Power Amplifier

Model: PA-50M-12G-1.2

0.05-12GHz 1.2W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 0.05-12GHz
- High output power at saturation, 1.2W Typ.
- High gain, 30 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview：

The PA-50M-12G-1.2 is a power amplifier with a minimun small signal gain of 30 dB and a nominal Psat of 1.2W across the frequency range of 0.05 to 12GHz. The DC power requirement for the amplifier is +24 VDC/790 mA. The input and output port configuration offers coax adapter structure with SMA female.

Electrical Specifications at 25℃:

Parameter	Min	Typ	Max	Units
Frequency range	0.05		12	GHz
Small Signal Gain	30	33		dB
Small Signal Gain Flatness		±3		dB
Output P1dB	30			dBm
Output Psat		31		dBm
Second Harmonic		-20		dBc
Spurious		-60		dBc
Input VSWR		2		:1
Output VSWR		2		:1
Noise Figure		8		dB
DC Voltage		+24		V DC
DC Supply Current		790	1000	mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-40℃ to +60℃	
Non-operating Temperature*	-50℃ to +70℃	
Relative humidity	100%RH at 35℃，95%RH at 40℃	
RF Input/Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Altitude	50,000	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	35*52*12	mm
Weight	50	g

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

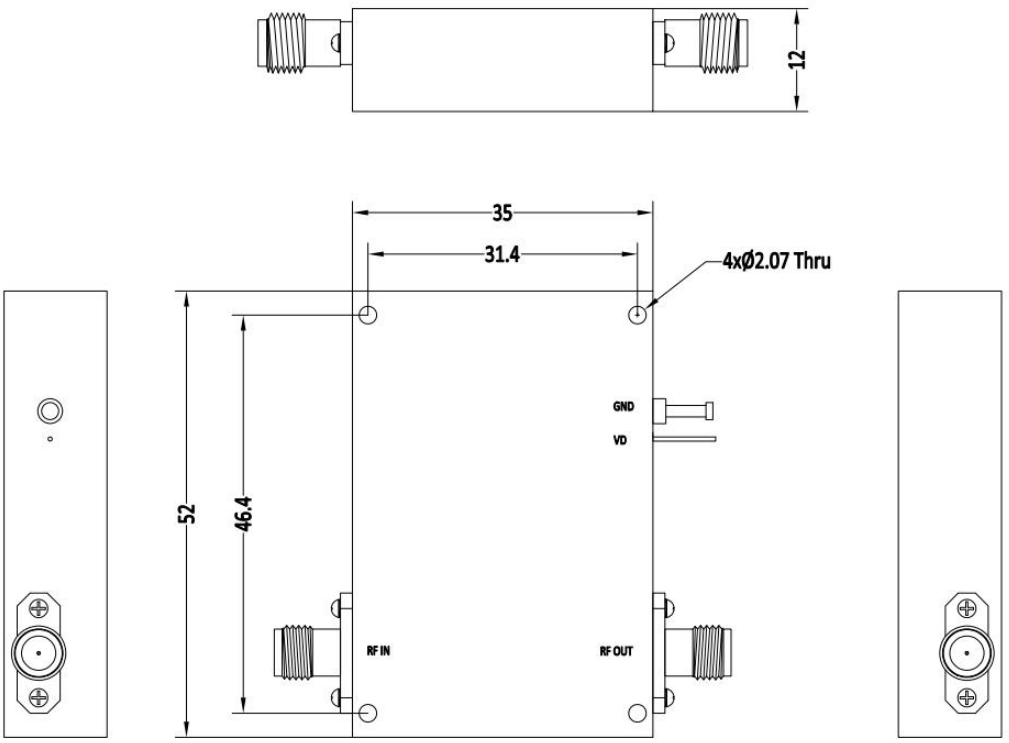
Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm

