

Power Amplifier

0.5-6GHz/43dB Gain/43dBm Psat

Model: TLPA0.5G6G-43-43

TLPA0.5G6G-43-43 is a power amplifier with a minimum small signal gain of 43 dB and a minimum Psat of 43 dBm across the frequency range of 0.5 to 6 GHz. The DC power requirement for the amplifier is +36 VDC/3 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.5-6GHz
- Gain: 43dB Min
- Output Power Psat: 43dBm 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		0.5-6			GHz
Small Signal Gain		43			dB
Gain Flatness			±3.5		dB
Output Psat		43			dBm
Spurious				-50	dBc
Harmonic	@0.5-0.7GHz			-5	dBc
	@0.7-6GHz			-10	dBc
Input VSWR				1.8	:1
DC Voltage			36		V DC
DC Supply Current			3		A
Impedance		50			Ohms

Mechanical Specifications:

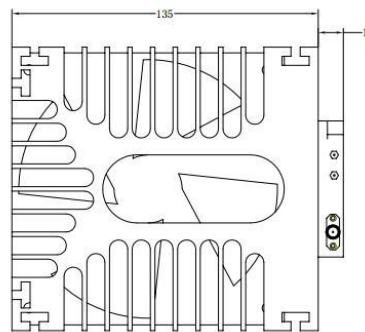
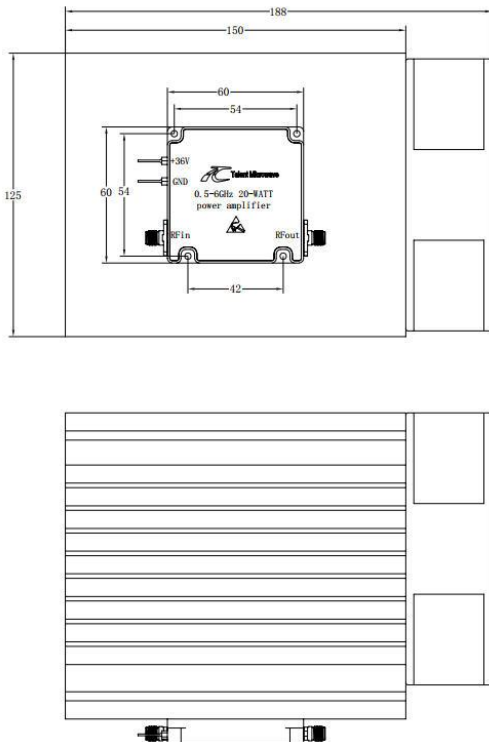
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Feedthru capacitors	
Size	60*60*11(Without heatsink) 188*125*146(With heatsink)	mm
Weight	≤200	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+39 V
RF Input Power	+5 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.

Environmental Conditions:

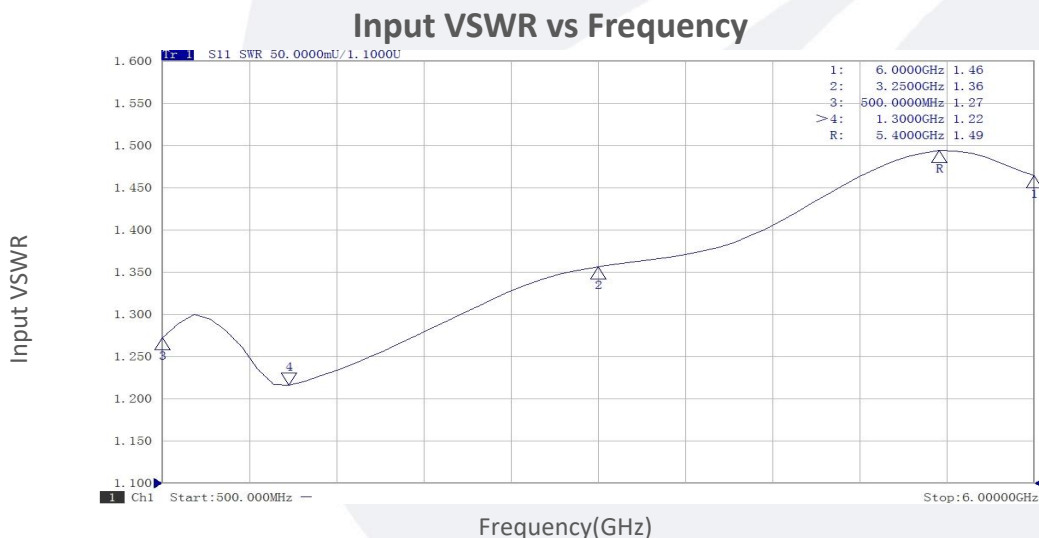
Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	°C
Non-operating Temperature*	-50		+60	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

Ordering Information:

Base Number	Description	Revision
TLPA0.5G6G-43-43	Power amplifier 0.5-6GHz, Gain:43dB,Psat:43dBm,+36V DC,Without Heatsink	Rev.1.1
TLPA0.5G6G-43-43-HS	Power amplifier 0.5-6GHz, Gain:43dB,Psat:43dBm,+36V DC,With Heatsink	Rev.1.1

