

Power Amplifier

2-6GHz/45dB Gain/47dBm Psat

Model: TLPA2G6G-45-47

TLPA2G6G-45-47 is a power amplifier with a typical small signal gain of 45 dB and a nominal Psat of 47 dBm across the frequency range of 2 to 6 GHz. The DC power requirement for the amplifier is +28 VDC/9 A. The input and output port configuration offers coax adapter structure with SMA Female.

Features:

- Frequency range: 2-6GHz
- Gain: 45dB Typ
- Output Power Psat: 47dBm 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	2		6	GHz
Gain	43	45		dB
Gain Flatness		±3		dB
Output P1dB		45		dBm
Output Psat		47		dBm
Harmonics		-15	-13	dBc
Input VSWR		1.5	2.0	:1
DC Voltage		+28		V DC
DC Supply Current		9		A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	150*90*20	mm

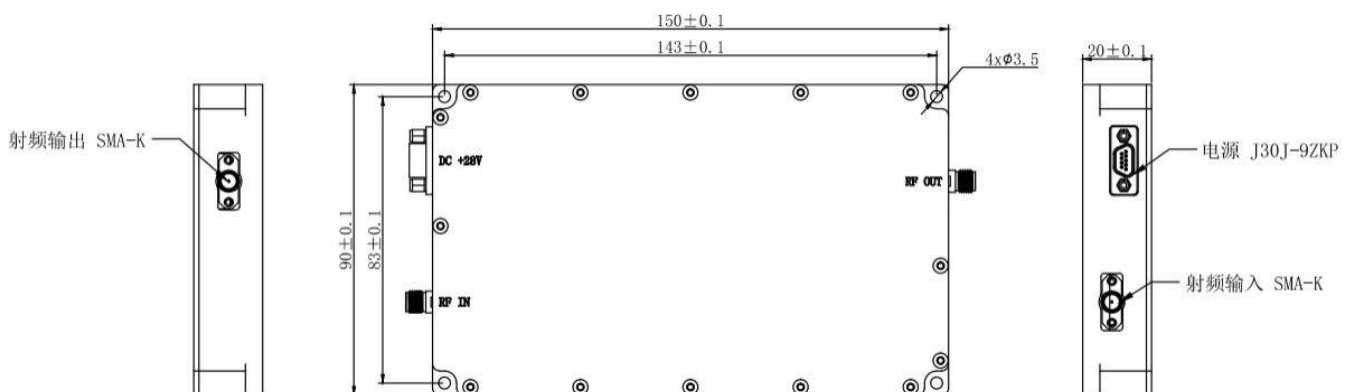
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+28 V
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*	-20		+50	°C
Non-operating Temperature*	-30		+60	°C
Relative humidity		95		%
Altitude	50000			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			

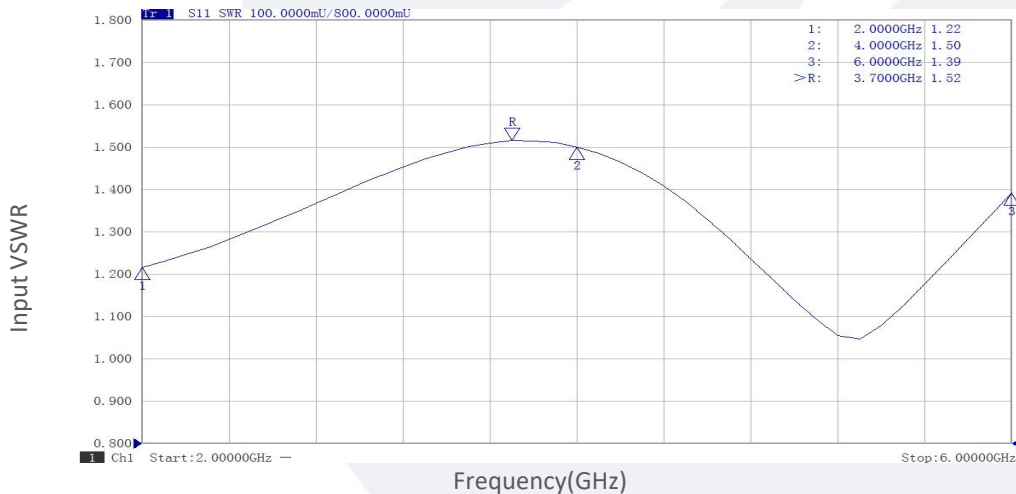
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA2G6G-45-47	Power amplifier 2-6GHz, Gain:45dB,Psat:47dBm,+28 VDC,Without Heatsink.	Rev.1.1
TLPA2G6G-45-47-HS	Power amplifier 2-6GHz, Gain:45dB,Psat:47dBm,+28 VDC,With Heatsink.	Rev.1.1

Typical Performance Data:

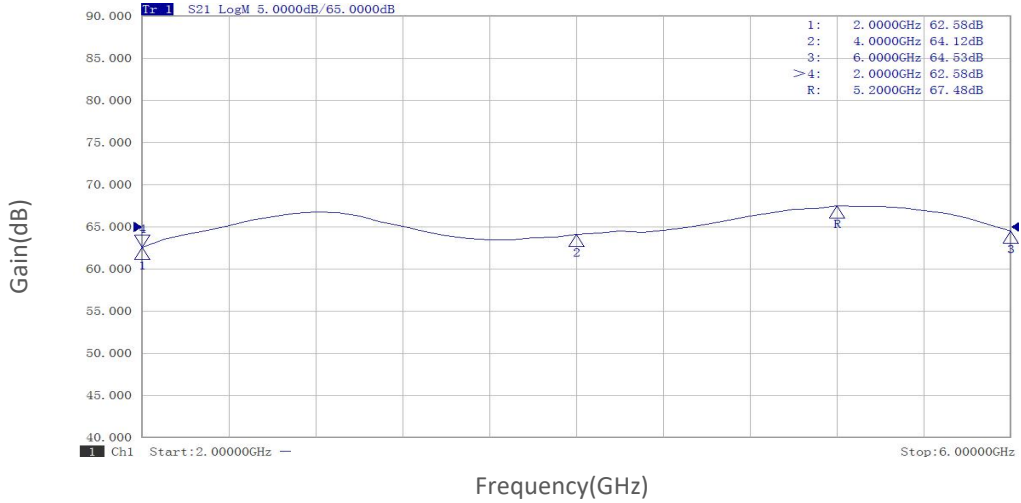
Input VSWR vs Frequency



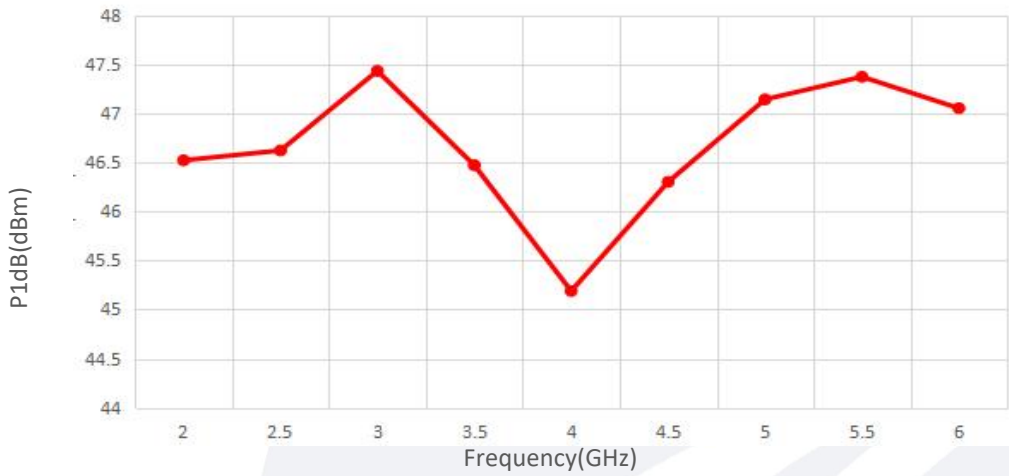
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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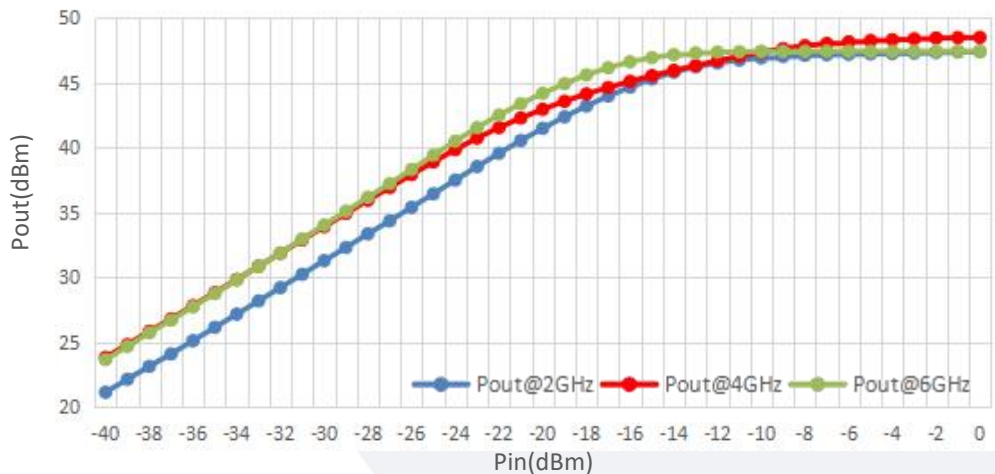
Gain vs Frequency



