

## Power Amplifier

0.8-18GHz/37dB Gain/37dBm Psat

Model: TLPA0.8G18G-37-37

TLPA0.8G18G-37-37 is a power amplifier with a minimum power gain of 37 dB and a minimum Psat of 37 dBm across the frequency range of 0.8 to 18 GHz. The DC power requirement for the amplifier is +28 VDC/3 A. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 0.8-18GHz
- Gain: 37dB Min
- Output Power Psat: 37dBm 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	0.8		18	GHz
Power Gain	37			dB
Gain Flatness		±3.5		dB
Output Psat	37			dBm
Spurious@Pout=37dBm			-60	dBc
Harmonic@Pout=37dBm			-10	dBc
Input VSWR			2	:1
Load VSWR			3	:1
DC Voltage		+28		V DC
DC Supply Current			3	A
Impedance		50		Ohms

### Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Feedthru capacitors	
Size	60*60*11(Without heatsink) 188*125*146(With heatsink)	mm
Weight	≤200	g

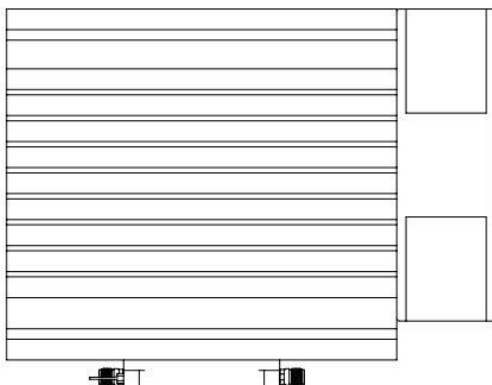
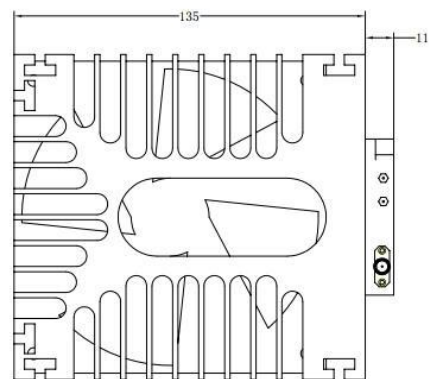
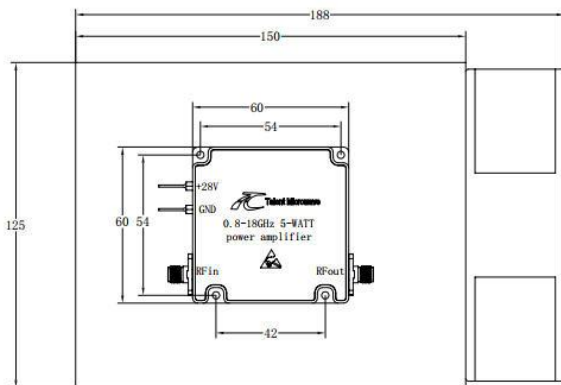
### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+29 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



### Outline Drawing:

Unit:mm



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		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			

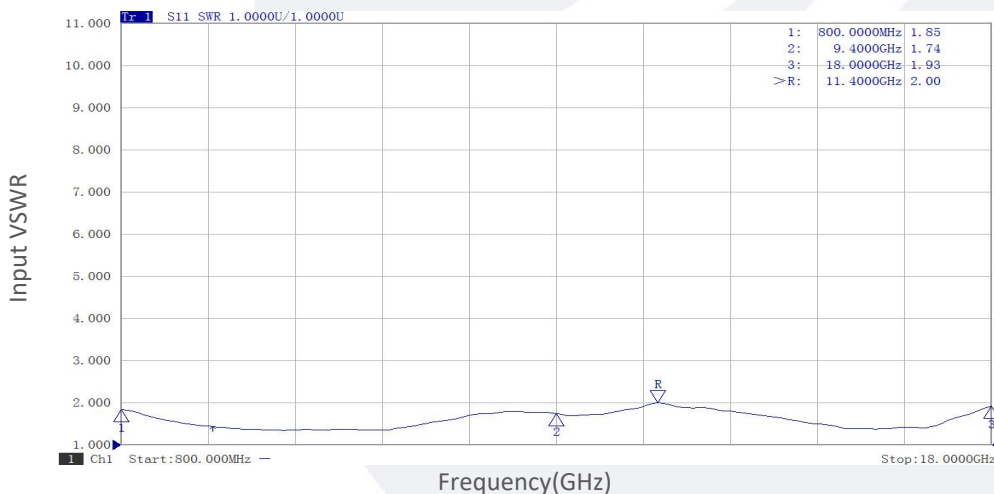
\*Note: For a wider temperature range, please consult the manufacturer.