PA-50M-12G-1.2

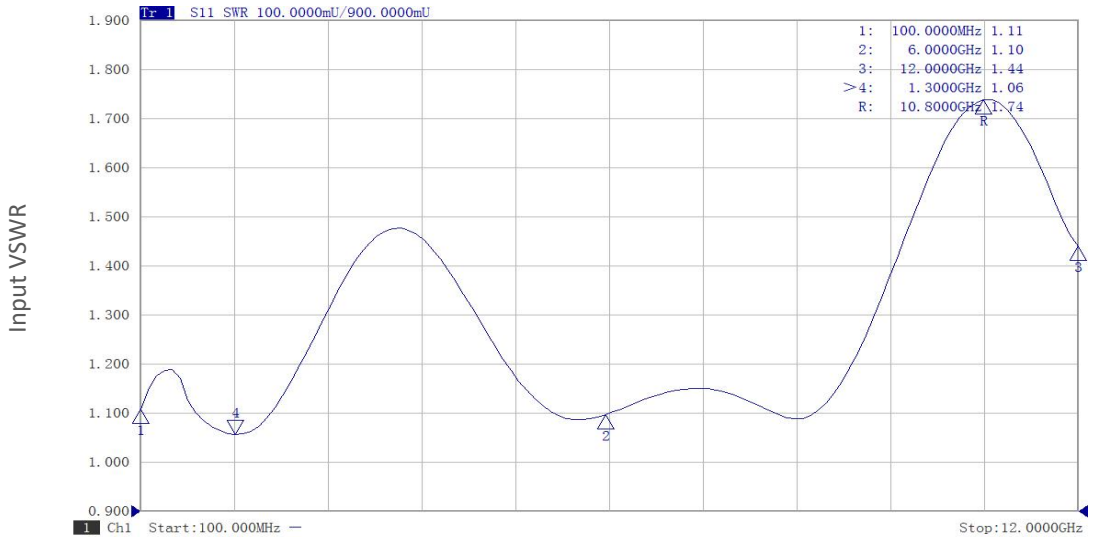


Ordering Information:

Base Number	Description	Optional
PA-50M-12G-1.2	Power Amplifier, 0.05-12GHz, Gain:30dB,Psat:1.2W,+24V DC	Without Heatsink
PA-50M-12G-1.2-HS	Power Amplifier, 0.05-12GHz, Gain:30dB,Psat:1.2W,+24V DC	With Heatsink

Typical Performance Data:

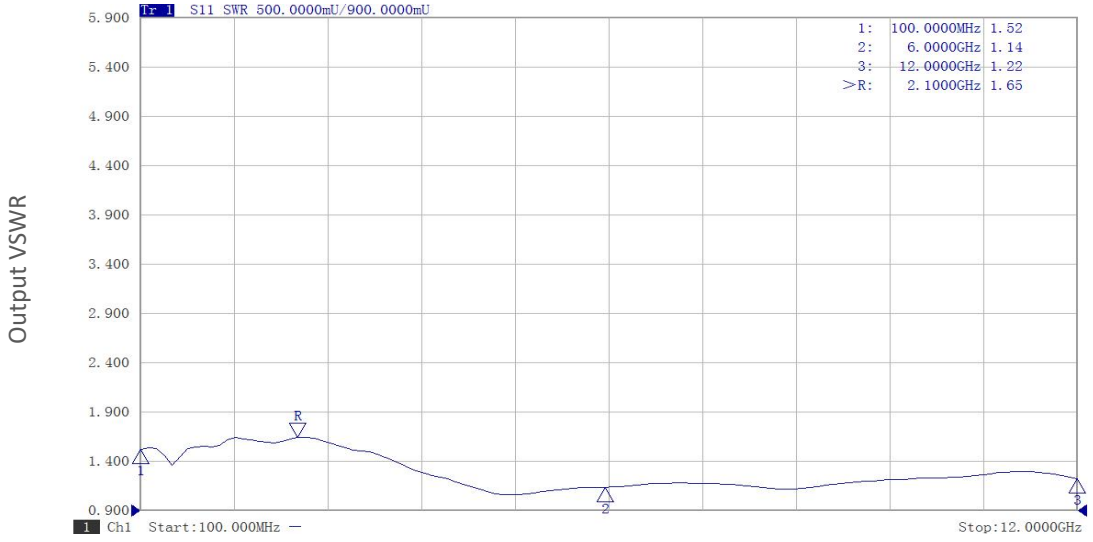
Input VSWR vs Frequency



Input VSWR

Frequency(GHz)

