

Power Amplifier

24-27.5GHz /43dB Gain/43 dBm Psat

Model: TLPA24G27.5G-43-43

TLPA24G27.5G-43-43 is a power amplifier with power gain of 43 dB and Psat of 43 dBm across the frequency range of 24 to 27.5 GHz. The DC power requirement for the amplifier is +22 VDC/12 A. The input and output port configuration offers coax adapter structure with 1.85mm female.

Features:

- Ultra Wide Band: 24-27.5 GHz
- Gain: 43dB Min
- Output Power Psat: 43dBm Min
- Protection: Over TEM, over voltage, over current protection
- Can withstand total reflection for a long time
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	24-27.5			GHz
Power Gain	43			dB
Gain Flatness		±3		dB
Output Psat	43			dBm
Spurious@Pout=43dBm			-60	dBc
Harmonic@Pout=43dBm			-20	dBc
DC Voltage	20	22	24.5	V DC
DC Supply Current			12	A
Impedance	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input Connector	2.92mm Female	
Output Connector	WR42/WR34/2.92mm Female	
DC Supply Interface	DSUB-2W2	A1:+22V A2:GND
Size	230*194*85(With Heatsink)	mm
Weight	≤7	Kg

*Note: Users can choose freely and J30J-9ZKP no connection.

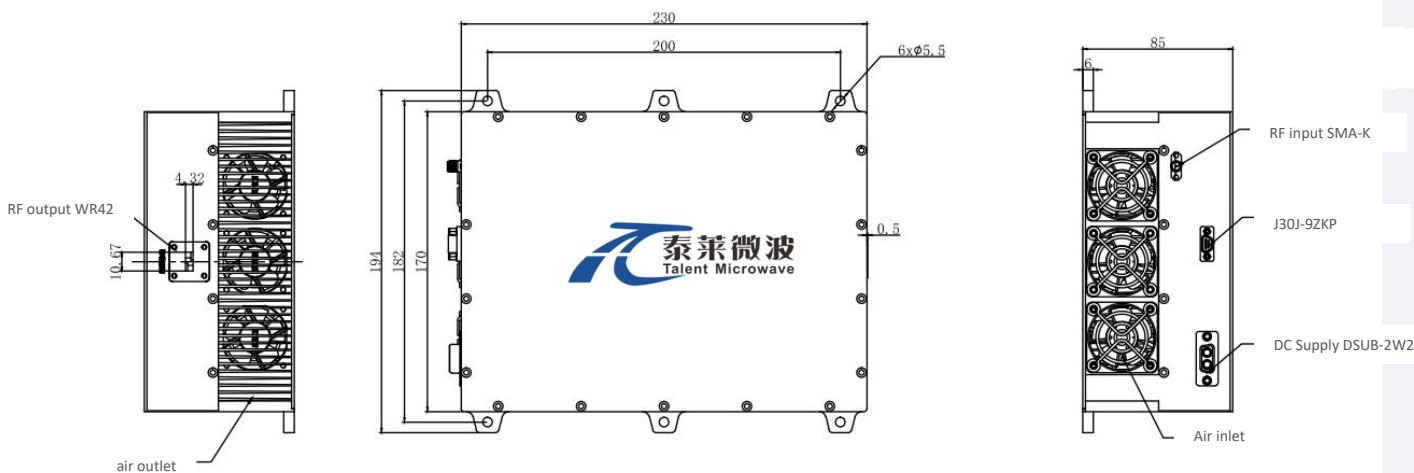
Absolute Maximum Ratings:

RF Input SMA-K

Parameter	Value
Supply Bias Voltage	+24.5 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Environmental Conditions:

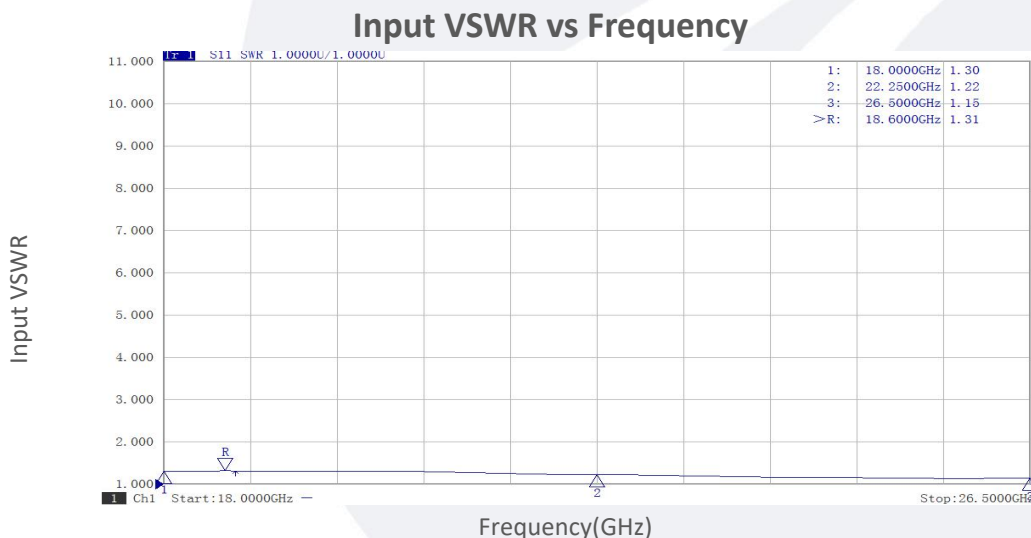
Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	°C
Non-operating Temperature*	-30		+60	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

Ordering Information:

Base Number	Description	Revision
TLPA24G27.5G-43-43	Power amplifier 24-27.5GHz,Gain:43dB,Psat:43dBm, +22V DC,Without Heatsink	Rev.1.1
TLPA24G27.5G-43-43-HS	Power amplifier 24-27.5GHz,Gain:43dB,Psat:43dBm, +22V DC,With Heatsink	Rev.1.1

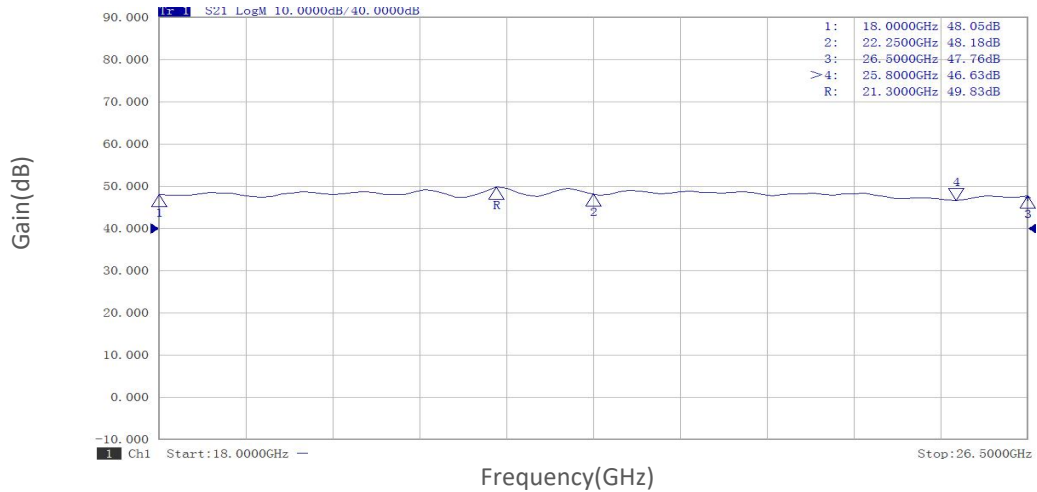
Typical Performance Data:



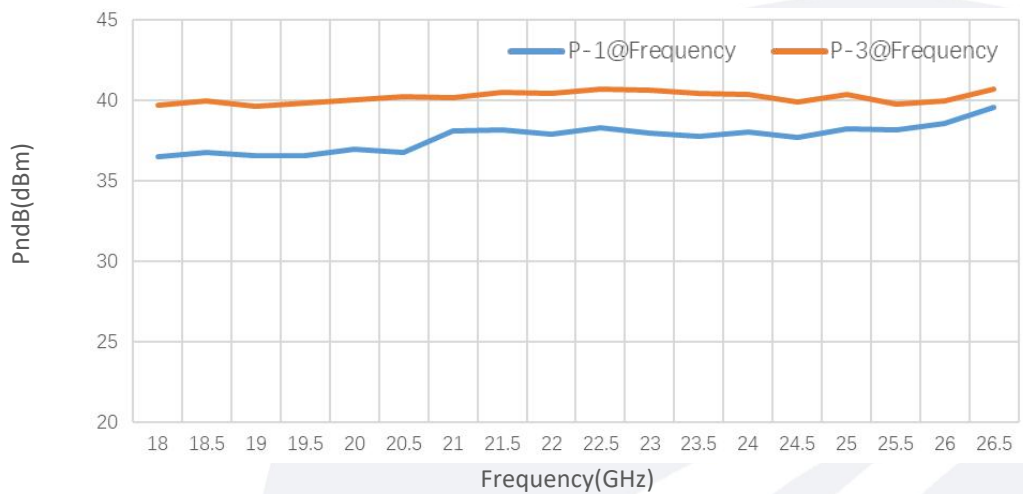
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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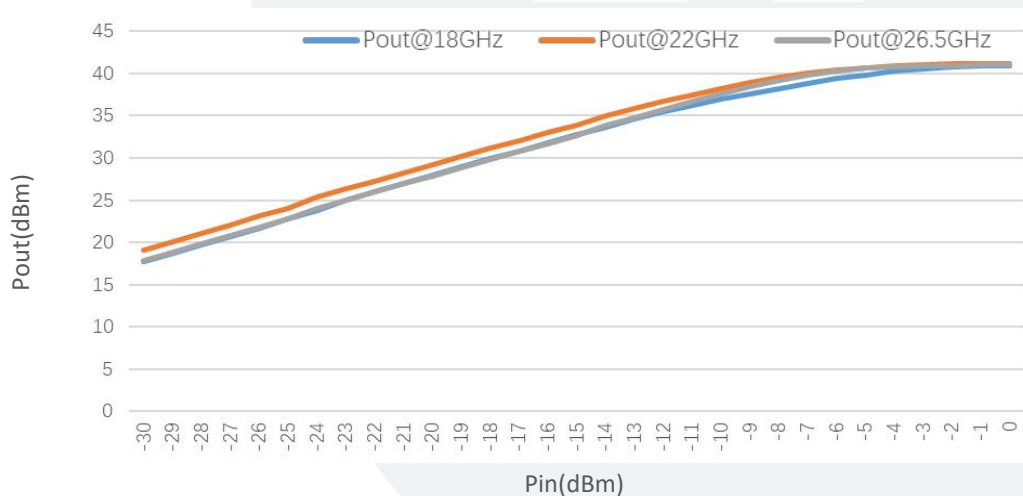
Small Signal Gain vs Frequency



