

Power Amplifier

2-6GHz/53dB Gain/53dBm Psat

Model: TLPA2G6G-53-53

TLPA2G6G-53-53 is a power amplifier with a typical small signal gain of 53 dB and a nominal Psat of 53 dBm across the frequency range of 2 to 6 GHz. The DC power requirement for the amplifier is +28 VDC/20 A. 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: 2-6GHz
- Gain: 53dB Typ
- Output Power : 53dBm 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	2		6	GHz
Small Signal Gain	50	53		dB
Gain Flatness		±3	±4	dB
Output P1dB	48	49		dBm
Output Psat	52	53		dBm
Input VSWR		1.5	2.0	:1
DC Voltage		+28	+30	V DC
Static Current		3		A
Saturation current		20	22	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/N Female	
DC Power Supply Connector	D-SUB-15Pin	
Size	270*160*40	mm
Weight	1500	g

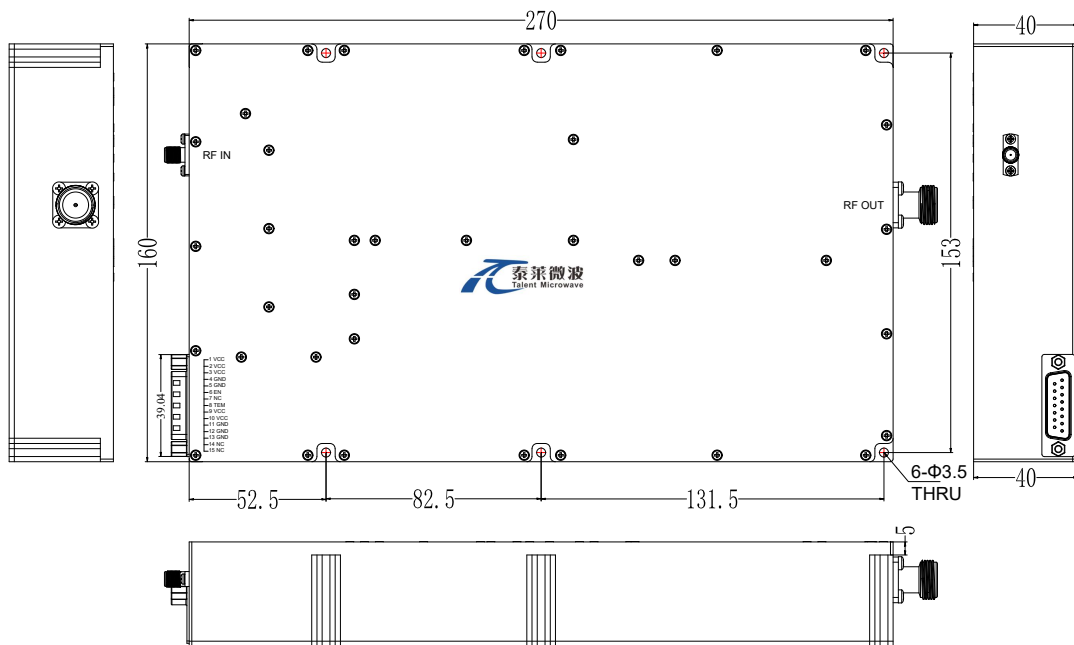
Absolute Maximum Ratings:

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



Outline Drawing:

Unit:mm



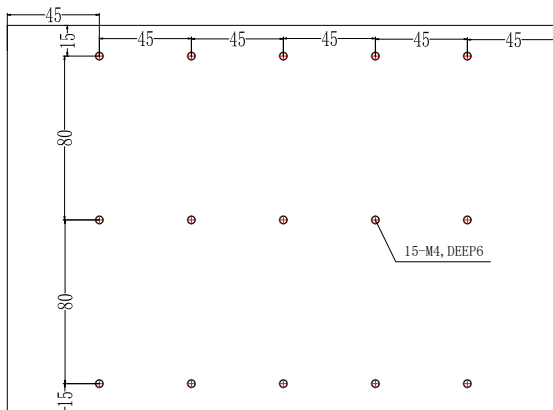
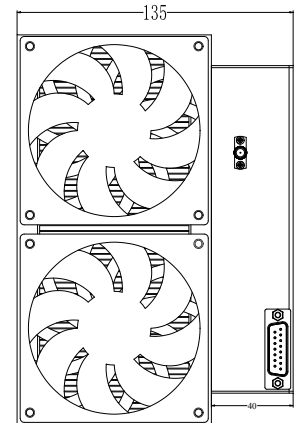
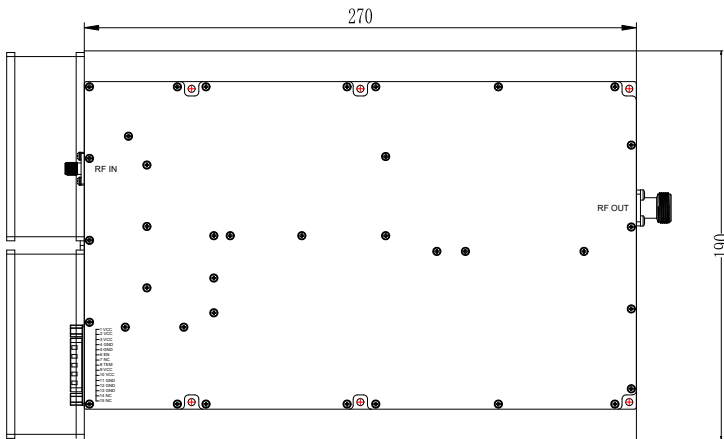
*****Heat Sink Required During Operation**



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

Outline Drawing:

Unit:mm



DC Supply Connector (D-SUB15 Female):

Pin	Name	Function
1~3、9~10	VCC	Power supply positive,+26.0-30.0VDC
4~5、11~13	GND	Ground
6	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground
8	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.
7、14~15	NC	Not Connected

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			

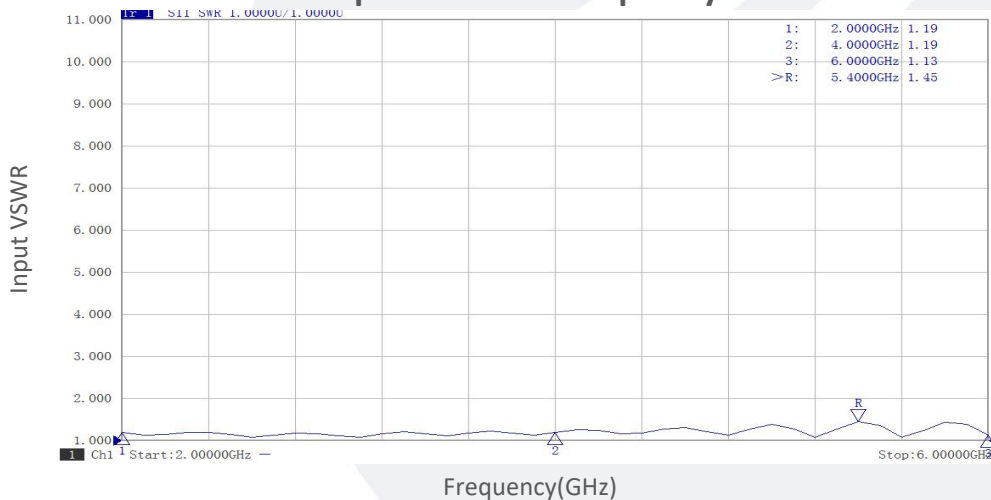
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA2G6G-53-53	Power amplifier 2-6GHz, Gain:53dB,Psat:53dBm,+28V DC,Without Heatsink	Rev.1.0
TLPA2G6G-53-53-HS	Power amplifier 2-6GHz, Gain:53dB,Psat:53dBm,+28V DC,With Heatsink	Rev.1.0

Typical Performance Data:

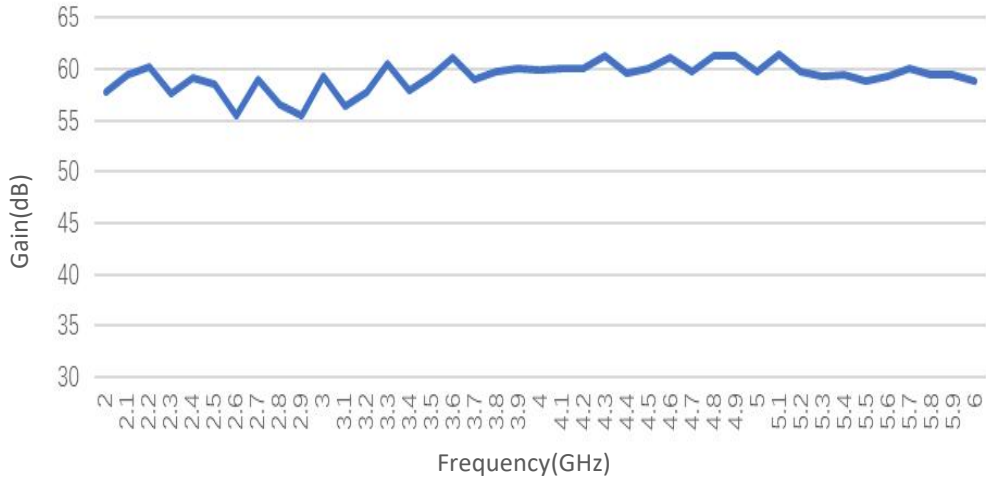
Input VSWR vs Frequency



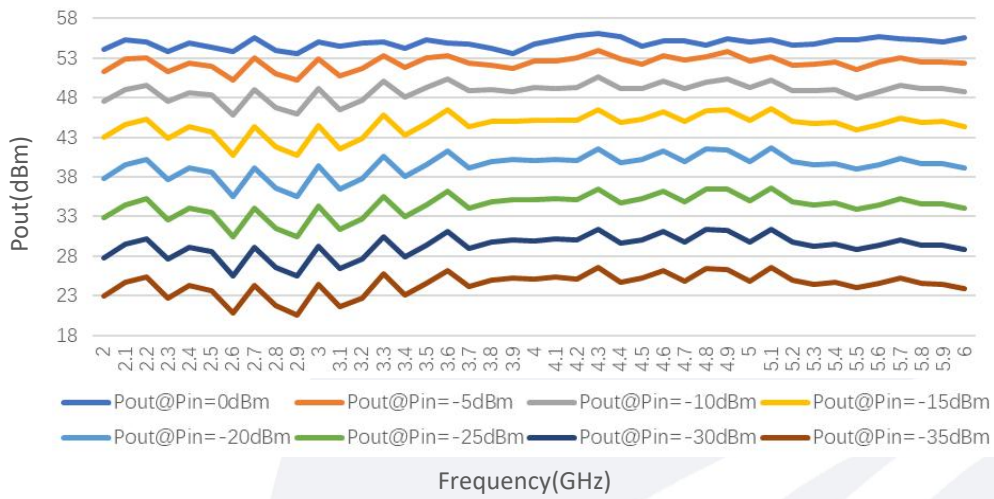
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

