

Power Amplifier

4-8GHz/50dB Gain/49dBm Psat

Model: TLPA4G8G-49-49

TLPA4G8G-49-49 is a power amplifier with a typical small signal gain of 50 dB and a normal Psat of 49 dBm across the frequency range of 4 to 8 GHz. The DC power requirement for the amplifier is +28 VDC/2 A. The input port configuration offers coax adapter structure with SMA female and N output port configuration offers coax adapter structure with female .

Features:

- Frequency range: 4-8GHz
- Gain: 50dB Typ
- Output Power Psat: 49dBm 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	4-8			GHz
Small Signal Gain	47	50		dB
Gain Flatness		±2	±3	dB
Output P1dB	47	47.5		dBm
Output Psat	48	49		dBm
Input VSWR		1.5	2.0	:1
DC Voltage		28	30	V DC
Static Current		2		A
Saturation current		10	12	A
Impedance	50			Ohms

Mechanical Specifications:

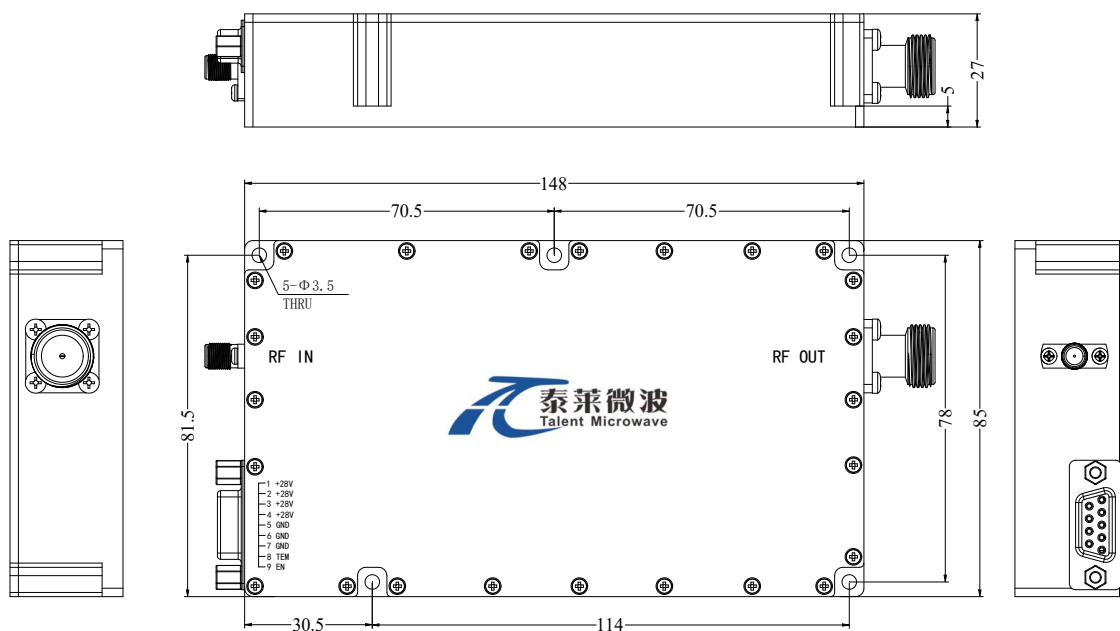
Parameter	Value	Units
Input /Output Connector	SMA Female/N Female	
DC Bias	D-SUB-9Pin	
Size	148*85*27	mm
Weight	600	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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

