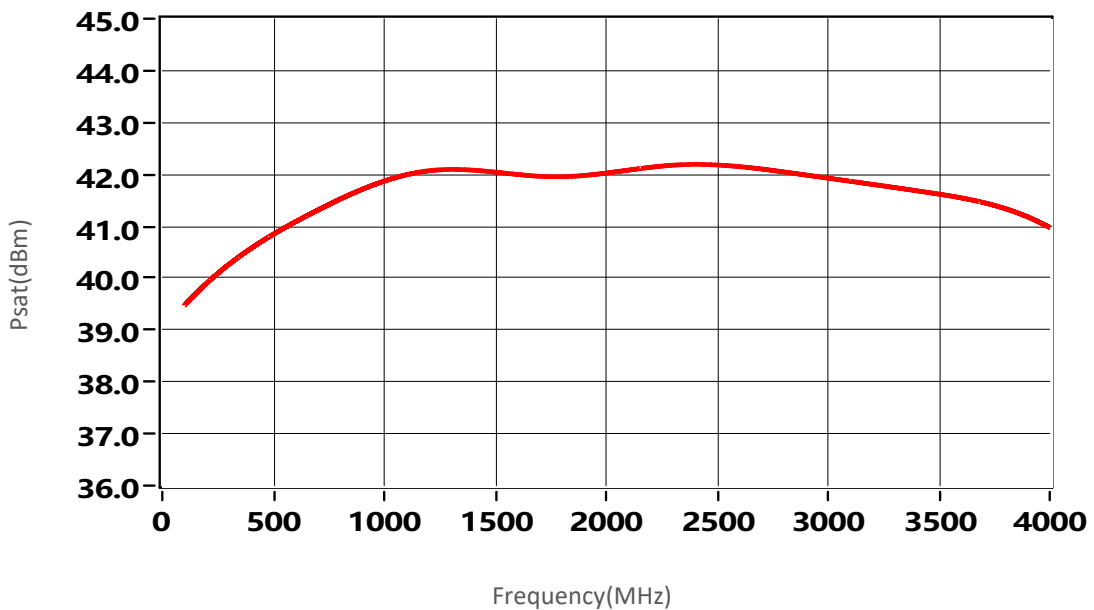


Typical Performance Data:

Gain vs Output Power



Psat vs Frequency

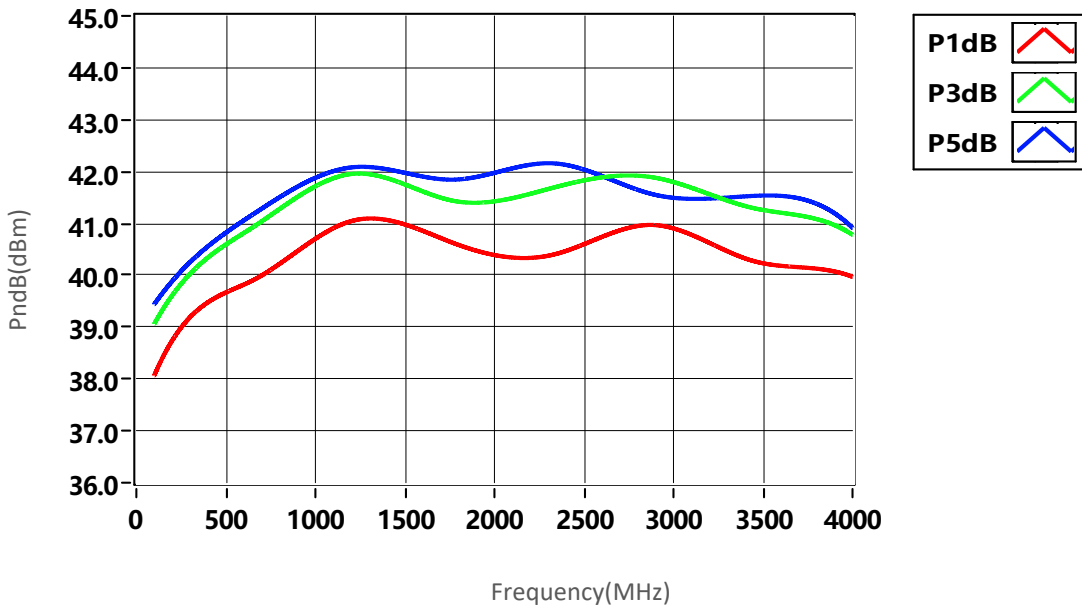


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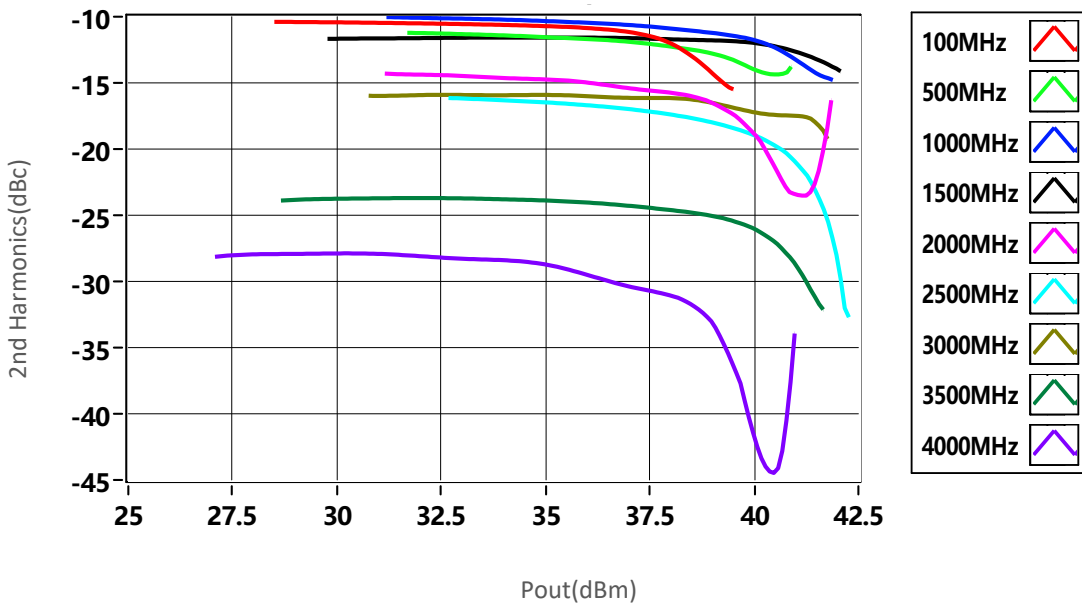


