

Power Amplifier

0.05-12GHz/30dB Gain/31dBm Psat

Model: TLPA0.05G12G-30-30

TLPA0.05G12G-33-30 is a power amplifier with a minimum small signal gain of 30 dB and a nominal Psat of 31 dBm across the frequency range of 0.05 to 12 GHz. 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.

Features:

- Frequency range: 0.05-12GHz
- Gain: 30dB Min
- Output Power Psat: 31dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.05		12	GHz
Small Signal Gain	30	33		dB
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	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	35*52*12	mm
Weight	50	g

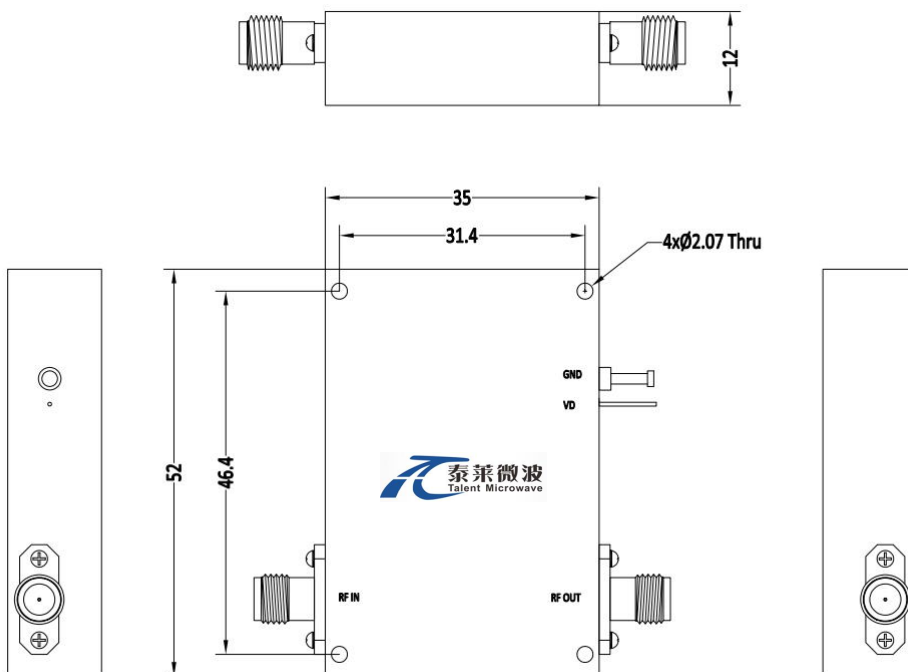
Absolute Maximum Ratings:

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



Outline Drawing:

Unit:mm



*****Heat Sink Required During Operation**



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity	100%RH at 35°C, 95%RH at 40°C			%
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			

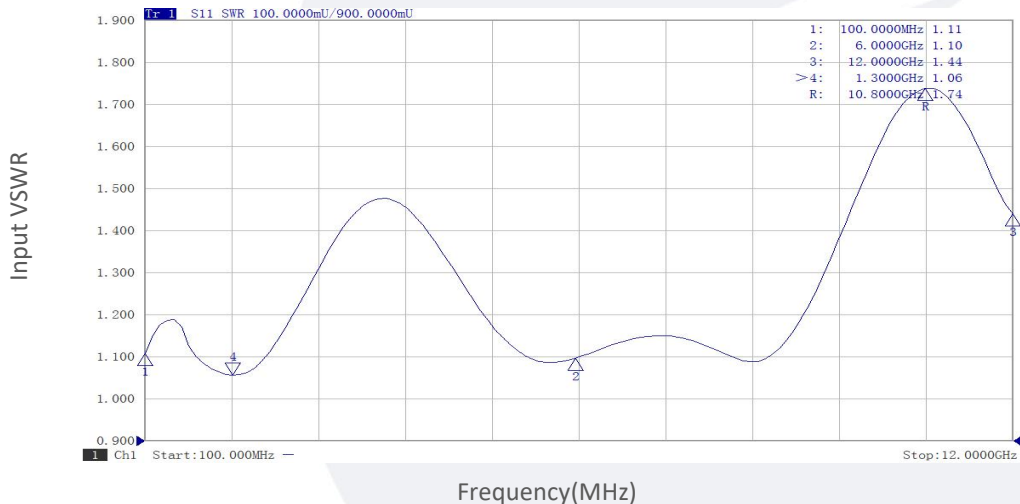
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA0.05G12G-30-30	Power amplifier 0.05-12GHz,Gain:30dB,Psat:31dBm,+24V DC,Without Heatsink.	Rev.1.1
TLPA0.05G12G-30-30-HS	Power amplifier 0.05-12GHz,Gain:30dB,Psat:31dBm,+24V DC,With Heatsink.	Rev.1.1

