

Power Amplifier

6-18GHz 50dB Gain/48 dBm Psat

Model: TLPA6G18G-47-48

TLPA6G18G-47-48 is a power amplifier with a typical power gain of 50 dB and a 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 port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

Features:

- Frequency range: 6-18GHz
- Gain: 50dB Typ
- Output Power Psat: 48dBm 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	6		18	GHz
Power Gain	46	50		dB
Gain Flatness		±4	±5	dB
Output P1dB		30		W
Output Psat	48			dBm
Spurious@Pout=47dBm		-60	-50	dBc
2nd Harmonic@Pout=48dBm		-20	-12	dBc
Input VSWR			2	:1
DC Voltage		28		V DC
DC Current		18		A
Power Consumption		800		W
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/N Female	
Forward/Reverse Coupling	SMA Female/ SMA Female	
DC Supply	DSUB-5W5	A1~2:+28V A3~5:GND
Size	255*200*107.4	mm
Weight	5	Kg

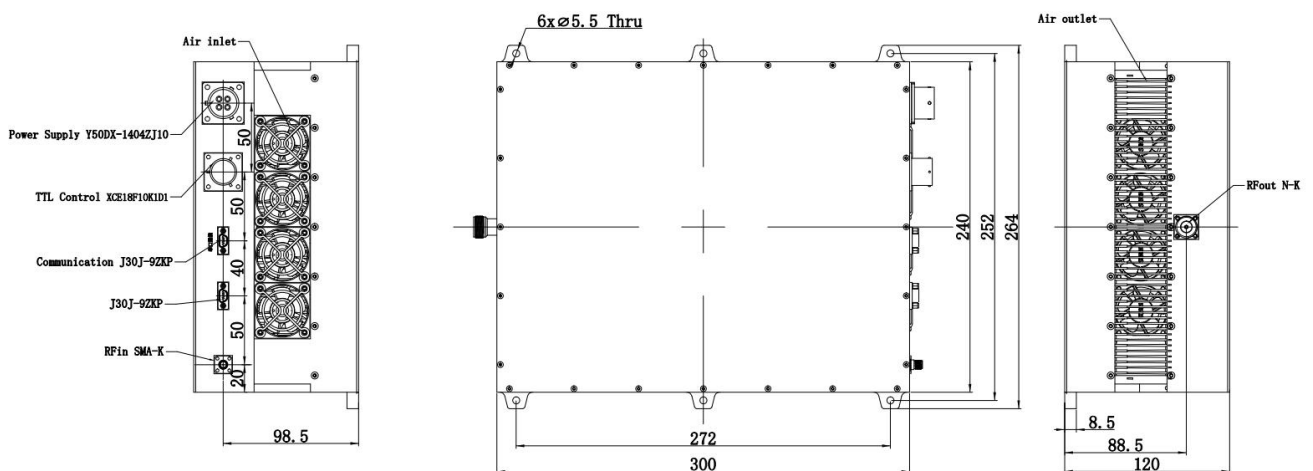
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	-2 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Control Connector(J30J-9ZKP):

J30J-9ZKP	
Pin	Function
1	TTL(High level conduction, low level cutoff)
2	0.5dB attenuation
3	1dB attenuation
4	2dB attenuation
5	4dB attenuation
6	8dB attenuation
7	16dB attenuation
8~9	GND