Output VSWR vs Frequency



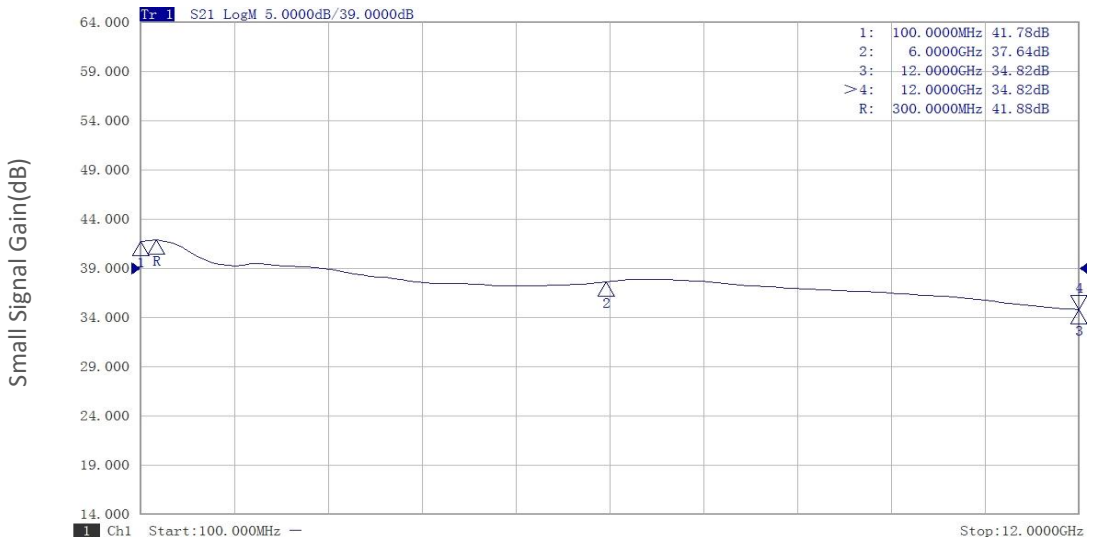
Output VSWR

Frequency(GHz)

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:

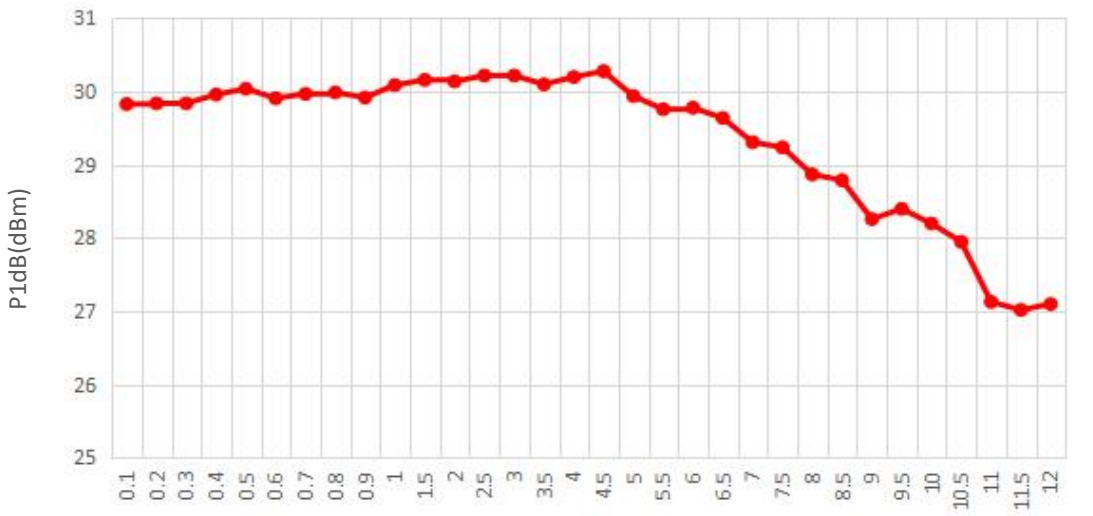
Small Signal Gain vs Frequency



Small Signal Gain(dB)

Frequency(GHz)

P1dB vs Frequency



P1dB(dBm)

Frequency(GHz)