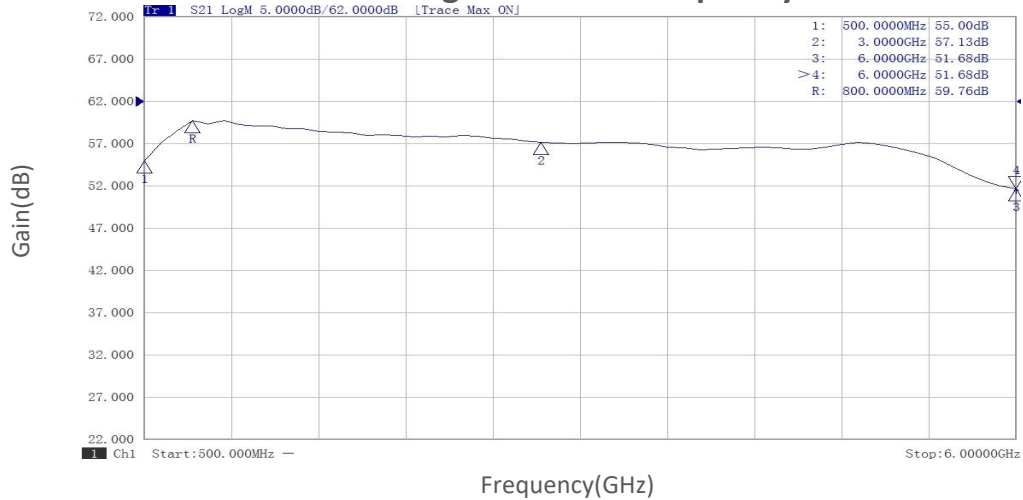
Typical Performance Data:



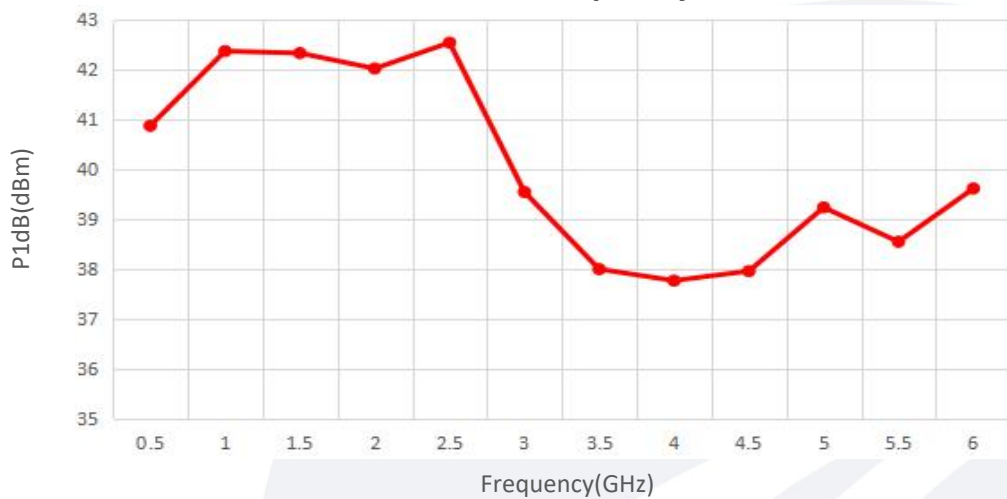
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