## Ordering Information:

Base Number	Description	Revision
TLPA0.8G18G-37-37	Power amplifier 0.8-18GHz, Gain:37dB,Psat:37dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA0.8G18G-37-37-HS	Power amplifier 0.8-18GHz, Gain:37dB,Psat:37dBm,+28V DC,With Heatsink	Rev.1.1

## Typical Performance Data:

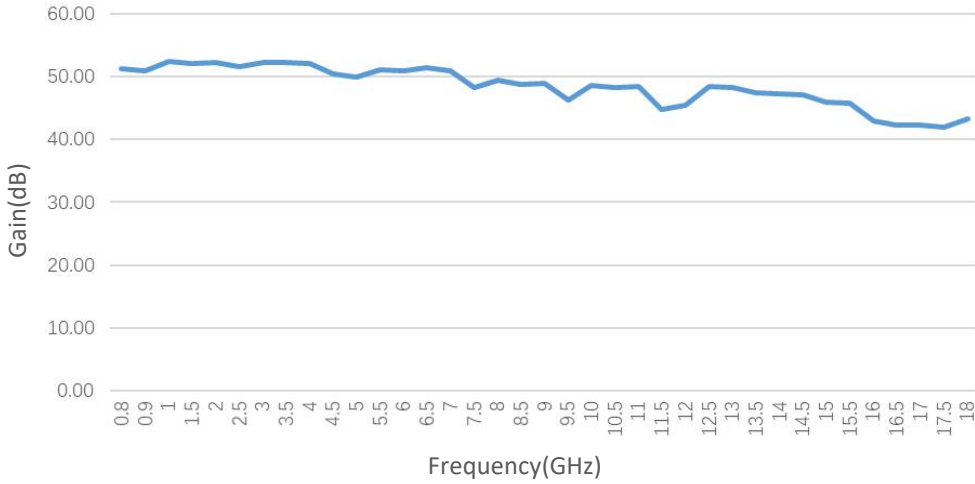
### Input VSWR vs Frequency



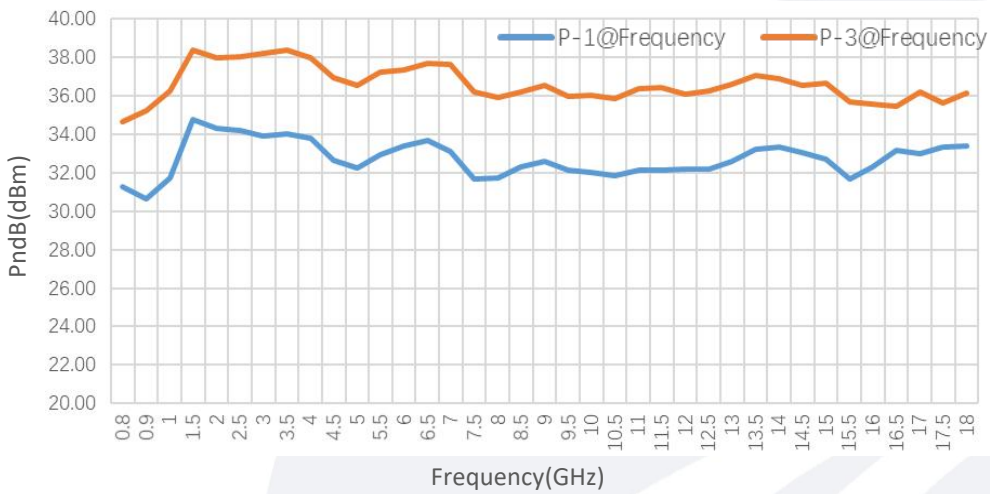
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**Typical Performance Data:**