Typical Performance Data:

PndB vs Frequency



2nd Harmonics vs Output Power

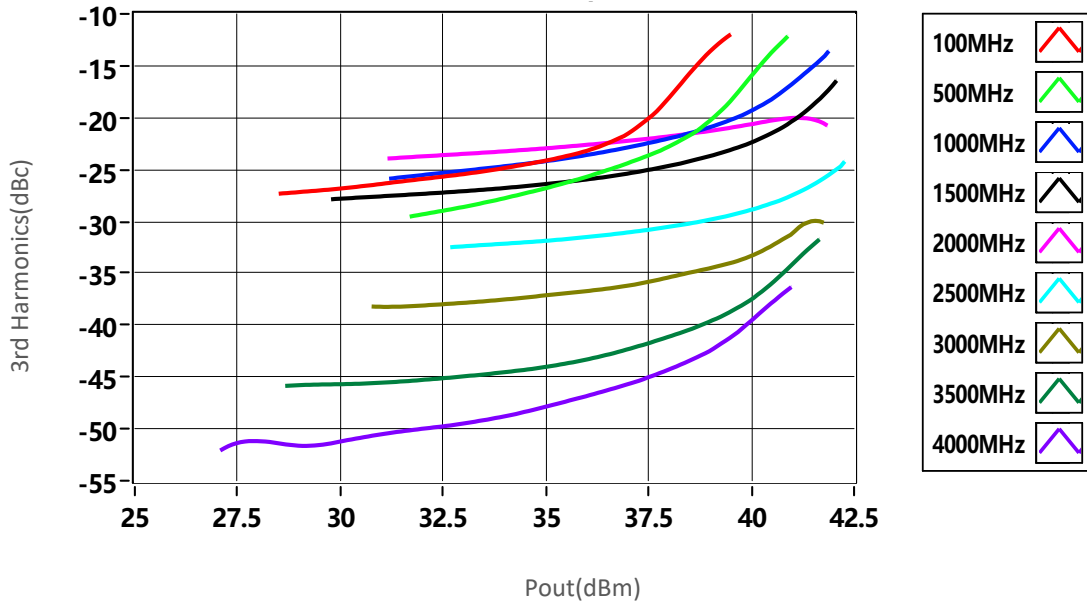


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

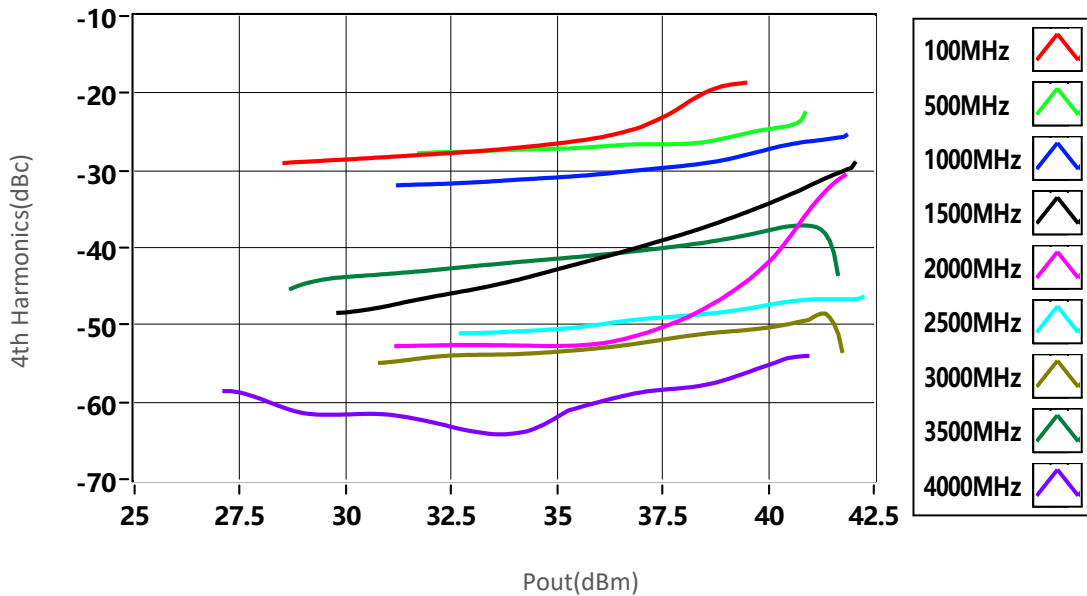


Typical Performance Data:

3rd Harmonics vs Output Power



4th Harmonics vs Output Power



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.