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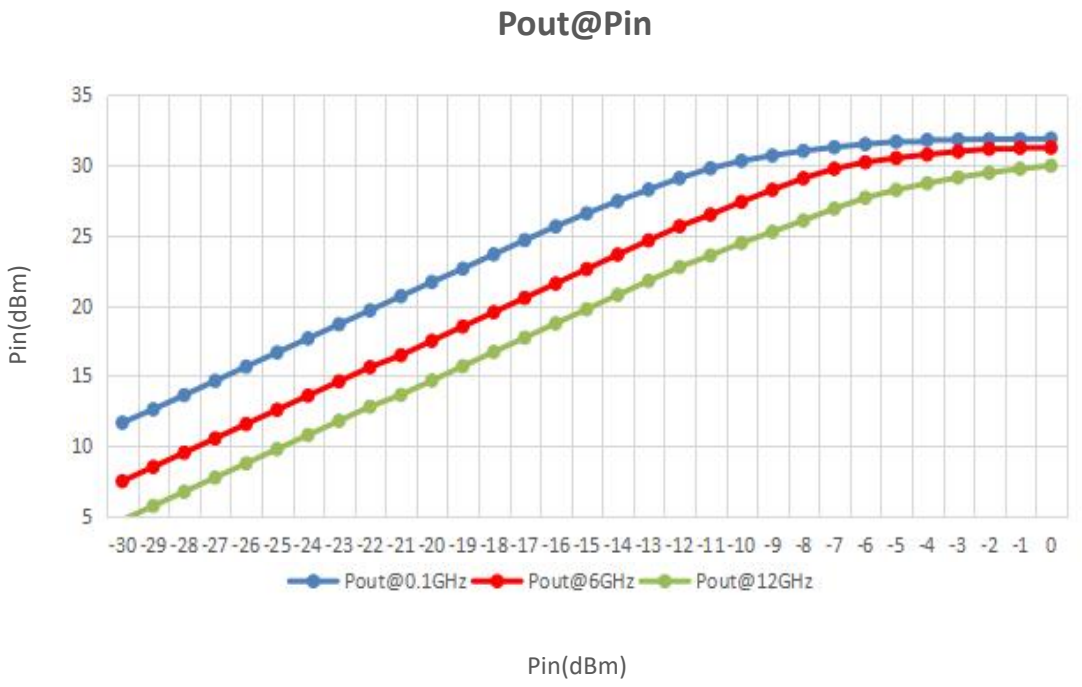
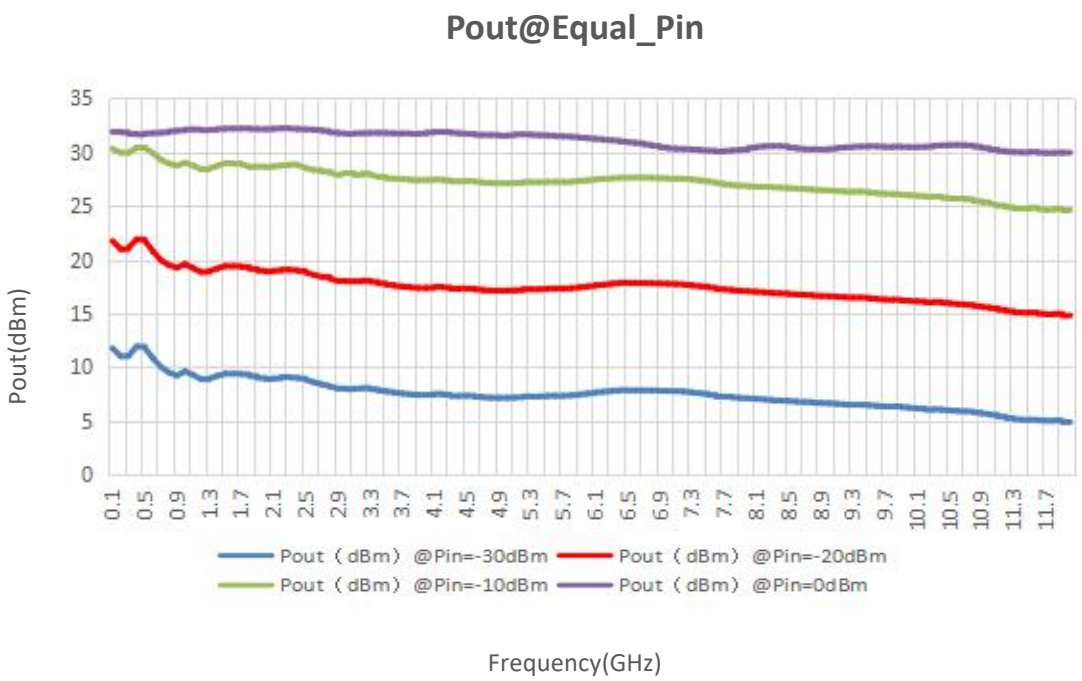
Typical Performance Data:





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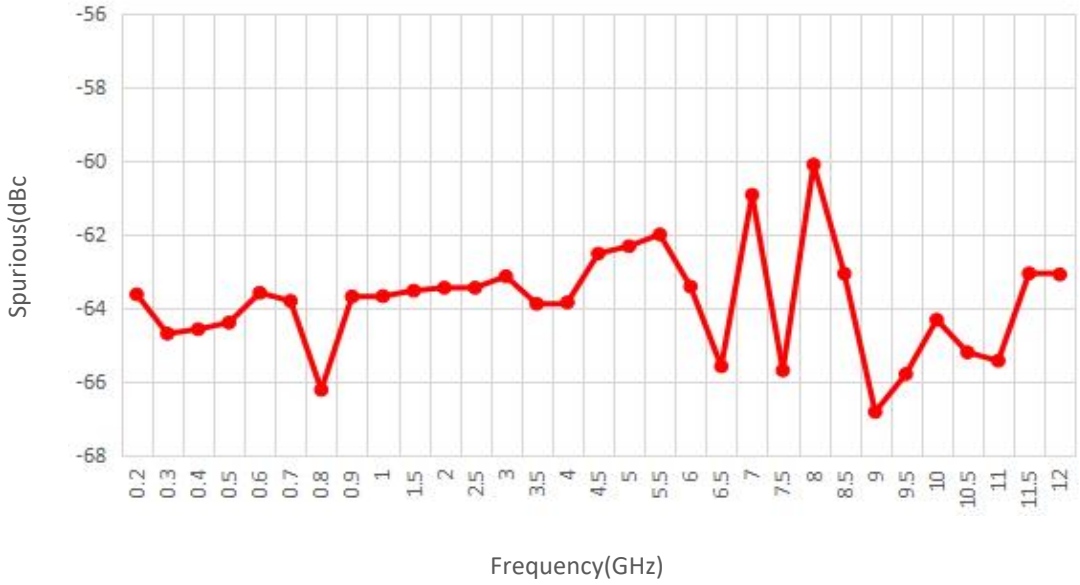
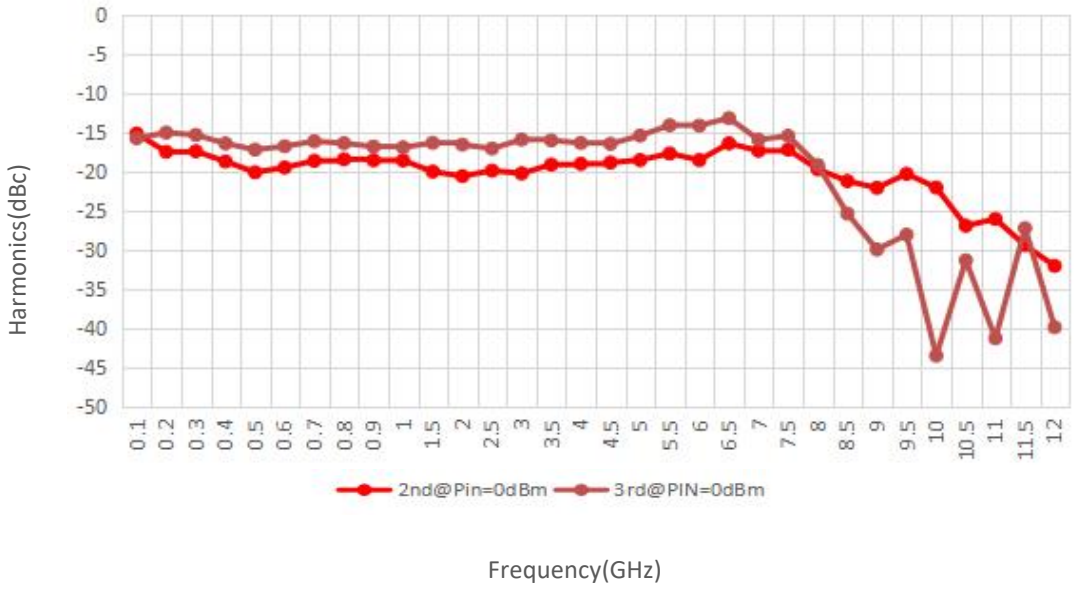
Typical Performance Data:

Spurious VS Frequency



Harmonics vs Frequency



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