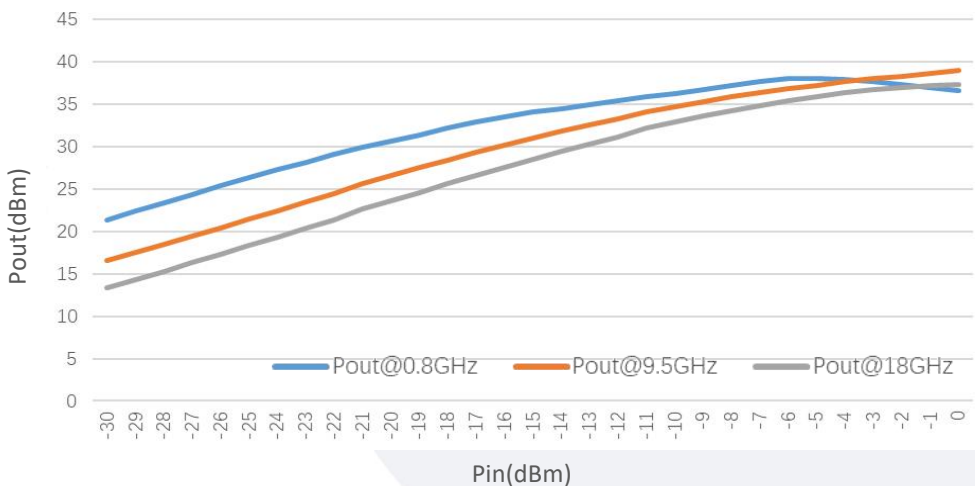
**Power Gain vs Frequency**



**PndB vs Frequency**



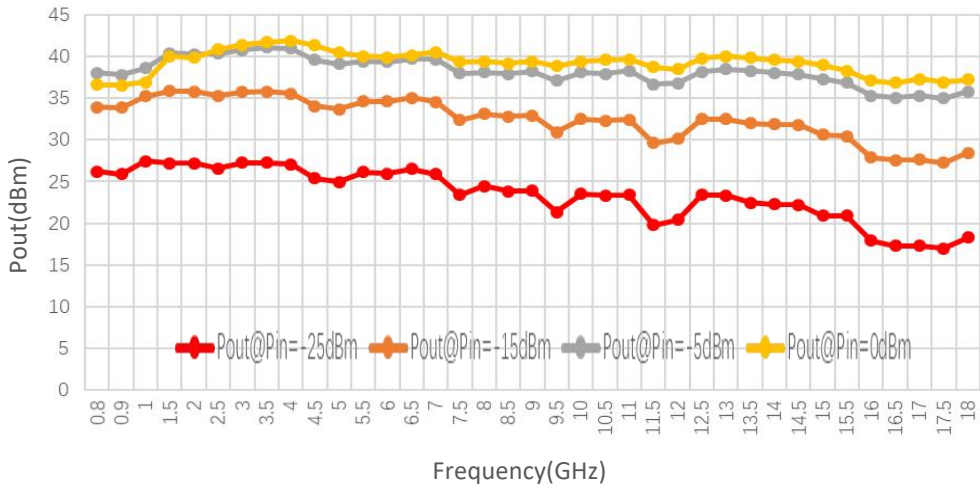
**Pout@Pin**



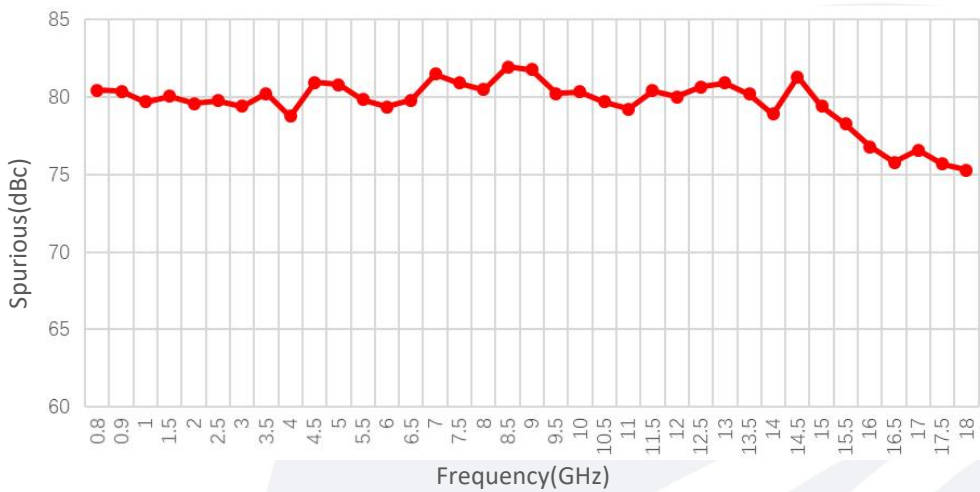
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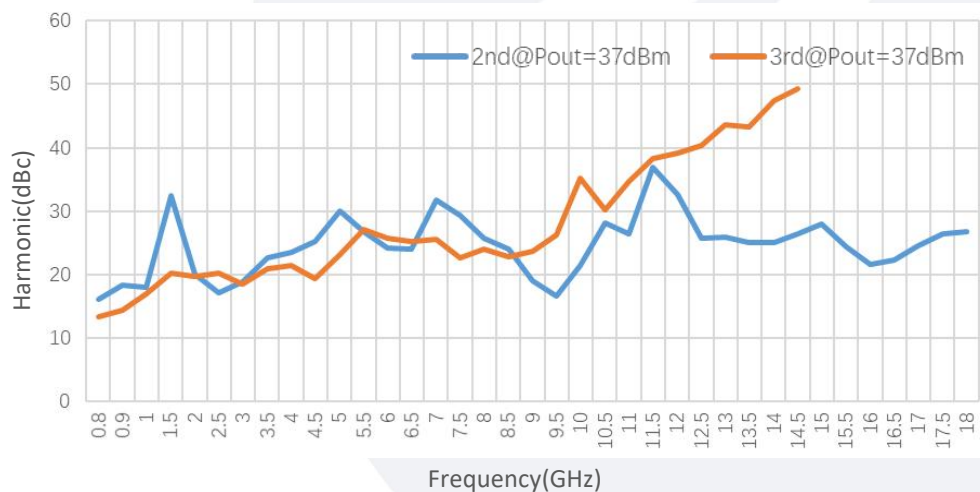
#### Pout@Equal\_Pin



#### Spurious vs Frequency



#### Harmonic vs Frequency



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