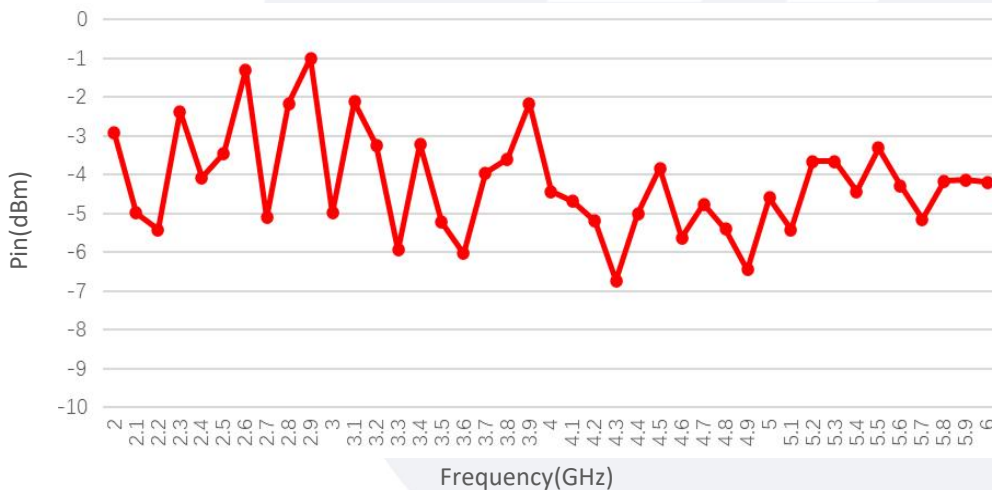
Small Signal Gain vs Frequency



Pout@Equal-Pin

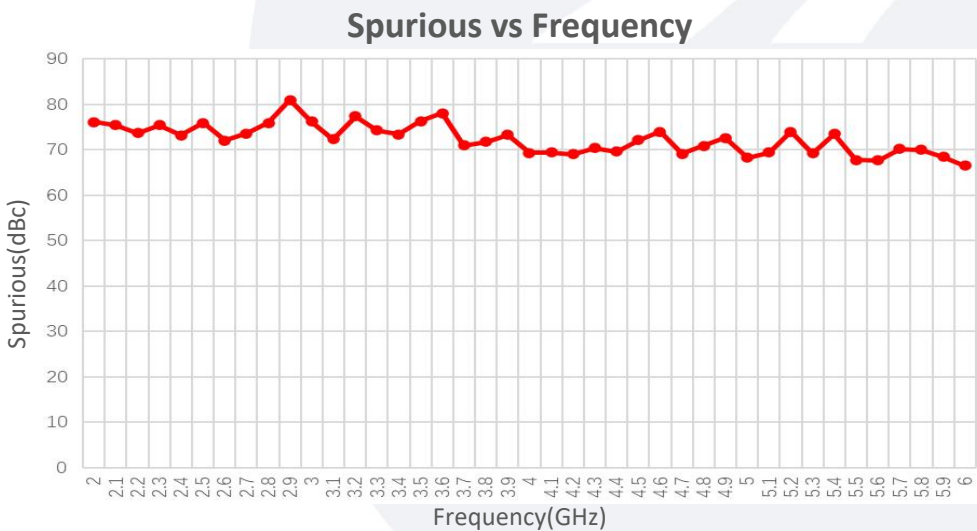
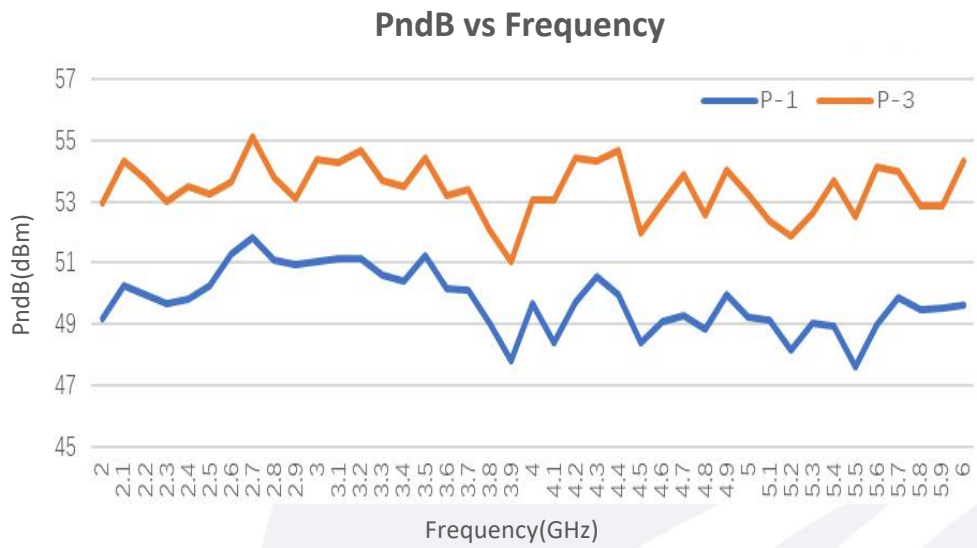
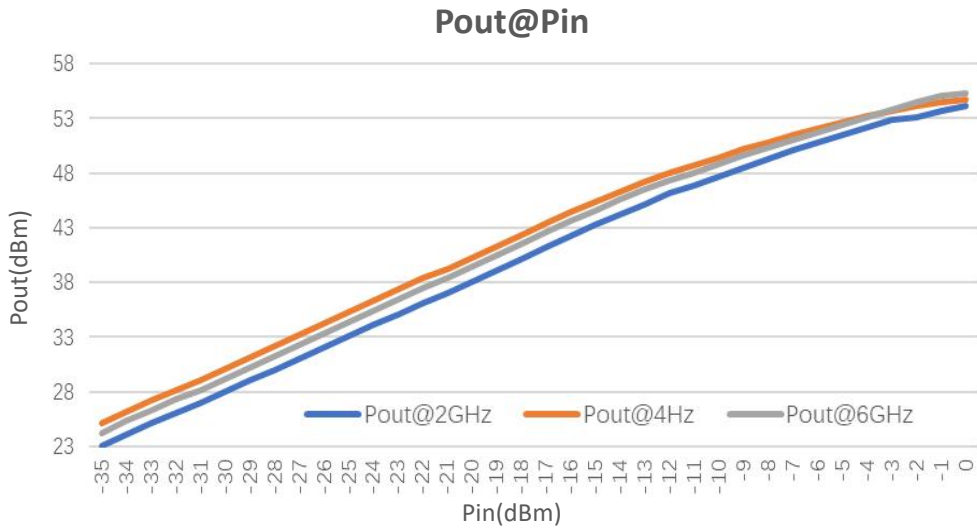