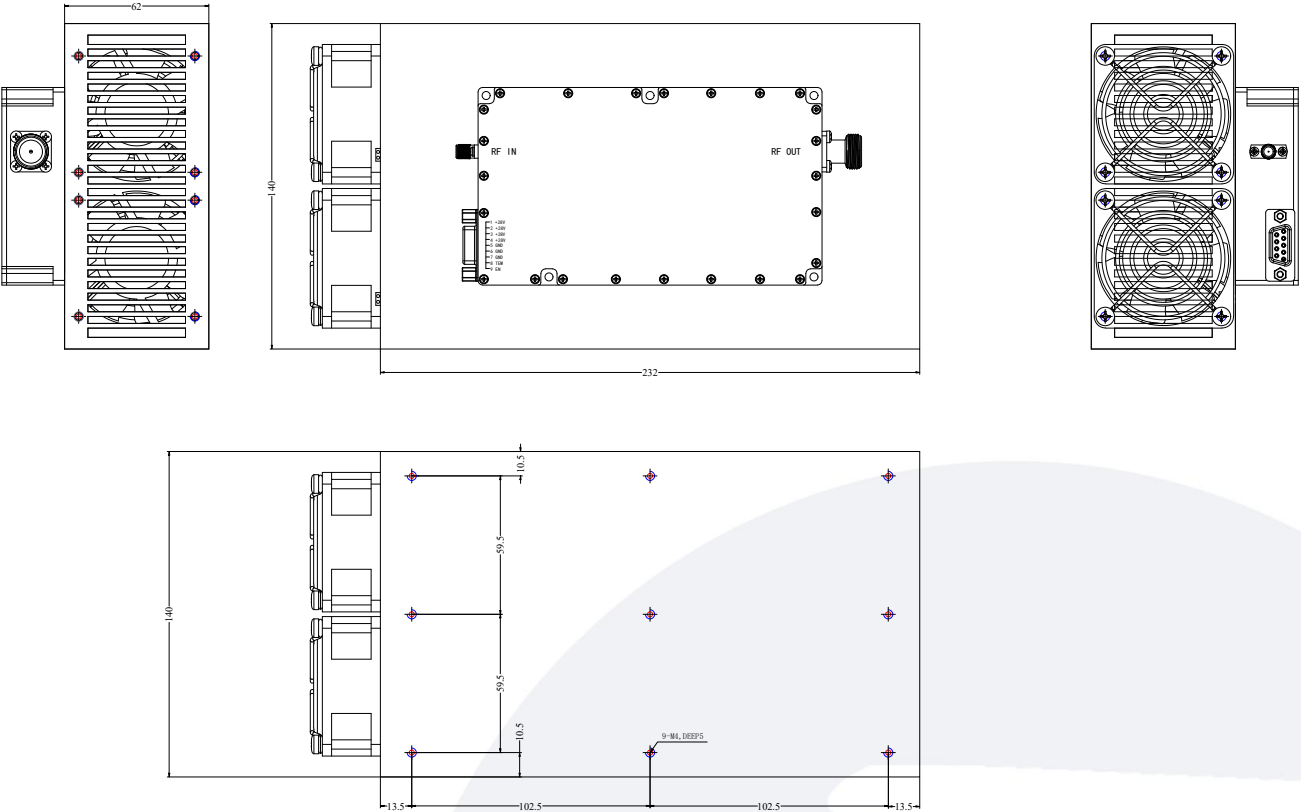


OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Outline Drawing:

Unit:mm

Regulatory Compliance:



DC Supply Connector (DSUB-9 Female):

Pin	Name	Function
1~4	VCC	Power supply positive, +26.0-30.0VDC
5~7	GND	Ground
8	Over TEM	When the temperature of the case exceeds 75 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	°C
Non-operating Temperature*	-30		+60	°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			

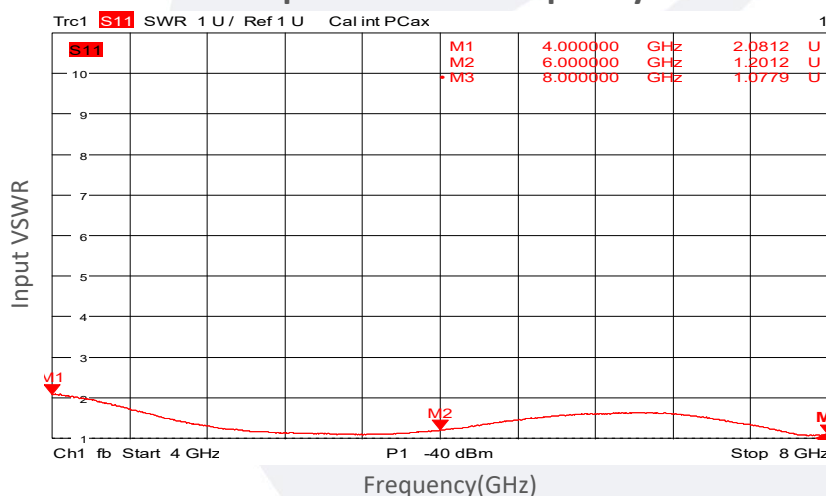
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA4G8G-49-49	Power amplifier 4-8GHz, Gain:50dB, Psat:49dBm, +28V DC, Without Heatsink	Rev.1.0
TLPA4G8G-49-49-HS	Power amplifier 4-8GHz, Gain:50dB, Psat:49dBm, +28V DC, With Heatsink	Rev.1.0

Typical Performance Data:

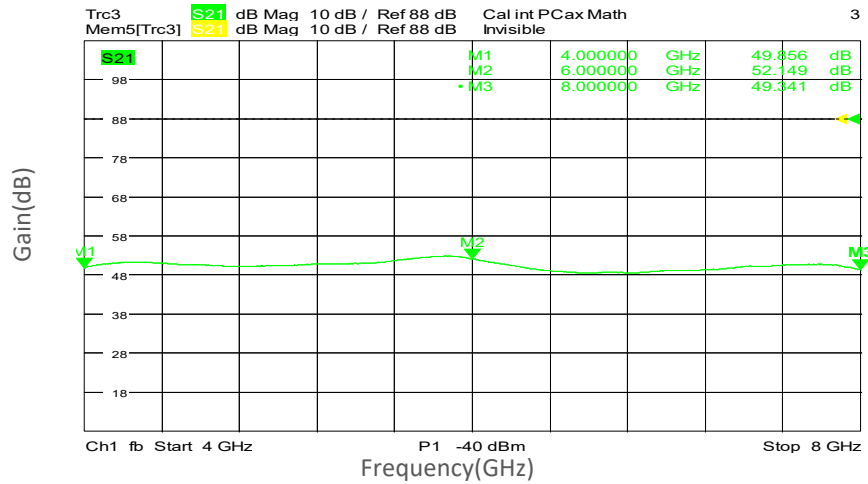
Input VSWR vs Frequency



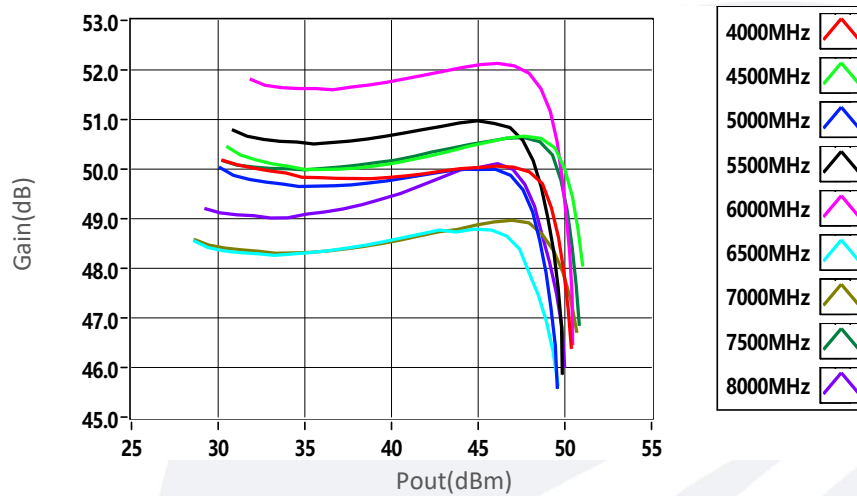
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

