

Power Amplifier

6-18GHz/50dB Gain/51dBm Psat

Model: TLPA6G18G-50-51

TLPA6G18G-50-51 is a power amplifier with a minimum power gain of 50 dB and a nominal Psat of 51 dBm across the frequency range of 6 to 18 GHz. The DC power requirement for the amplifier is +28 VDC. The input port configuration offers coax adapter structure with SMA female and output port configuration offers WRD500.

Features:

- Frequency range: 6-18GHz
- Gain: 50dB Min
- Output Power Psat: 51dBm 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	50			dB
Gain Flatness		±3.5	±5	dB
Output Psat	50.5	51		dBm
Spurious@Pout=50dBm			-60	dBc
Harmonic@Pout=50dBm			-10	dBc
Input VSWR			2	:1
DC Voltage		28		V DC
DC Supply Current			1500	A
Impedance	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/WRD500	
DC Bias	DSUB-5W5	
Control Connector	J30J-15ZKSP	
Forward/Reverse Coupling	SMA Female/SMA Female	
Size	300*300*113	mm
Weight	11	Kg

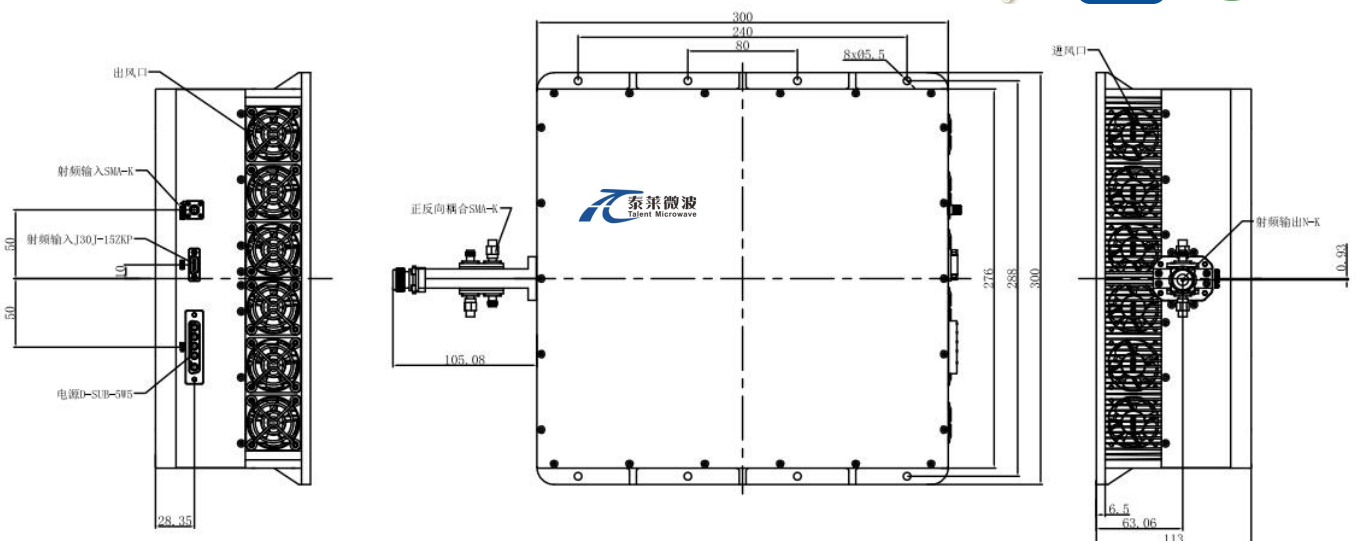
Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm

Regulatory Compliance:



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

Control Connector:

J30J-15ZKP Define	
Pin	Function
1	Voltage Monitor
2	Current Monitor
3	Temperature Monitor
4	0.5dB Attenuation
5	1dB Attenuation
6	2dB Attenuation
7	4dB Attenuation
8	8dB Attenuation
9	16dB Attenuation
10	TTL(high for open,low for close)
11~15	GND

DC Supply Connector (DSUB-5W5):

Pin	Function
A1	+28V
A2	+28V
A3~A5	GND

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+65	°C
Non-operating Temperature*	-30		+75	°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			