PndB vs Frequency



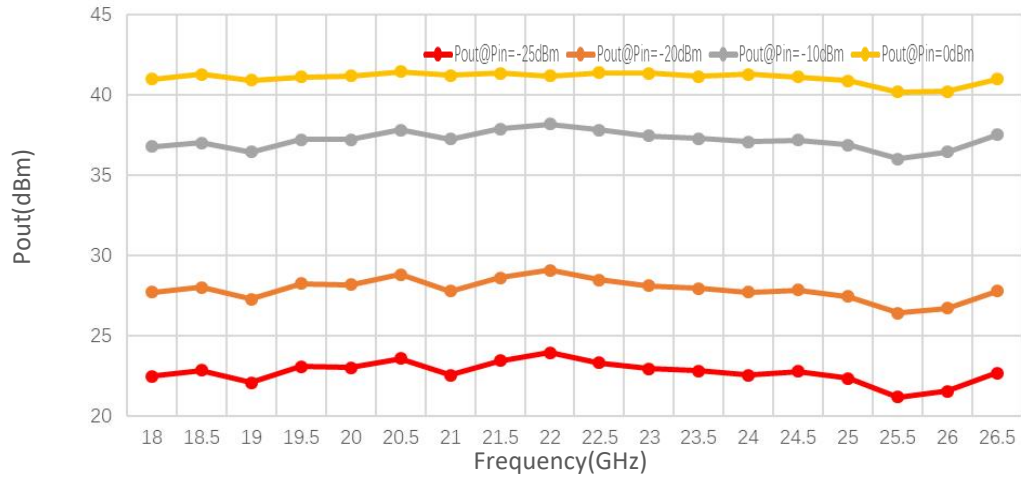
Pout@Pin



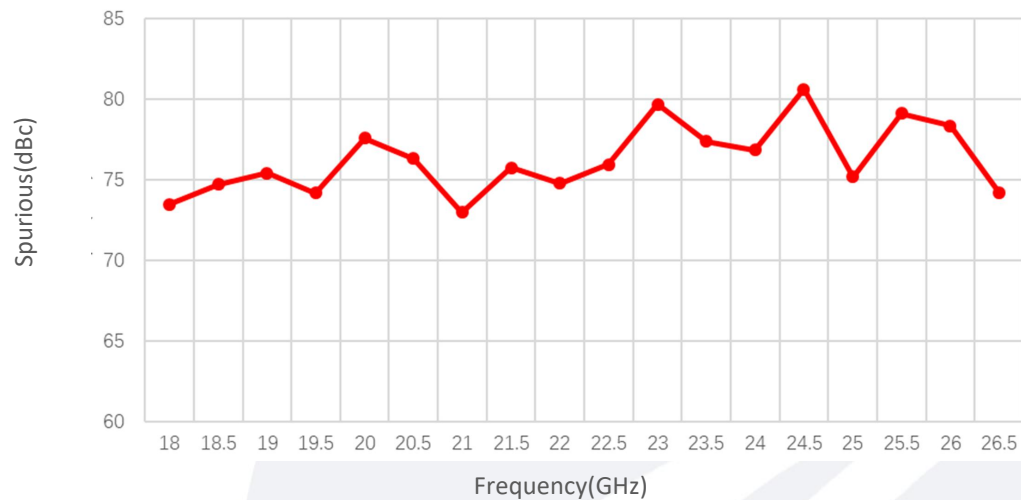
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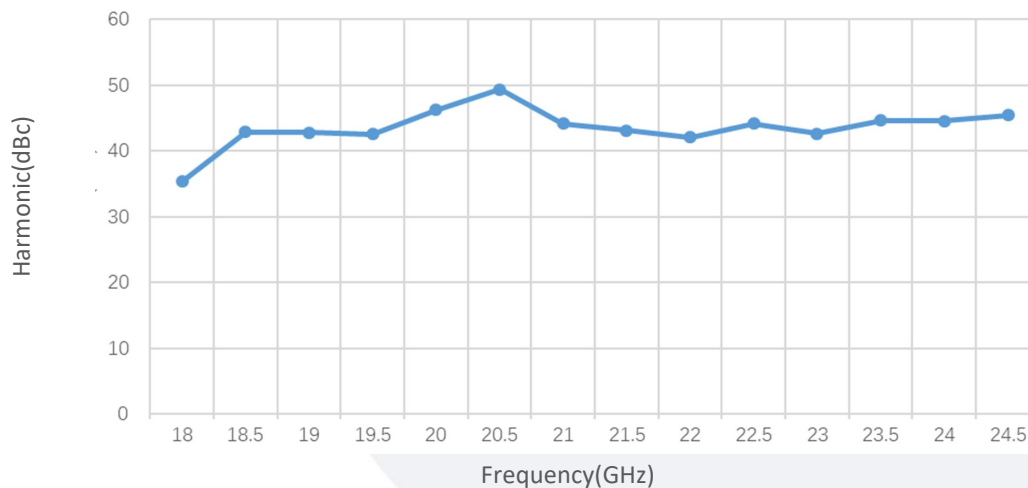
Pout@Equal_Pin



Spurious vs Frequency



Harmonic vs Frequency



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