P1dB vs Frequency



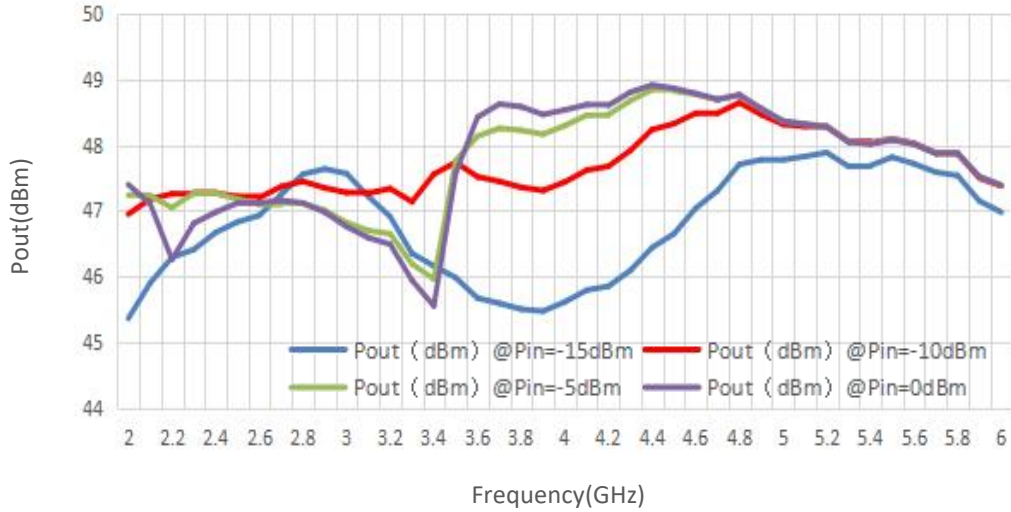
Pout@Pin



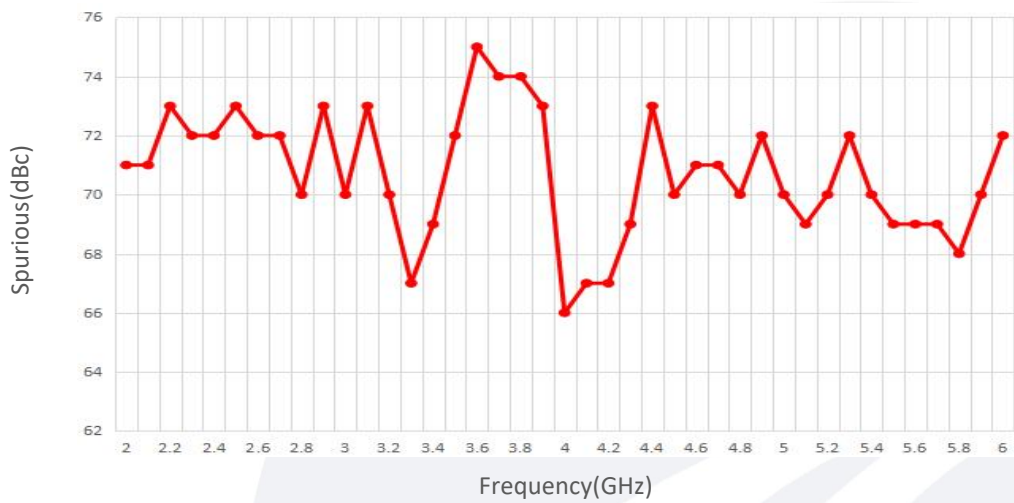
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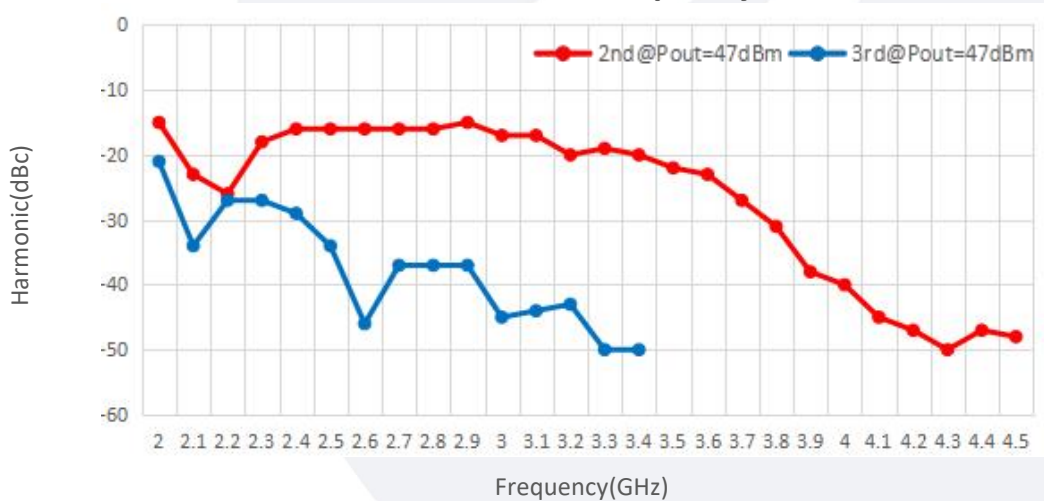
Pout@Equal Pin



Spurious vs Frequency



Harmonic vs Frequency



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