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			

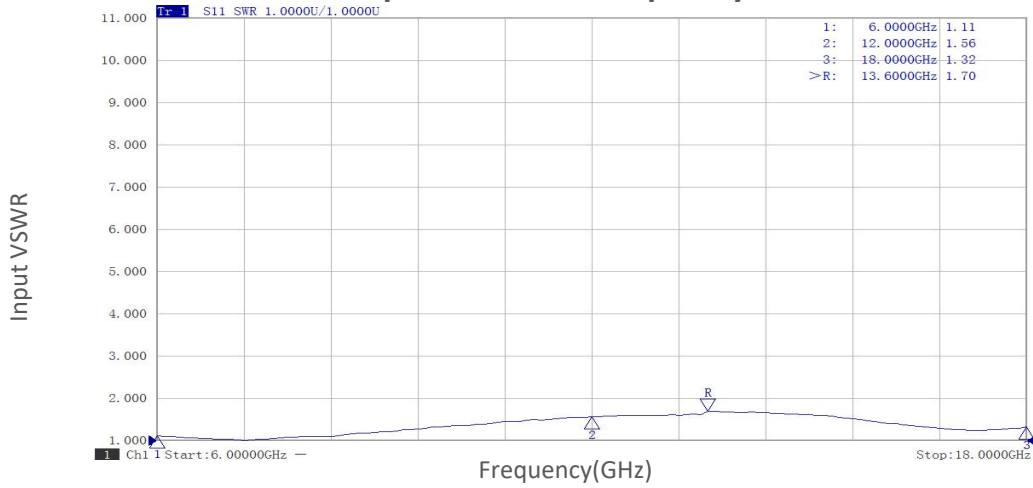
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

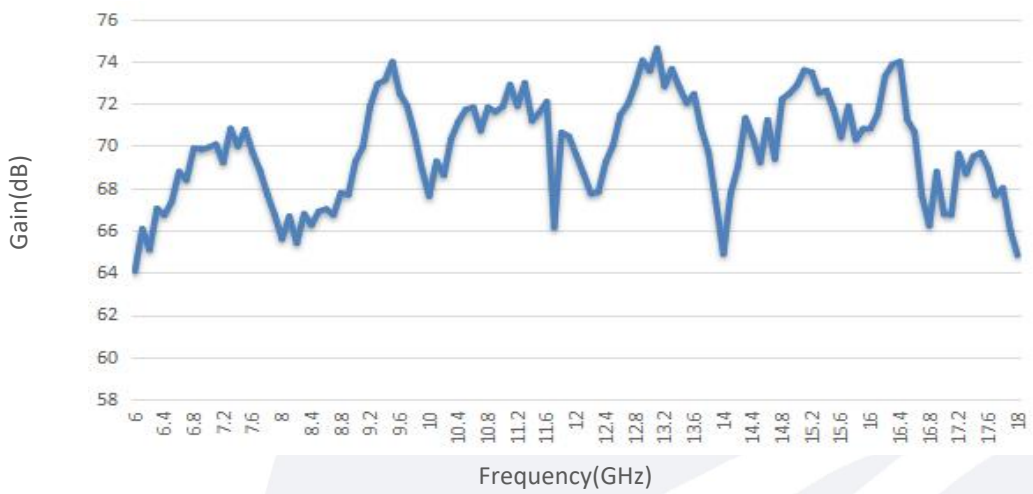
Base Number	Description	Revision
TLPA6G18G-47-48	Power amplifier 6-18GHz, Gain:50dB, Psat:48dBm, +28V DC, With Heatsink	Rev.1.2

Typical Performance Data:

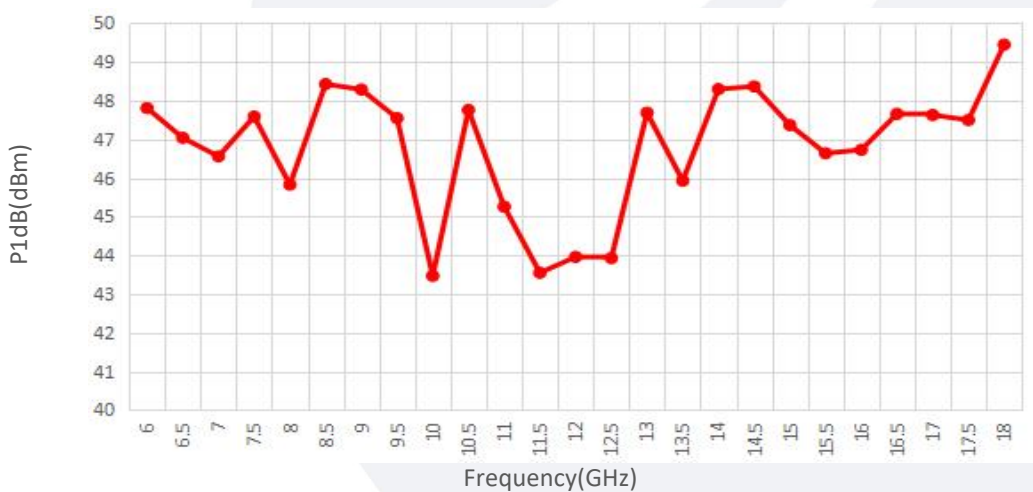
Input VSWR vs Frequency



Small Signal Gain vs Frequency



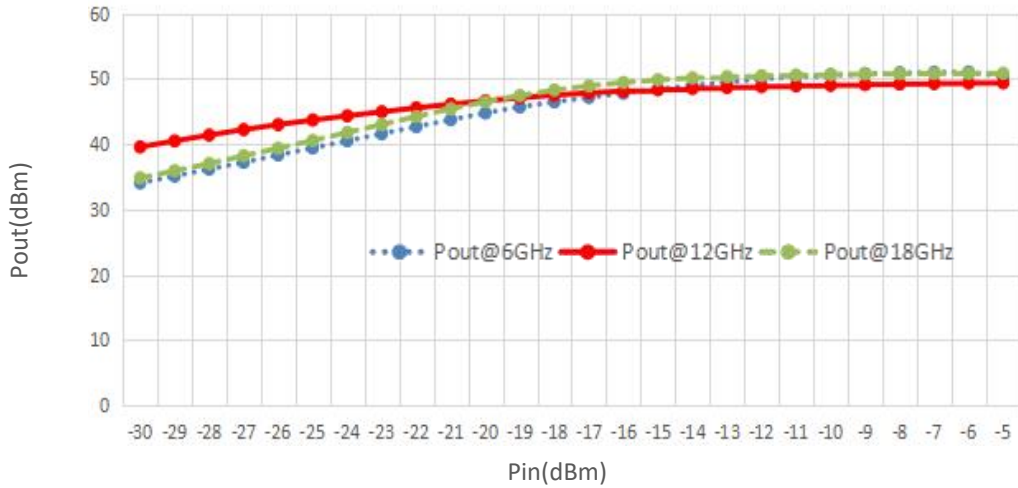
P1dB vs Frequency



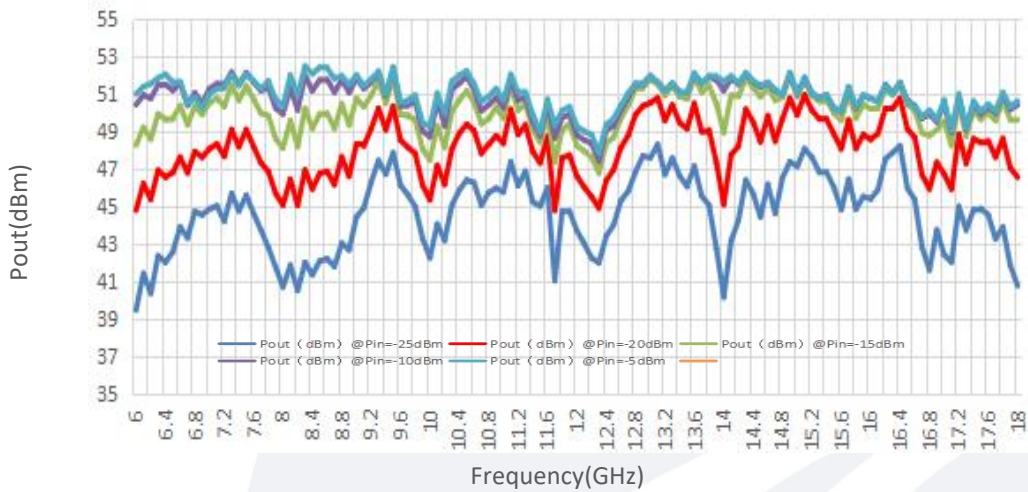
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

