

Power Amplifier

8-12GHz/47dB Gain/47dBm Psat

Model: TLPA8G12G-47-47

TLPA8G12G-47-47 is a power amplifier with a minimum power gain of 47 dB and a minimum Psat of 47 dBm across the frequency range of 8 to 12 GHz. The DC power requirement for the amplifier is +28 VDC/11 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 8-12GHz
- Gain: 47dB Min
- Output Power Psat: 47dBm Min
- 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	8		12	GHz
Power Gain	47			dB
Gain Flatness@full band		±3		dB
Output Psat	47			dBm
Spurious@Pout=47dBm			-50	dBc
2nd Harmonic@Pout=47dBm			-15	dBc
Input VSWR			2	:1
DC Voltage	+24	+28	+29	V DC
DC Supply Current		11		A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Power Supply Connector	DSUB-7W2	A1:+28V A2:GND Pin1~5:NC
Size	150*90*20	mm
Weight	≤500	g

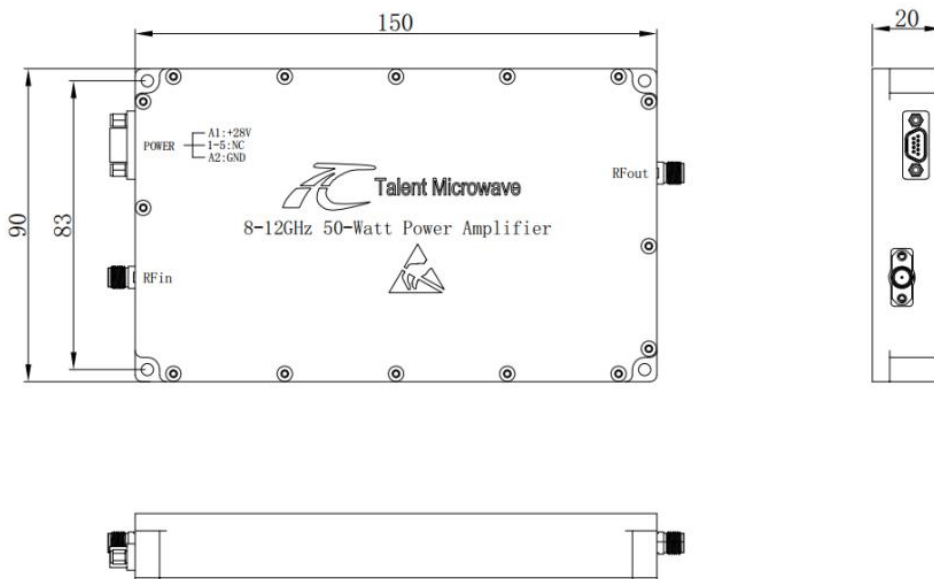
Absolute Maximum Ratings:

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*	-40		+50	°C
Non-operating Temperature*	-50		+60	°C
Relative humidity		95		%
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			

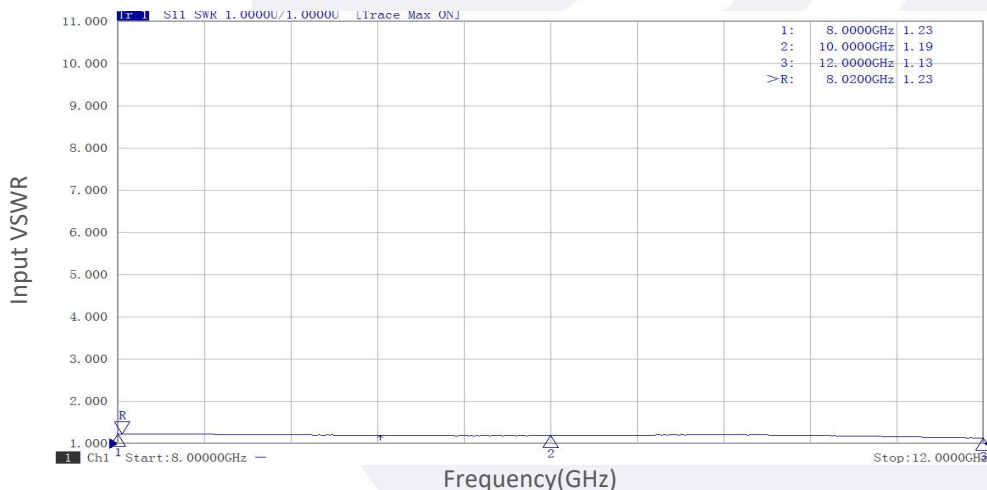
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA8G12G-47-47	Power amplifier, 8-12GHz, Gain:47dB,Psat:47dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA8G12G-47-47-HS	Power amplifier, 8-12GHz, Gain:47dB,Psat:47dBm,+28V DC,With Heatsink	Rev.1.1

