

Power Amplifier

0.5-3GHz /47 dB Gain/47 dBm Psat

Model: TLPA0.5G3G-47-47

TLPA0.5G3G-47-47 is a power amplifier with a typical small signal gain of 47 dB and Psat of 47 dBm across the frequency range of 0.5 to 3 GHz. The DC power requirement for the amplifier is +32 VDC/10A. The input and output port configuration offers coax adapter structure with SMA Female.

Features:

- Ultra Wide Band: 0.5-3GHz
- Small Signal 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	0.5-3			GHz
Gain	47			dB
Gain Flatness			±3	dB
Output Psat	47			dBm
Spurious@Pout=50dBm			-65	dBc
Harmonics@Pout=50dBm			-10	dBc
Input VSWR			1.8	:1
DC Voltage		+32	+33	V DC
DC Supply Current		10		A
Impedance	50			Ohms

Mechanical Specifications:

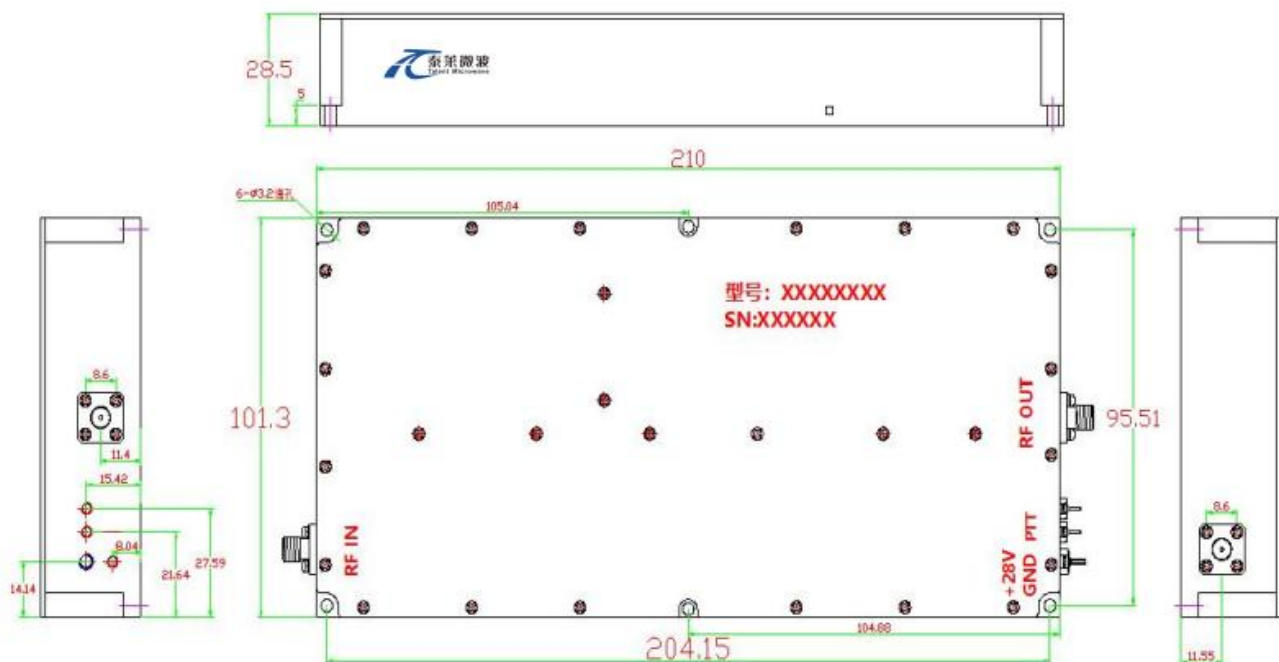
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Power Interface	Cap Feed	
Size	35*40*12	mm
Weight	/	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+33V
RF Input Power	6dBm
EESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-25		+55	°C
Non-operating Temperature*	-20		+75	°C
Relative humidity		95		%
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			

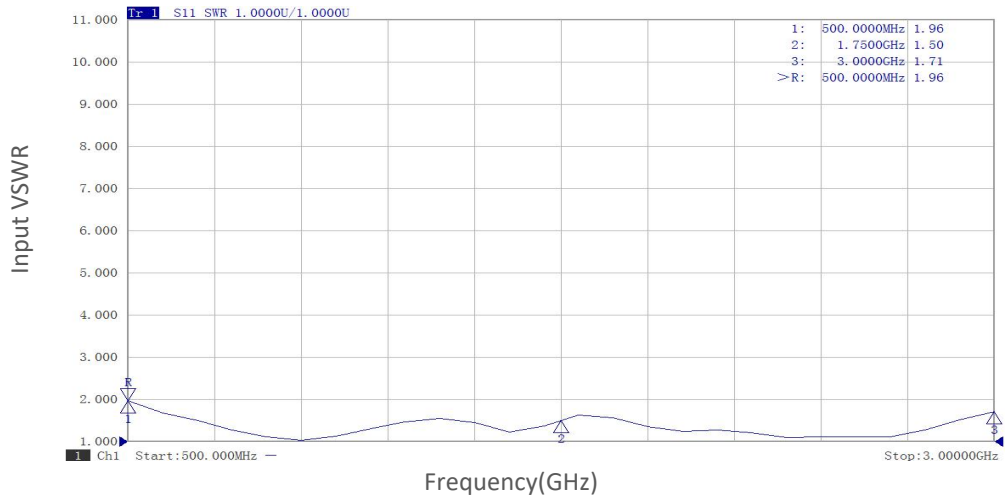
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

