泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Power Amplifier

1-6GHz /52dB Gain/50 dBm Psat Model: TLPA1G6G-52-50

TLPA1G6G-52-50 is a power amplifier with a typical small signal gain of 52 dB and Psat of 50 dBm across the frequency range of 1 to 6 GHz. The DC power requirement for the amplifier is +28 VDC/3 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

Features:

- Ultra Wide Band: 1-6 GHz
- Gain: 52dB Typ
- Output Power Psat: 50dBm 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		1-6		GHz
Small Signal Gain	50	52		dB
Gain Flatness		±3	±5	dB
Output Psat	50	51		dBm
Harmonic		-12		dBc
Input VSWR		1.5	2	:1
DC Voltage	26	28	30	V DC
DC Supply Current		3	22	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/N Female	
DC Supply Connector	DSUB-15 Female	
Size	270*160*27	mm
Weight	2400	g

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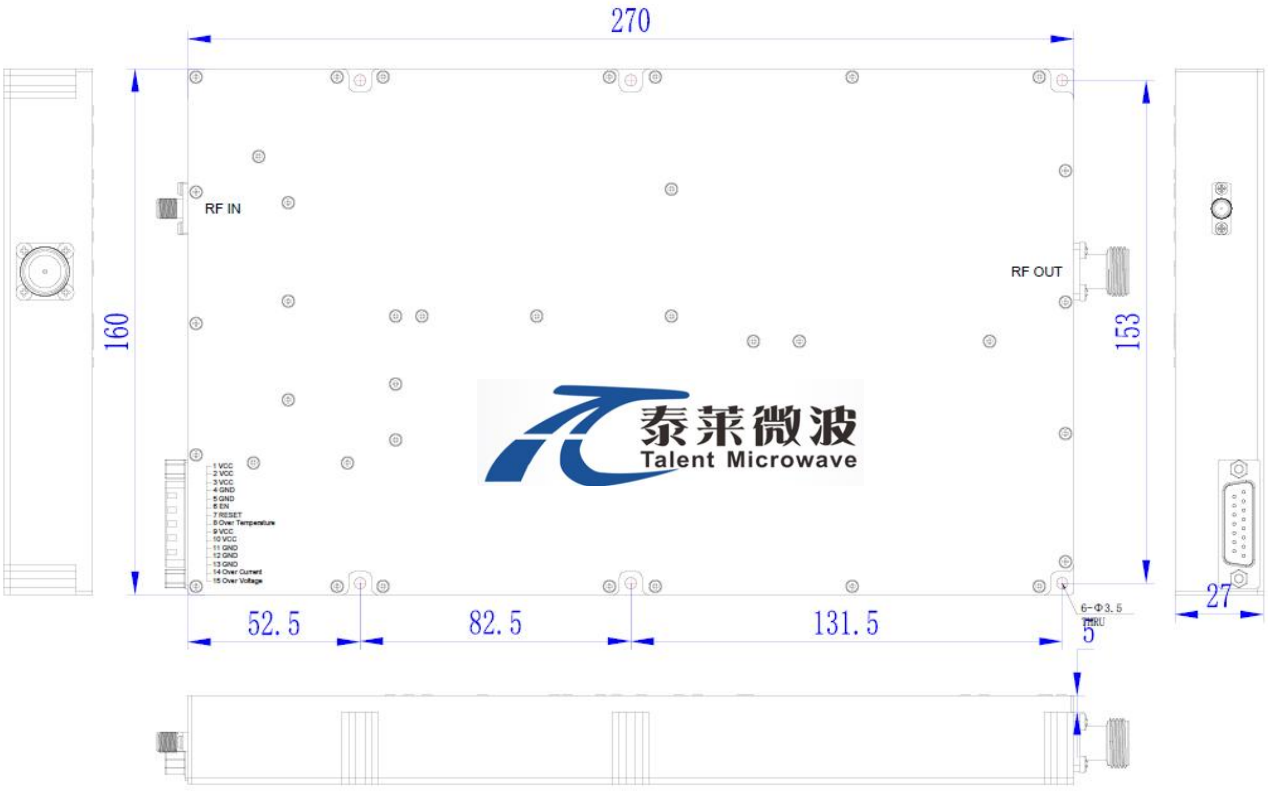
Absolute Maximum Ratings:

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

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DC Supply Connector（DSUB-15 Female):

Pin	Name	Function
1	VCC	+26.0-30.0VDC
2	VCC	+26.0-30.0VDC
3	VCC	+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High)
7	RESET	Resets PA when logic LOW is applied and released (Internally Pulled-High)
8	Over Temperature	When the temperature of the case exceeds 85 ℃, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 ℃, the power amplifier will return to normal operation, and this pin will be pulled low.
9	VCC	+26.0-30.0VDC
10	VCC	+26.0-30.0VDC
11	GND	Ground
12	GND	Ground
13	GND	Ground
14	Over Current	Current FAULT:(TTL High= Fault, TTL Low =Normal)
15	Over Voltage	Voltage FAULT:(TTL High= Fault, TTL Low =Normal)

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Environmental Conditions:

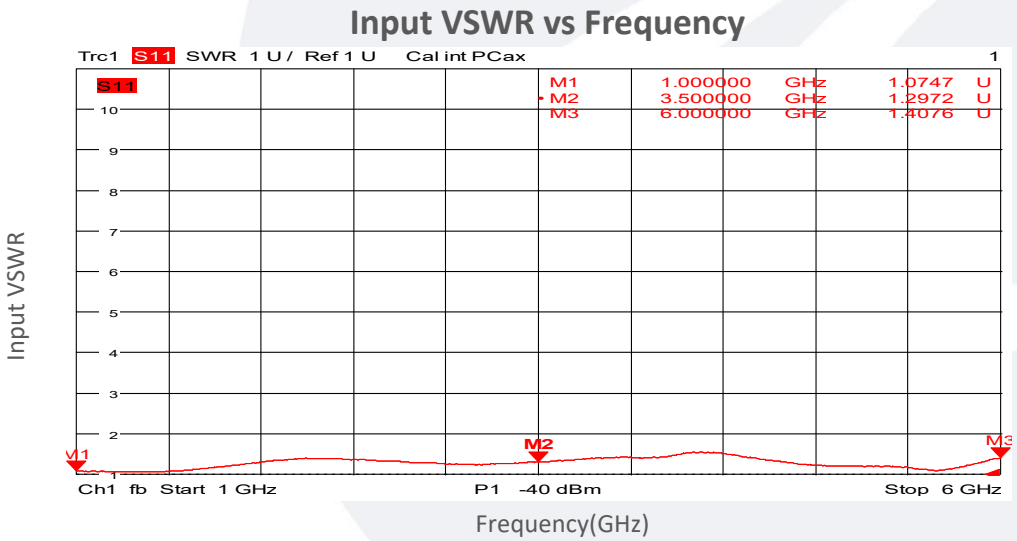
Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	℃
Non-operating Temperature*	-30		+60	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

Ordering Information:

Base Number	Desciption	Revision
TLPA1G6G-52-50	Power amplifier 1-6GHz,Gain:52dB,Psat:50dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA1G6G-52-50-HS	Power amplifier 1-6GHz,Gain:52dB,Psat:50dBm, +28V DC,With Heatsink	Rev.1.1

Typical Performance Data:



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.