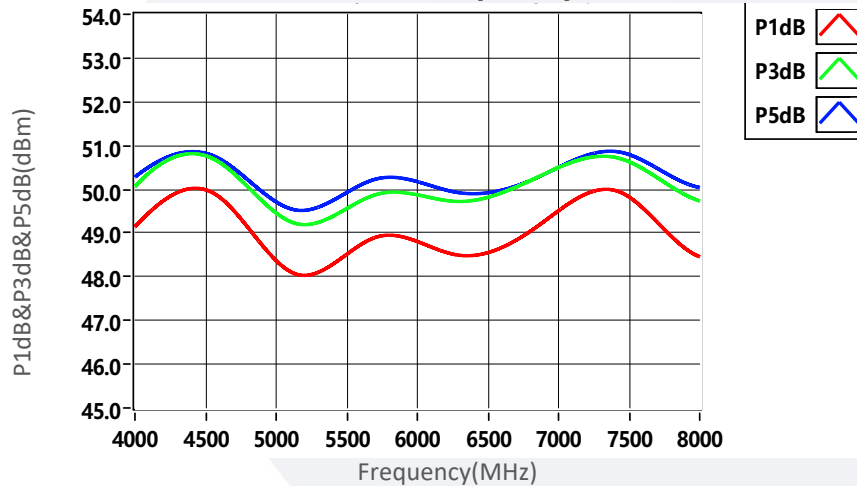
Small Signal Gain vs Frequency



Gain vs Output Power



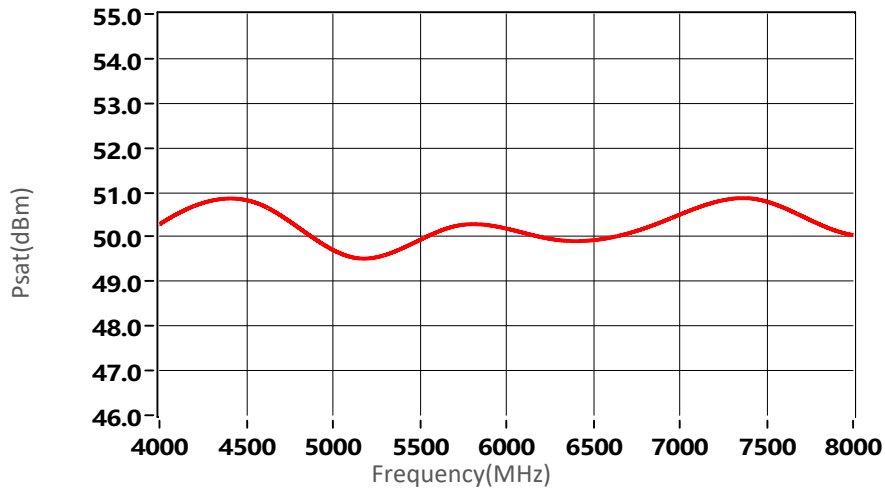
PndB vs Frequency



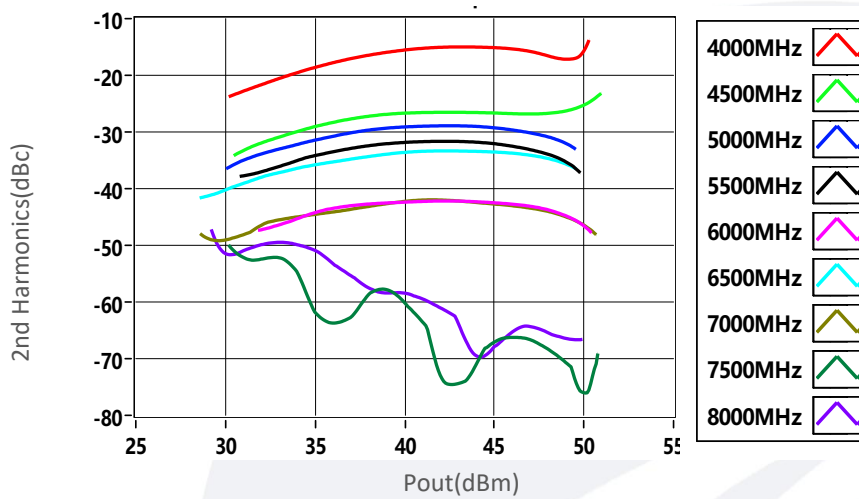
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Typical Performance Data:

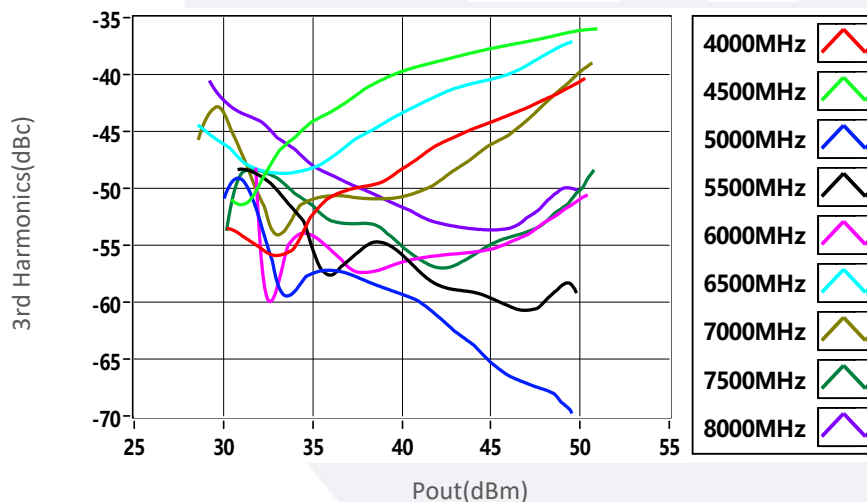
Psat vs Frequency



2nd Harmonics vs Output Power



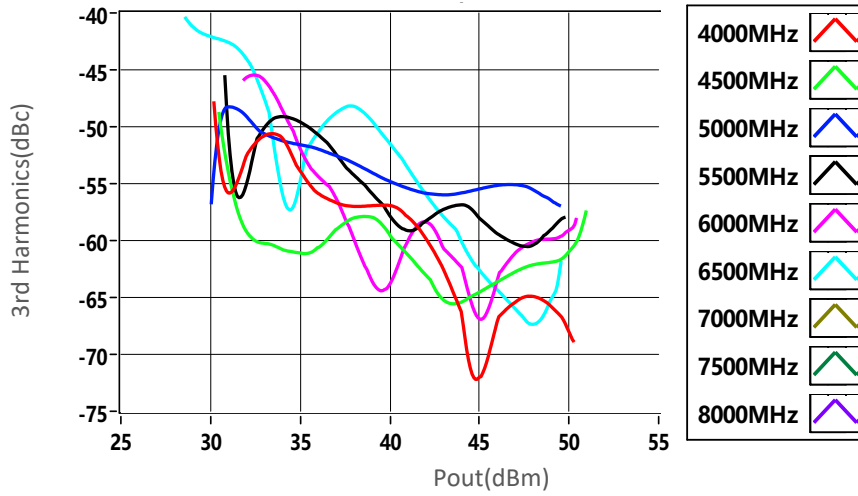
3rd Harmonics vs Output Power



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Typical Performance Data:

3rd Harmonics vs Output Power



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