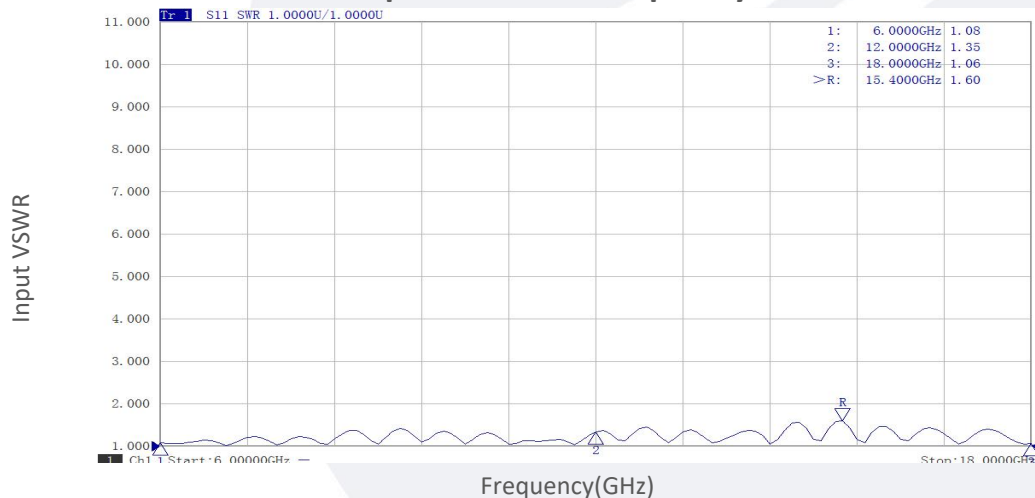
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA6G18G-50-51	Power amplifier 6-18GHz, Gain:50dB,Psat:51dBm,+28V DC,Built in Fan Cooling	Rev.1.1

Typical Performance Data:

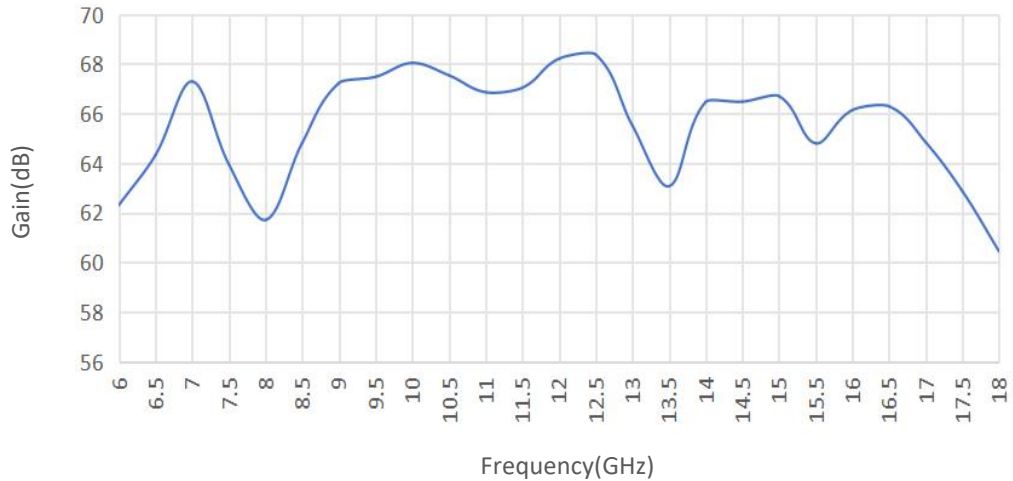
Input VSWR vs Frequency



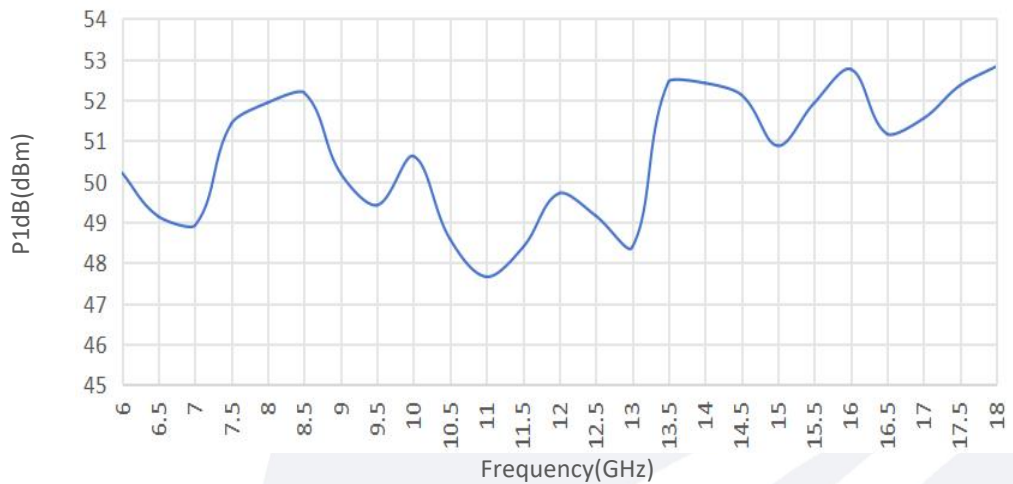
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

