

Power Amplifier

6-18GHz /47dB Gain/48 dBm Psat

Model: TLPA6G18G-47-48

TLPA6G18G-47-48 is a power amplifier with a typical small signal gain of 47 dB and a nominal Psat of 48 dBm across the frequency range of 6 to 18 GHz. The DC power requirement for the amplifier is +28 VDC/800 W. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 6-18GHz
- Gain: 47dB Min
- Output Power Psat: 48dBm 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	6-18			GHz
Power Gain	47			dB
Gain Flatness		±3.5		dB
Output Psat	47	48		dBm
Spurious@Pout=47dBm			-50	dBc
Harmonic@Pout=47dBm		-13		dBc
Input VSWR			2	:1
DC Voltage		28		V DC
Power Consumption		800		W
Impedance	50			Ohms

Mechanical Specifications:

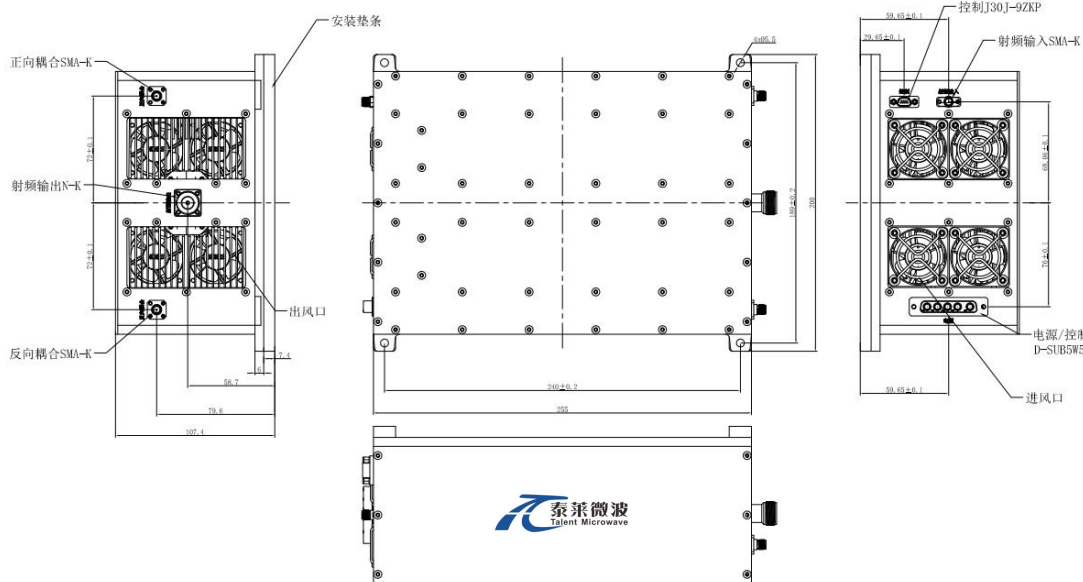
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	J30J-9ZKP	
Size	255*200*107.4	mm
Weight	500	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



***Heat Sink Required During Operation



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Supply Connector(J30J-9ZKP):

J30J-9ZKP	
Pin	Function
1	EN
2	TEM sensor
3	Voltage monitoring
4	Current monitoring
5	GND
6~9	NC

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+40	°C
Non-operating Temperature*	-30		+50	°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			