Typical Performance Data:

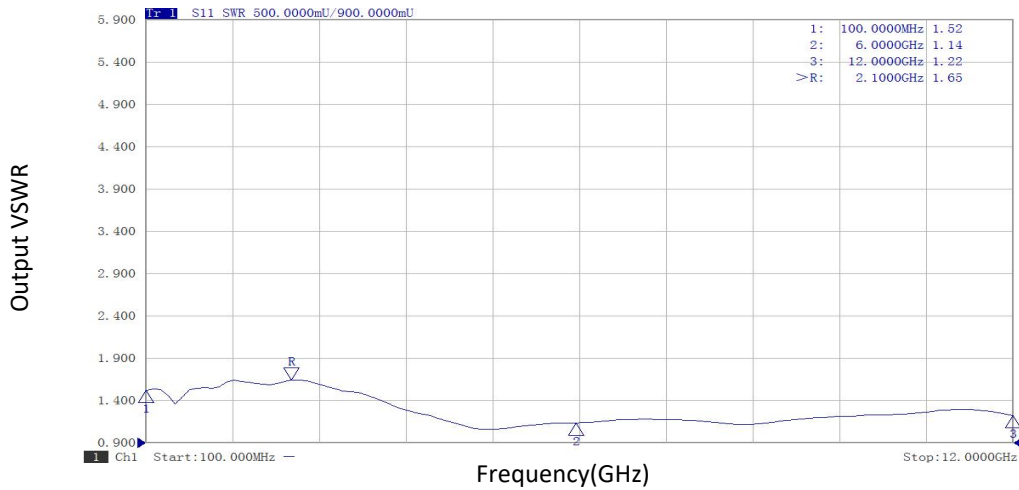
Input VSWR vs Frequency



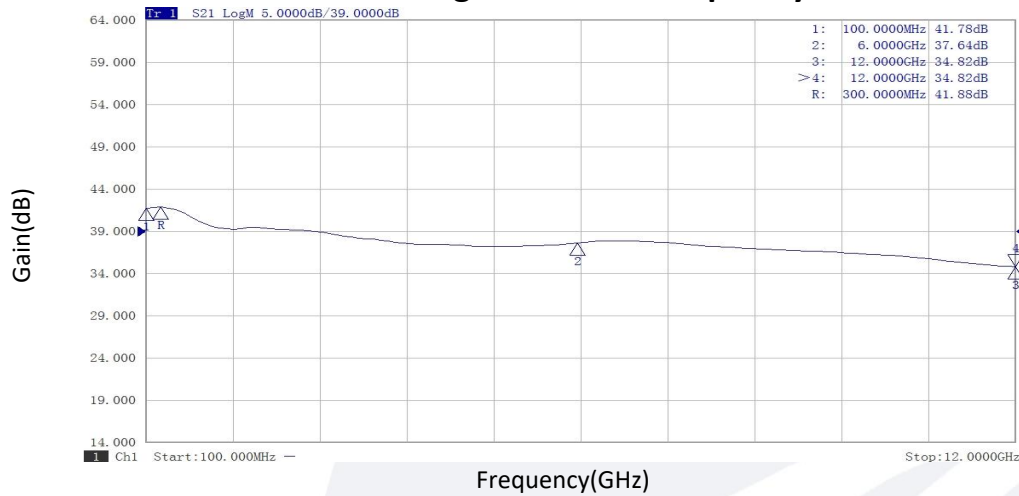
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