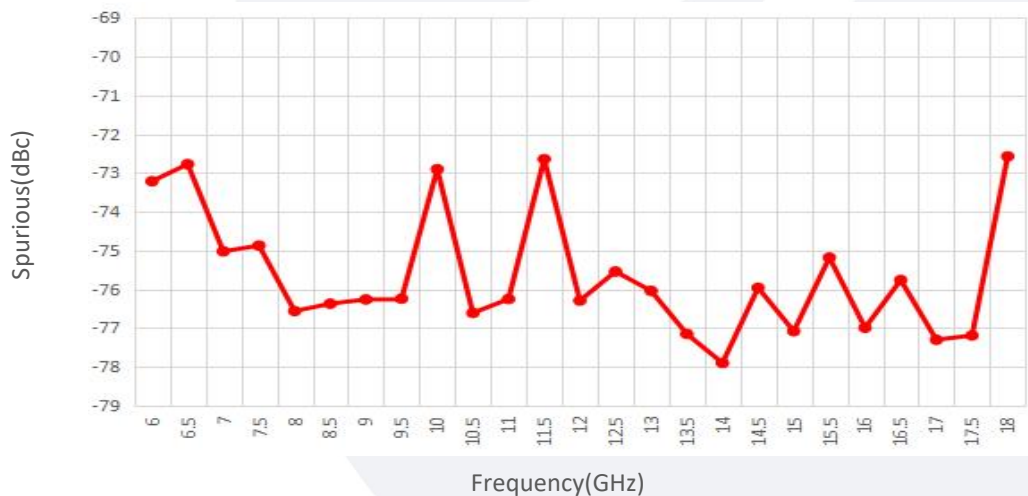
Pout@Pin



Pout@Equal_Pin



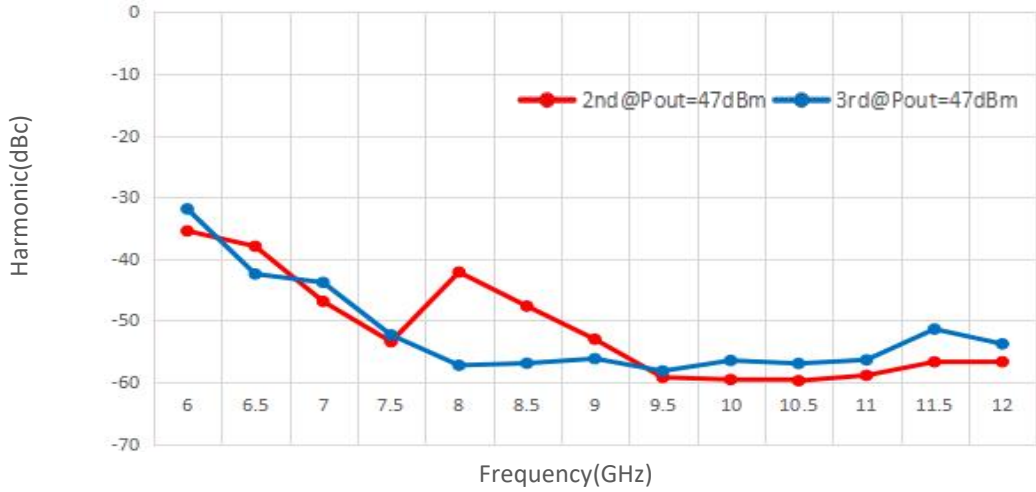
Spurious vs Frequency



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Typical Performance Data:

Harmonic vs Frequency



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