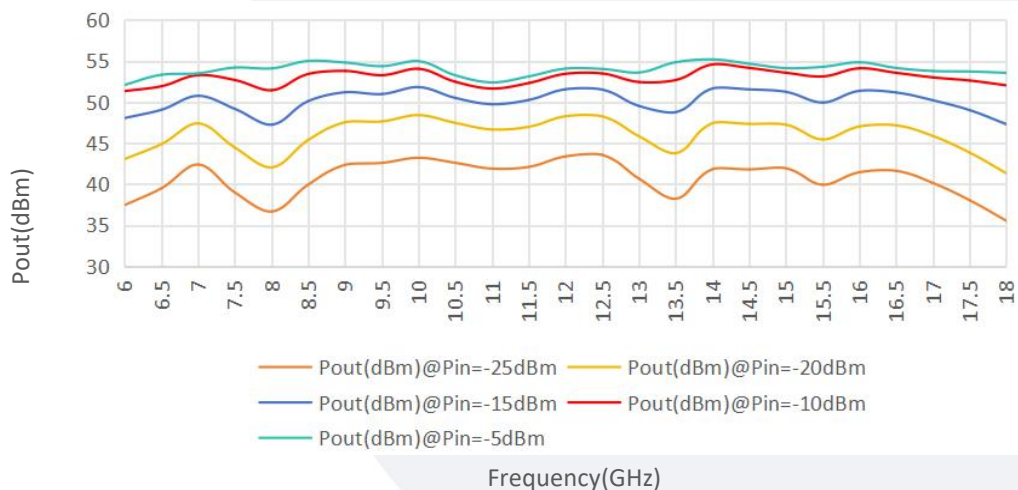
Small Signal Gain vs Frequency



P1dB vs Frequency



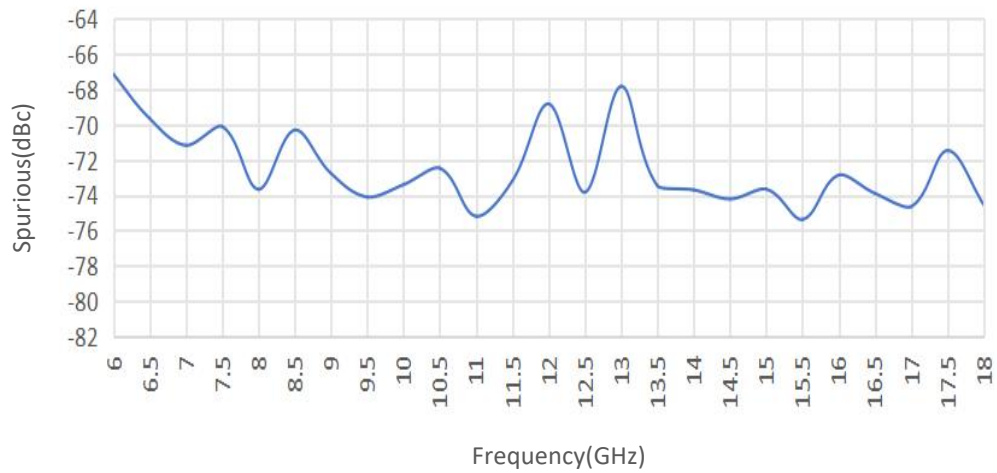
Pout@Equal_Pin



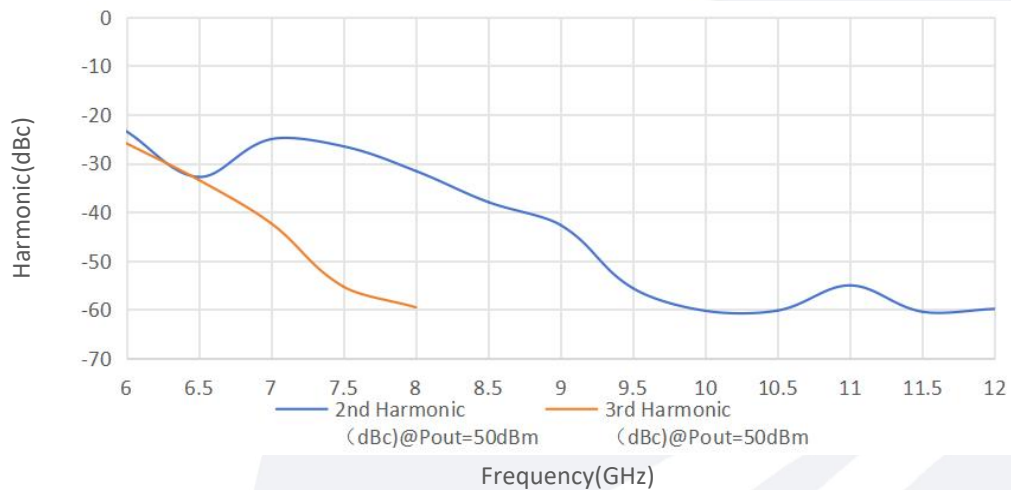
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Typical Performance Data:

Spurious vs Frequency



Harmonic vs Frequency



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