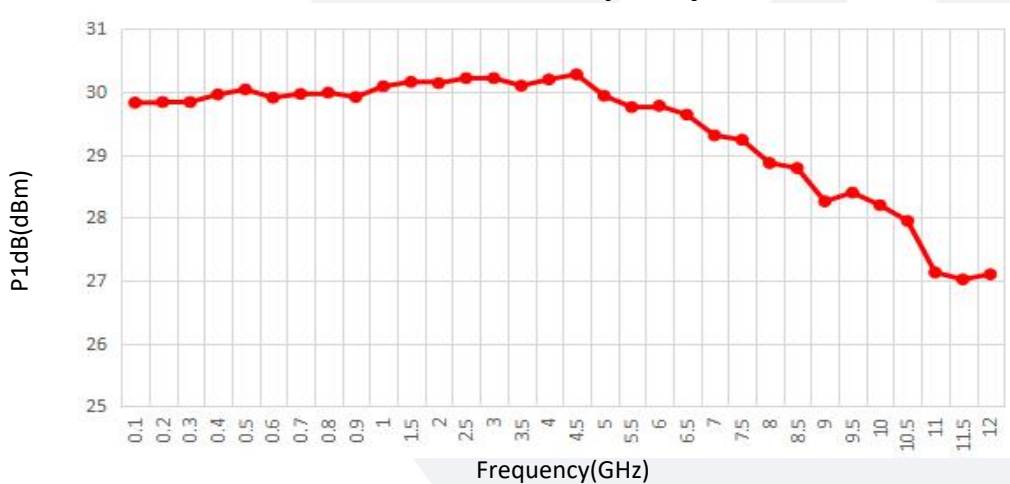
Output VSWR vs Frequency



Small Signal Gain vs Frequency



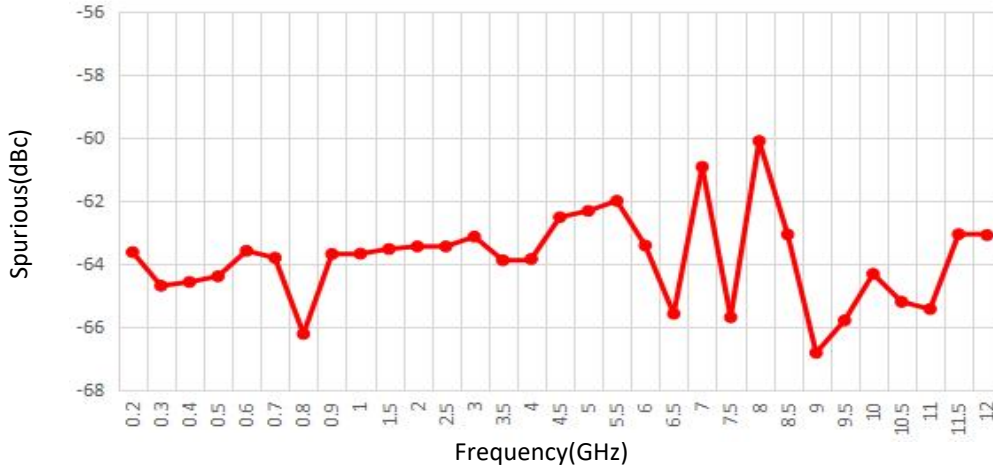
P1dB vs Frequency



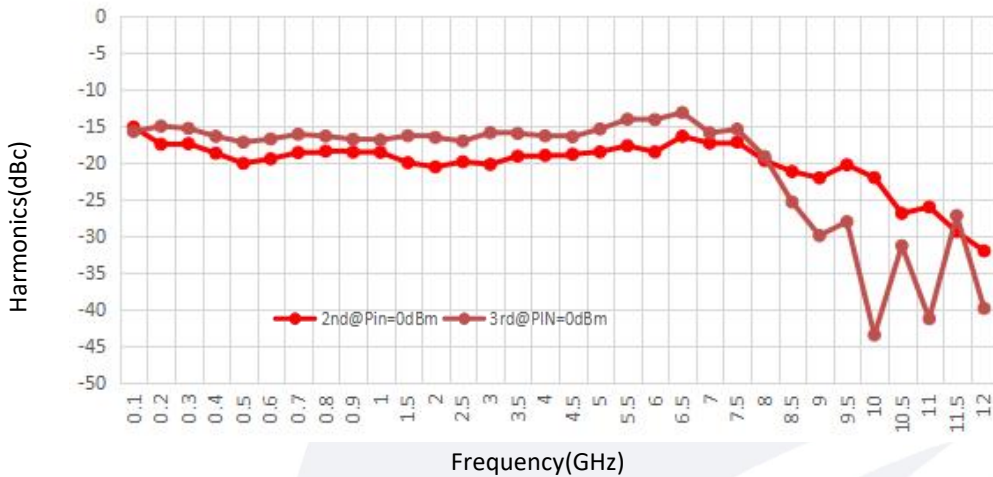