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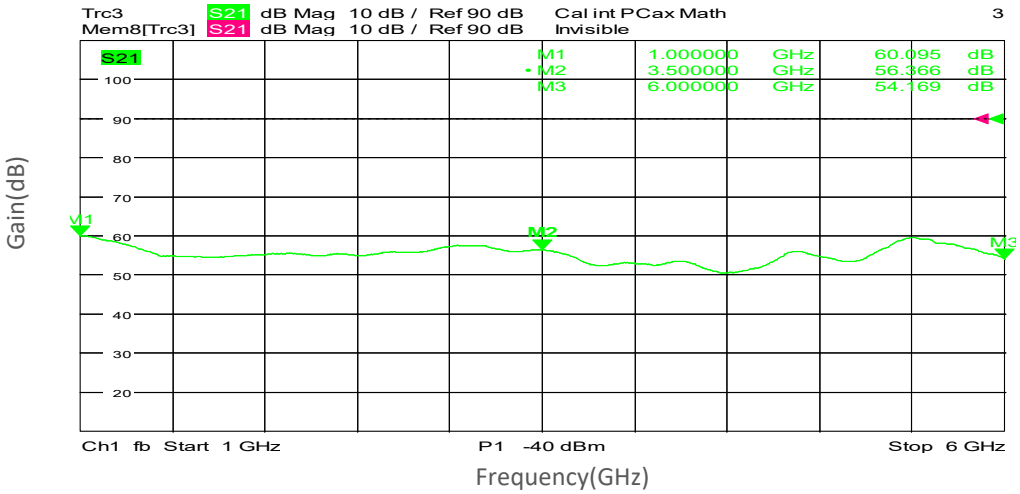
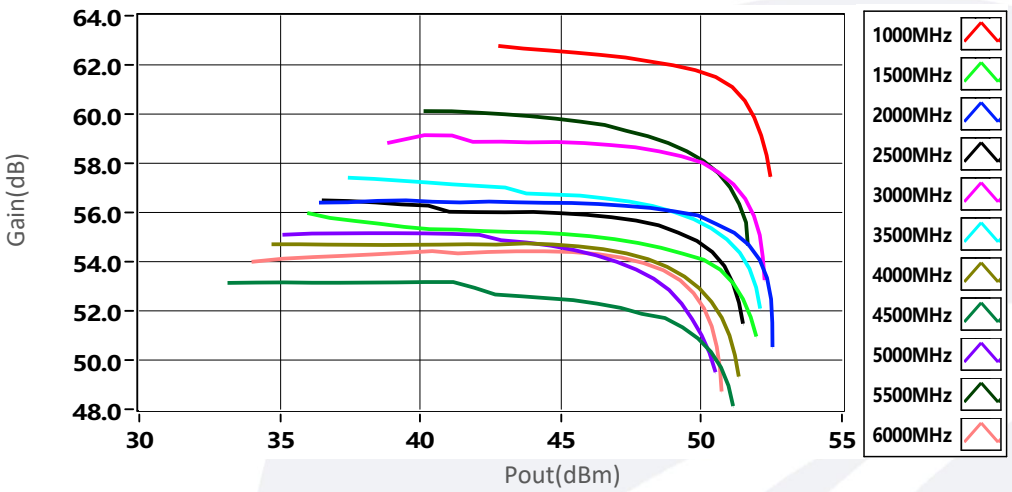
Typical Performance Data:

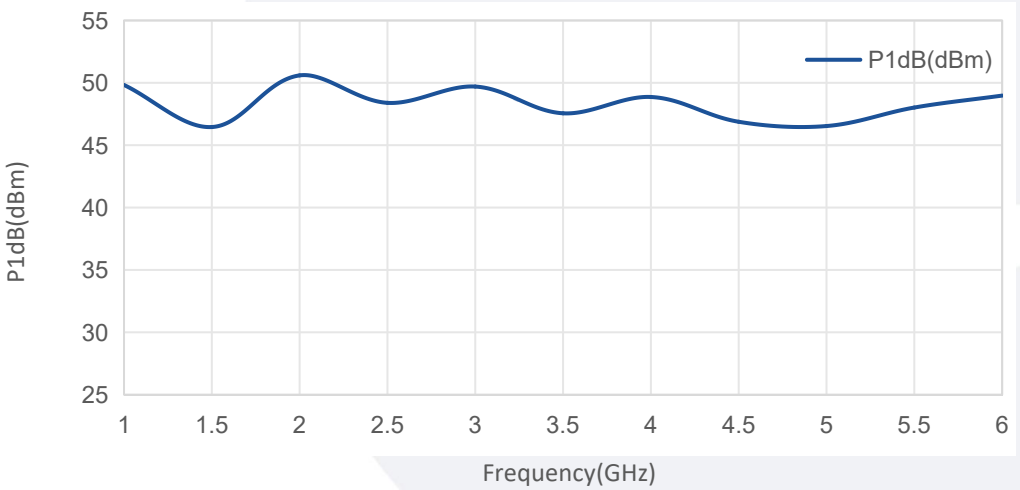
Small Signal Gain vs Frequency



Gain vs Output Power



P1dB vs Frequency



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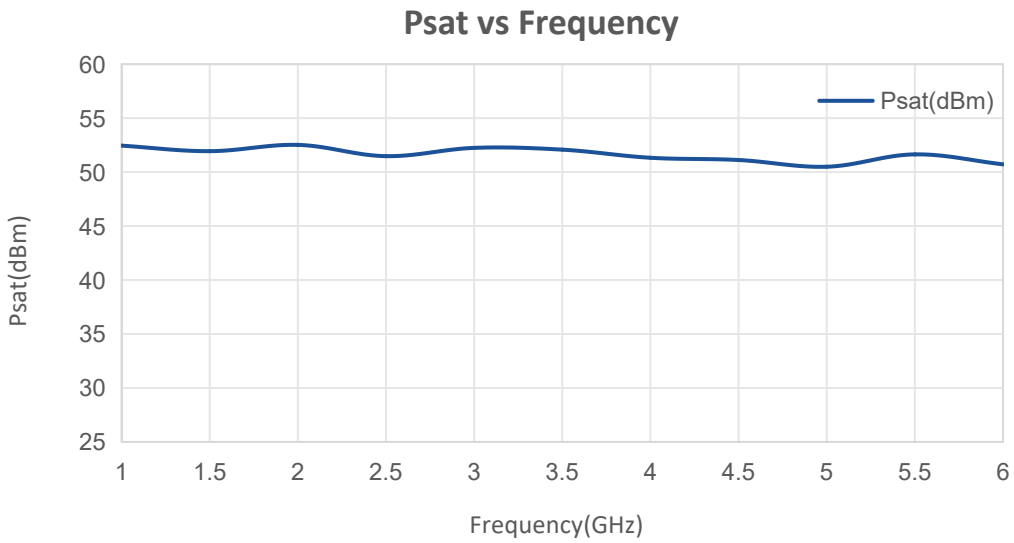

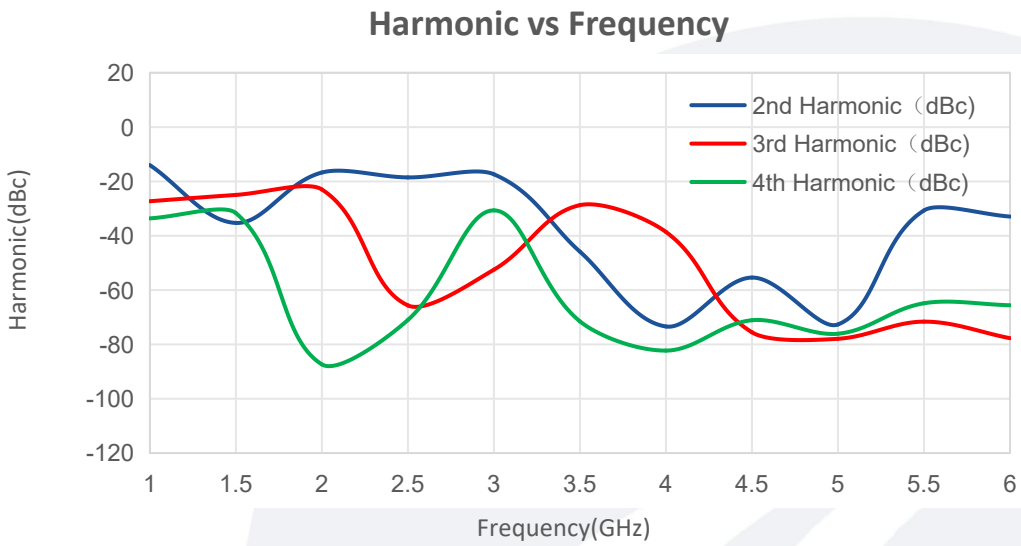

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