Typical Performance Data:

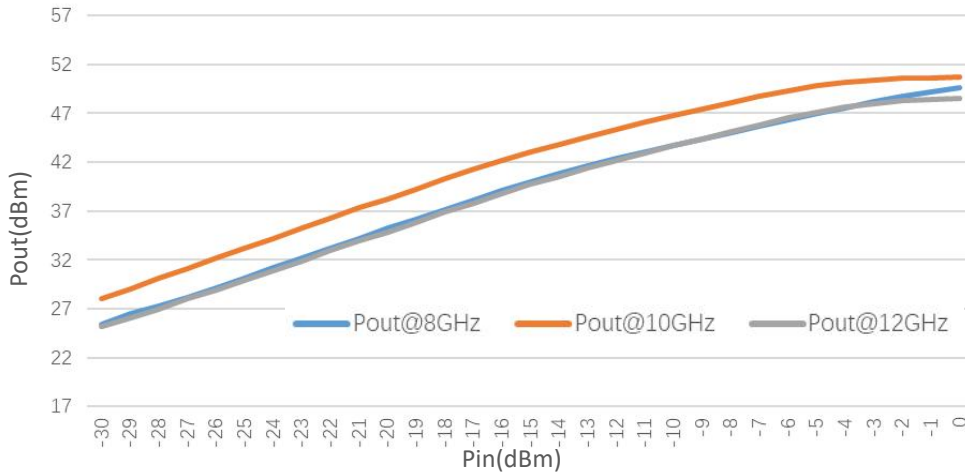
Input VSWR vs Frequency



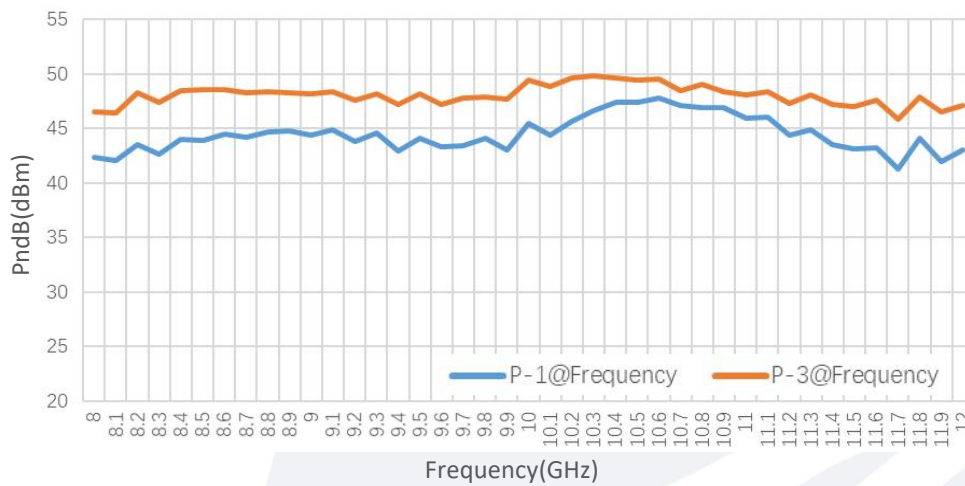
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