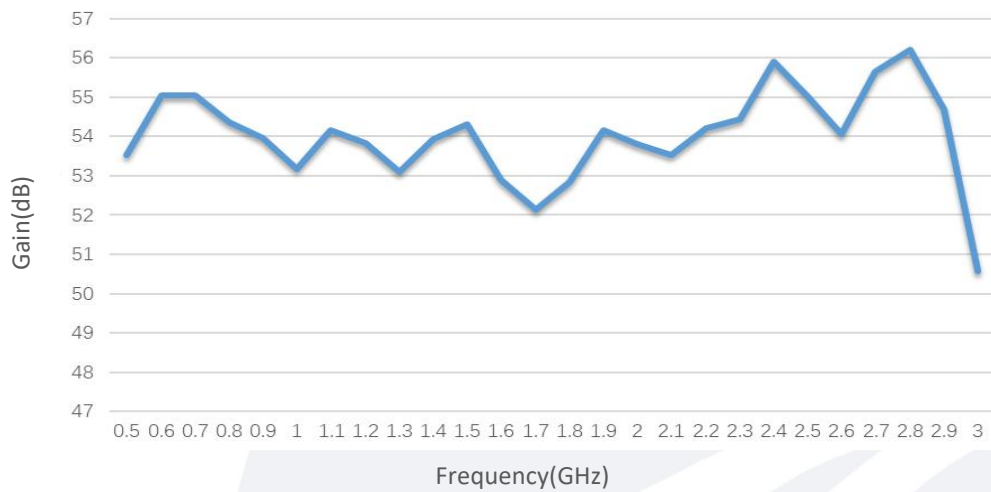
Base Number	Description	Revision
TLPA0.5G3G-47-47	Power amplifier 0.5-3GHz,Gain:47dB,Psat:47dBm,+32V DC,Without Heatsink.	Rev.1.1
TLPA0.5G3G-47-47-HS	Power amplifier 0.5-3GHz,Gain:47dB,Psat:47dBm,+32V DC,With Heatsink.	Rev.1.1

Typical Performance Data:

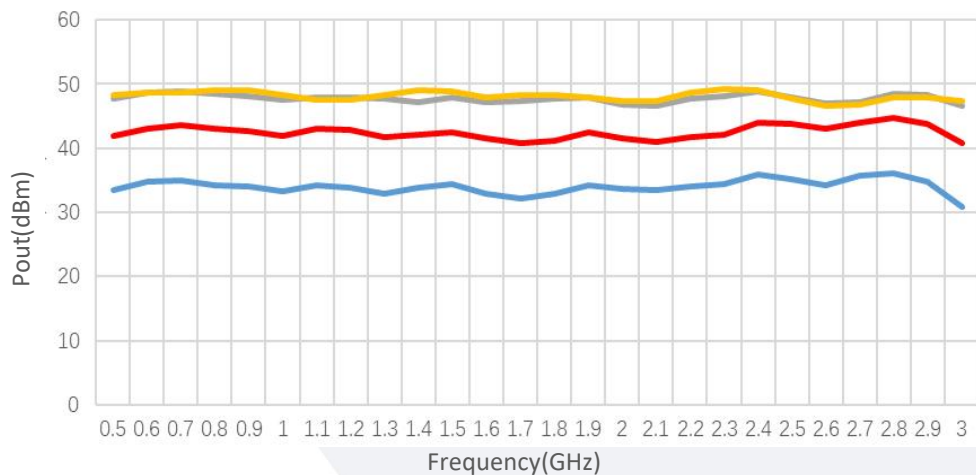
Input VSWR vs Frequency



Gain vs Frequency



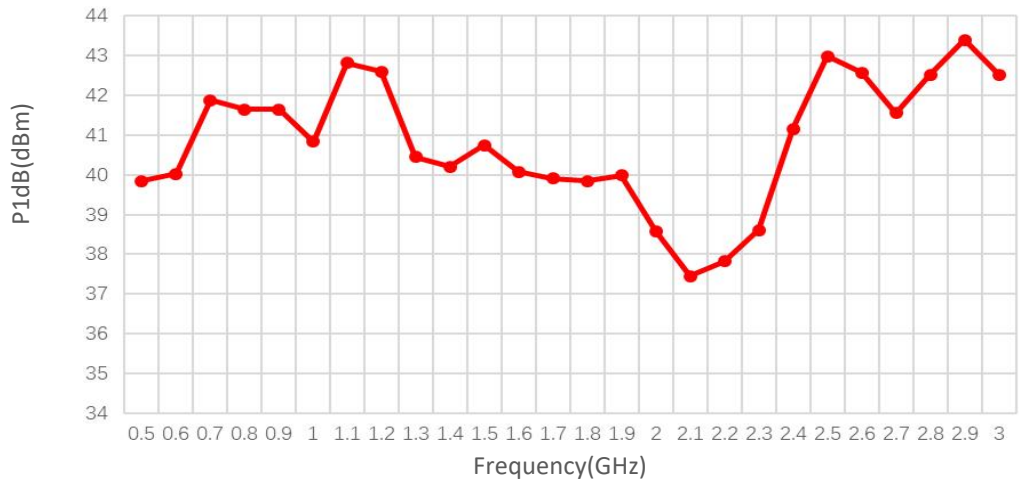
Pout@Equal_Pin



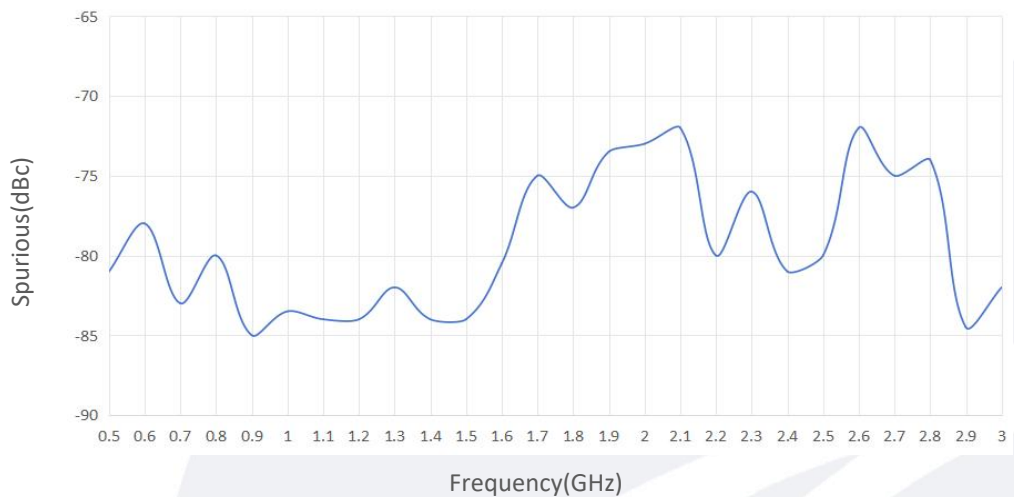
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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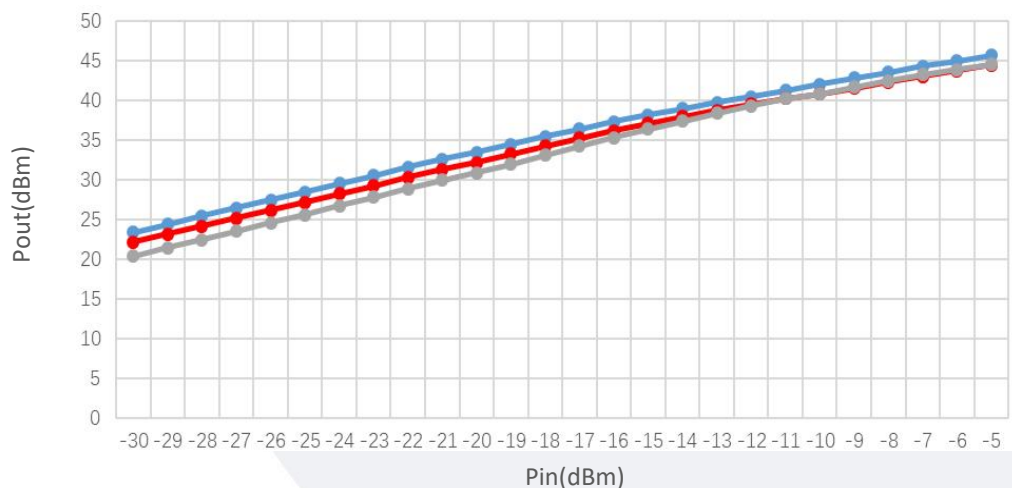
P1dB vs Frequency



Spurious vs Frequency



Pout@Pin



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