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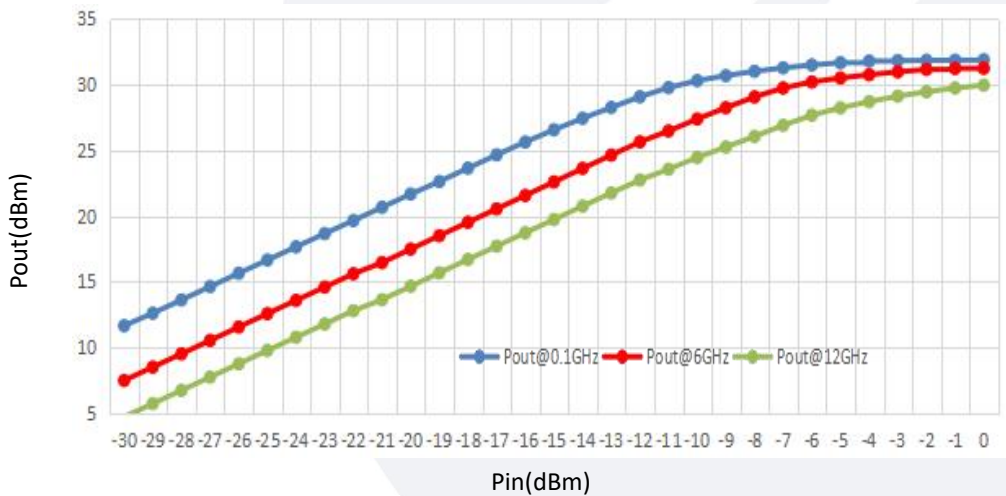
Spurious VS Frequency



Harmonics VS Frequency

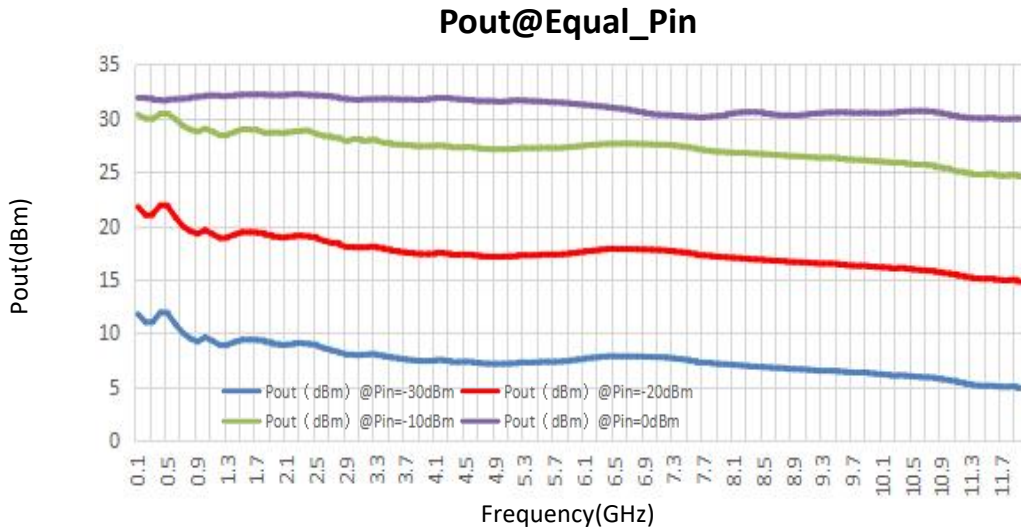


Pout@Pin



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