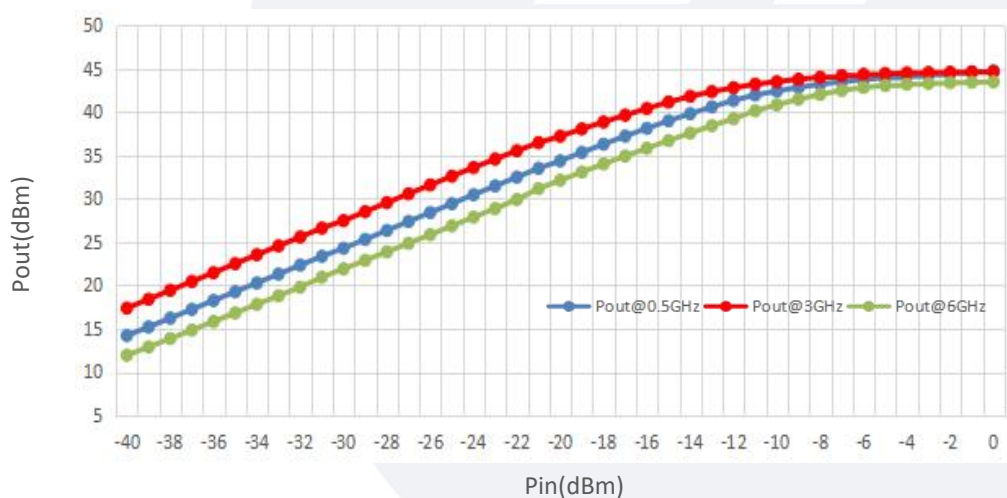
Small Signal Gain vs Frequency



P1dB vs Frequency



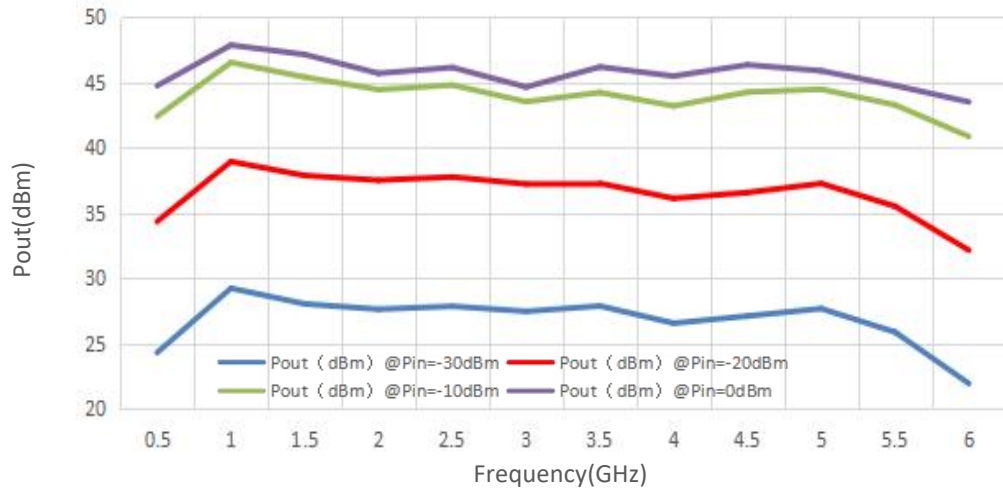
Pout@Pin



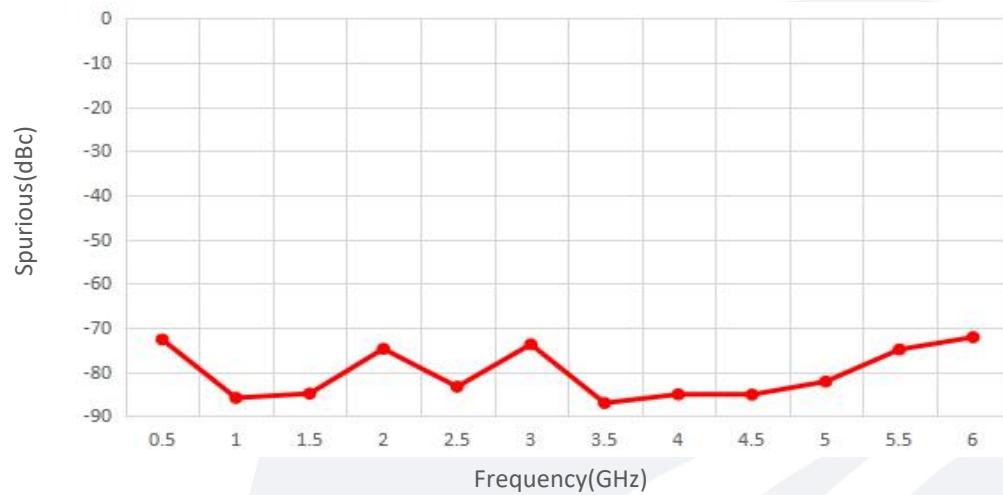
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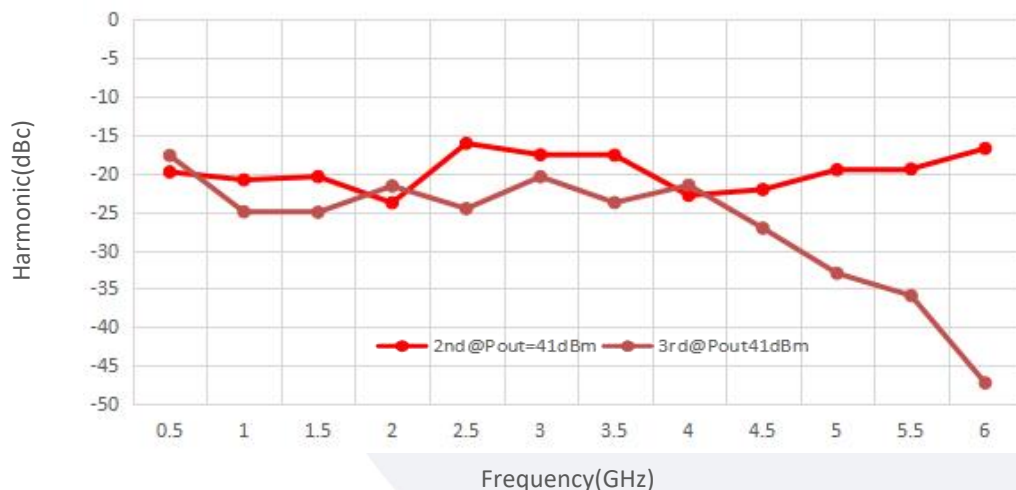
Pout@Equal_Pin



Spurious vs Frequency



Harmonic vs Frequency



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