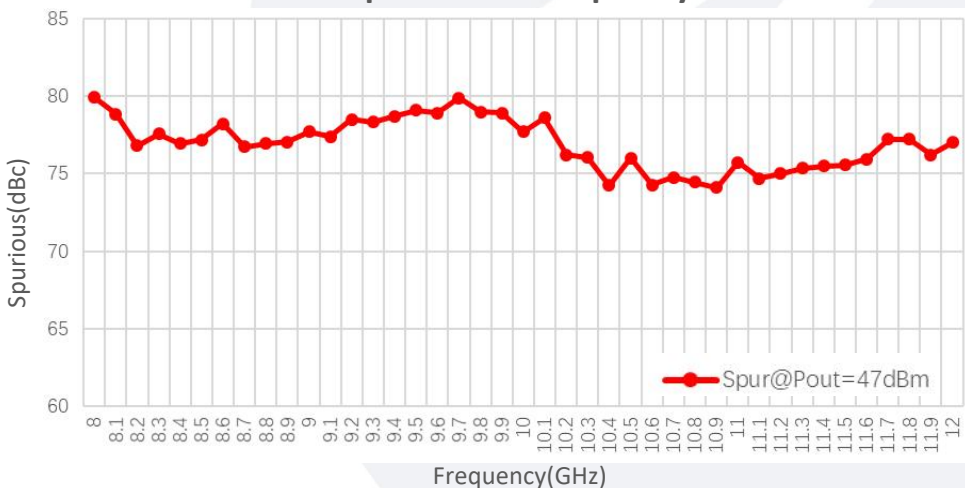
Pout@Pin



PndB vs Frequency



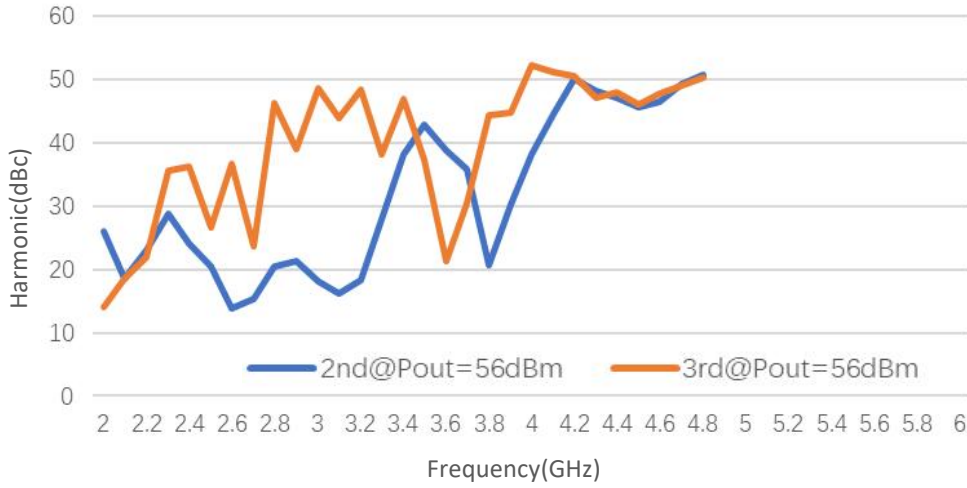
Spurious vs Frequency



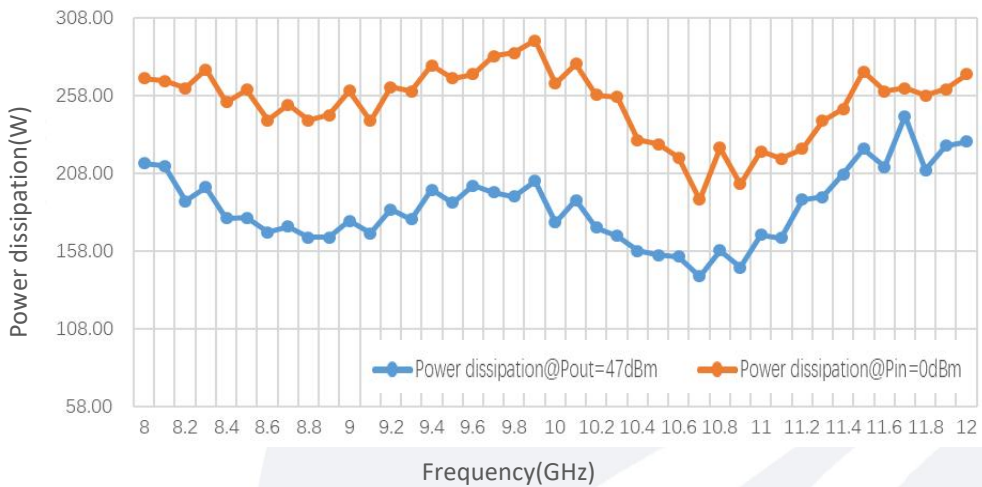
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Typical Performance Data:

Harmonic vs Frequency



Power dissipation



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