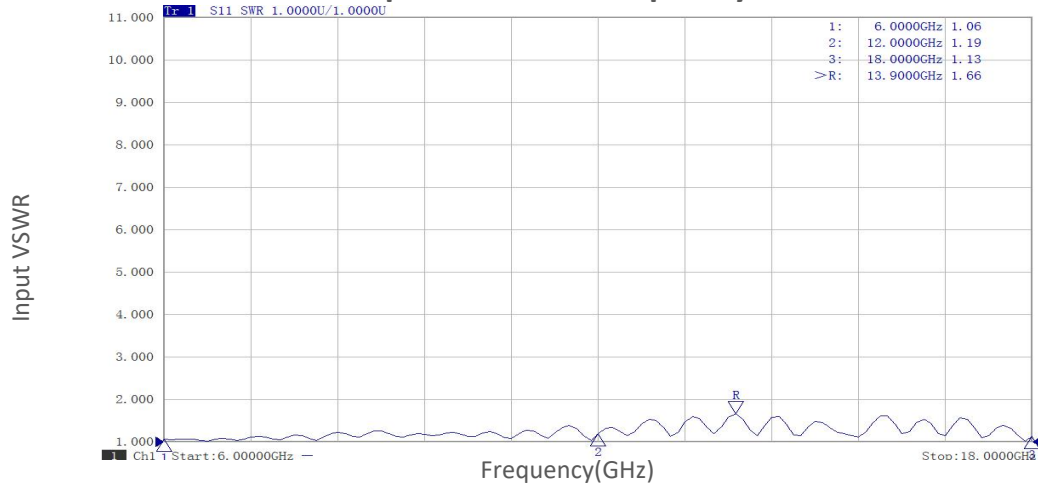
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

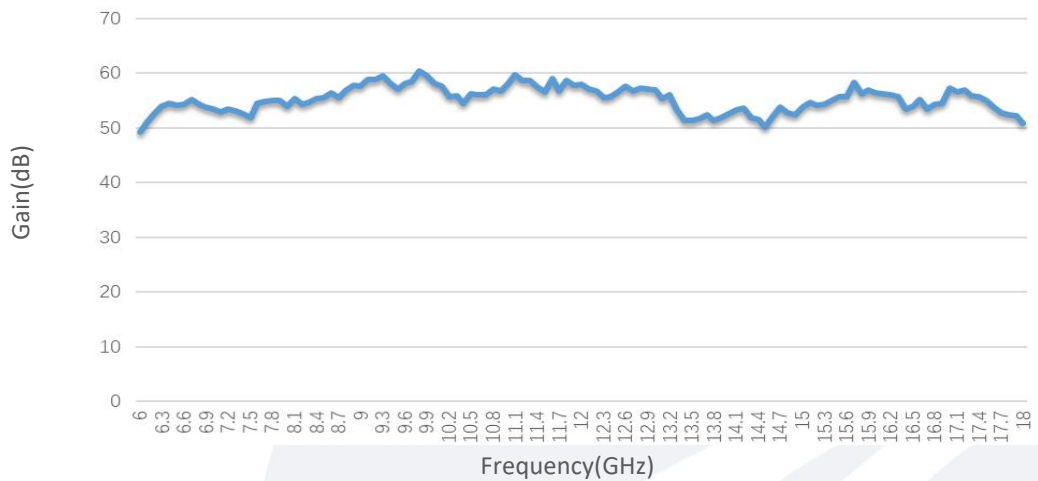
Base Number	Description	Revision
TLPA6G18G-47-48	Power amplifier 6-18GHz,Gain:47dB,Psat:48dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA6G18G-47-48-HS	Power amplifier 6-18GHz,Gain:47dB,Psat:48dBm, +28V DC,With Heatsink	Rev.1.1

Typical Performance Data:

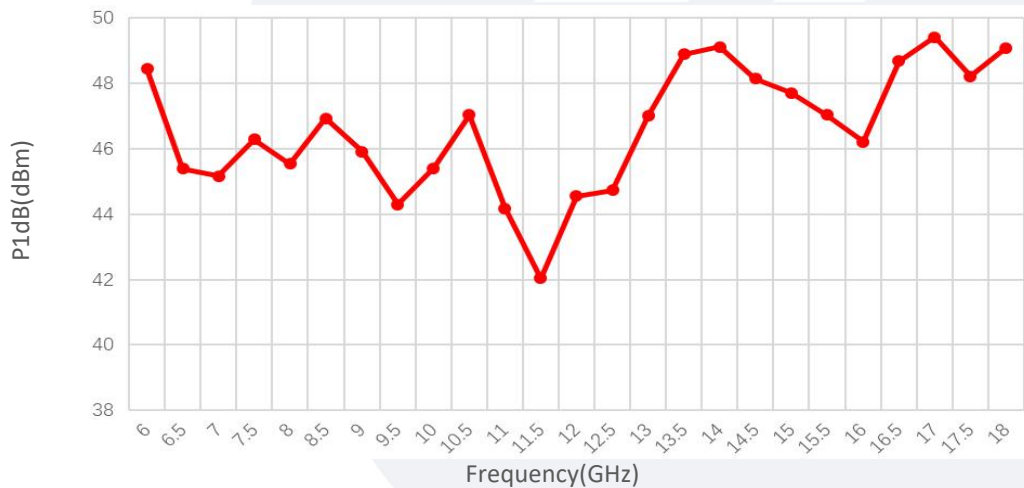
Input VSWR vs Frequency



Small Signal Gain vs Frequency



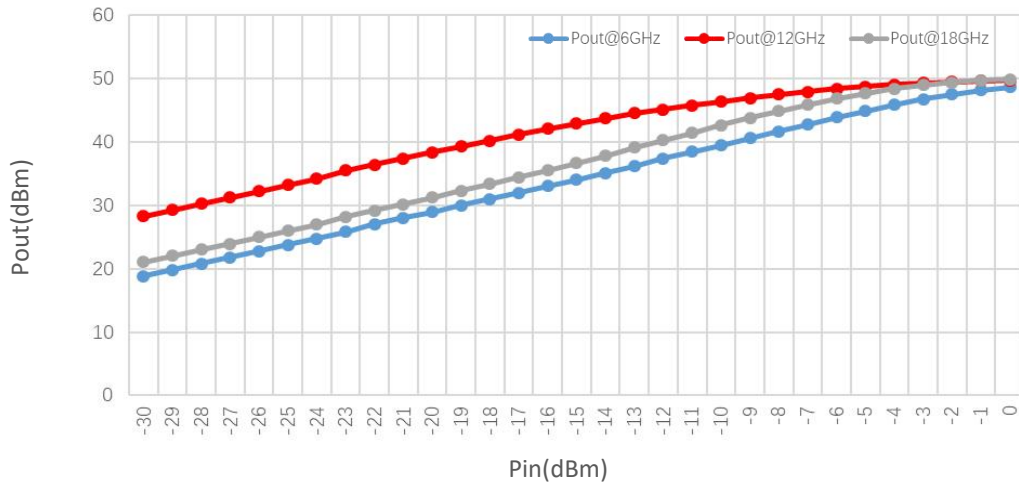
P1dB vs Frequency



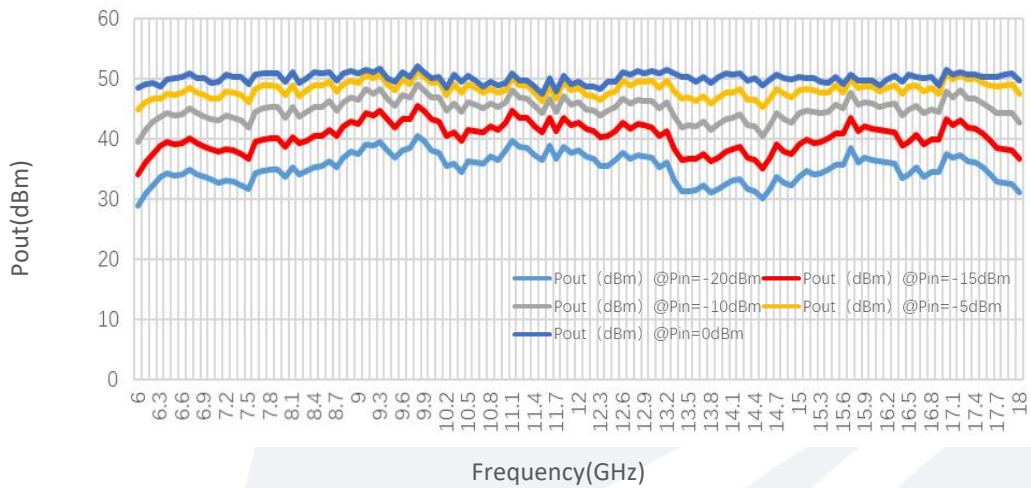
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