Pin@Pout



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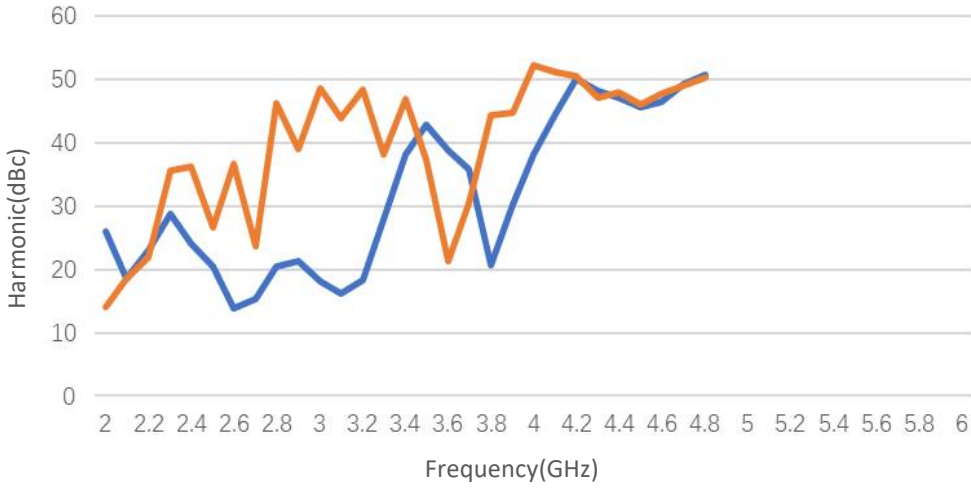
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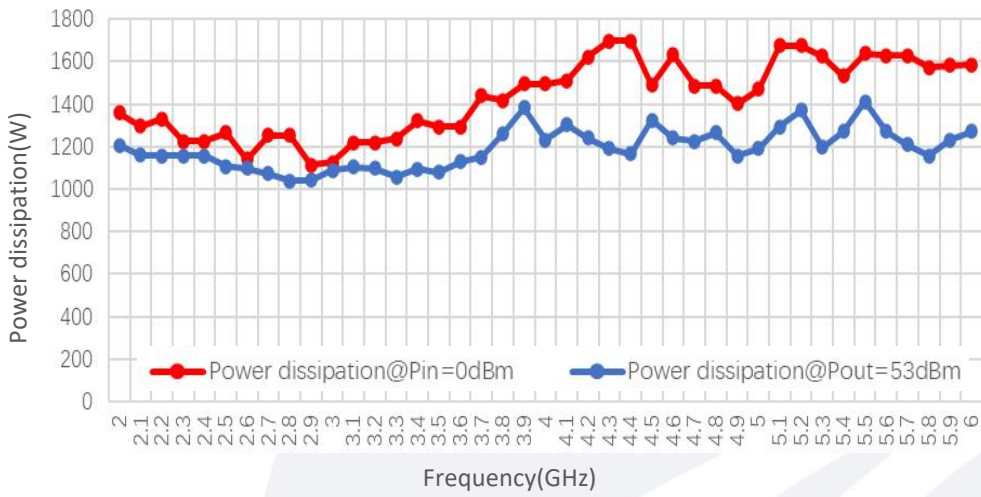
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Typical Performance Data:

Harmonic vs Frequency



Power dissipation



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