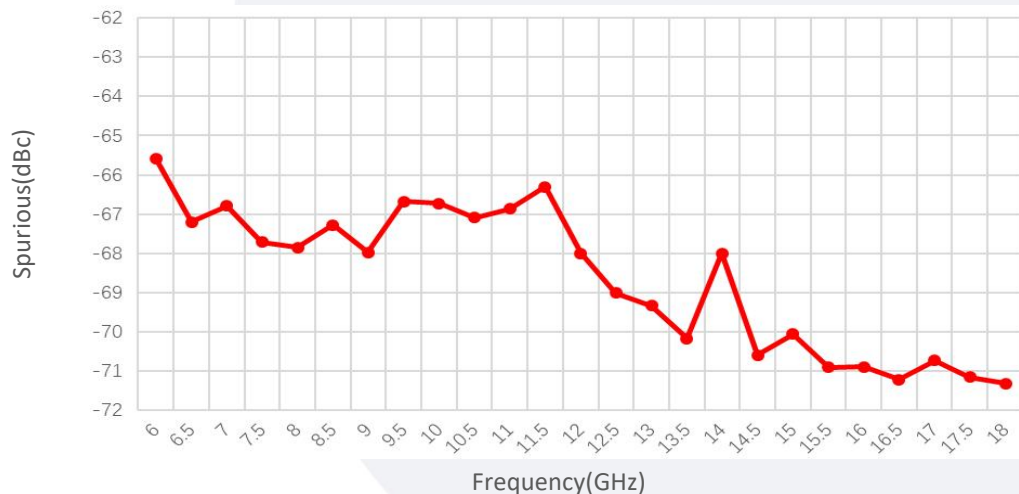
Pout@Pin



Pout@Equal_Pin



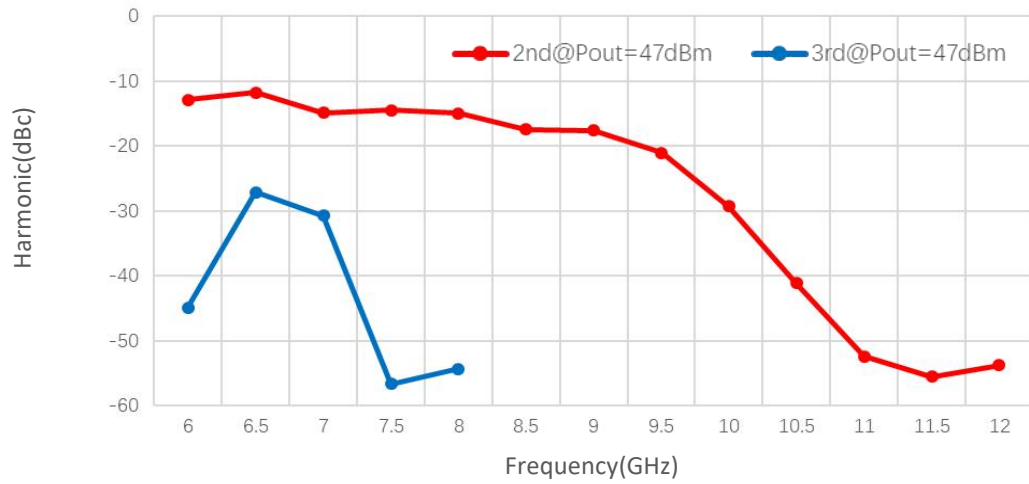
Spurious vs Frequency



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:

Harmonic 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.