Suzhou Talent Microwave,Inc
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Power Amplifier

0.5-6GHz/40dB Gain/40 dBm Psat

Model: TLPA0.5G6G-40-40-A

TLPA0.5G6G-40-40-A is a power amplifier with a minimum small signal gain of 40 dB and a minimum Psat of 40 dBm across the frequency range of 0.5 to 6 GHz. The DC power requirement for the amplifier is +30 VDC/0.5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.5-6GHz
- Gain: 40dB Min
- Output Power Psat: 40dBm 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	40	43		dB
Gain Flatness		±2.5	±3.5	dB
Output P1dB	37	38		dBm
Output Psat	40			dBm
Spurious		-60		dBc
Harmonic		-15	-11	dBc
Input VSWR		1.5	2.5	:1
DC Voltage		+30		V DC
DC Supply Current		0.5	2	A
Impedance		50		Ohms

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Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	125*95*12	mm

Absolute Maximum Ratings:

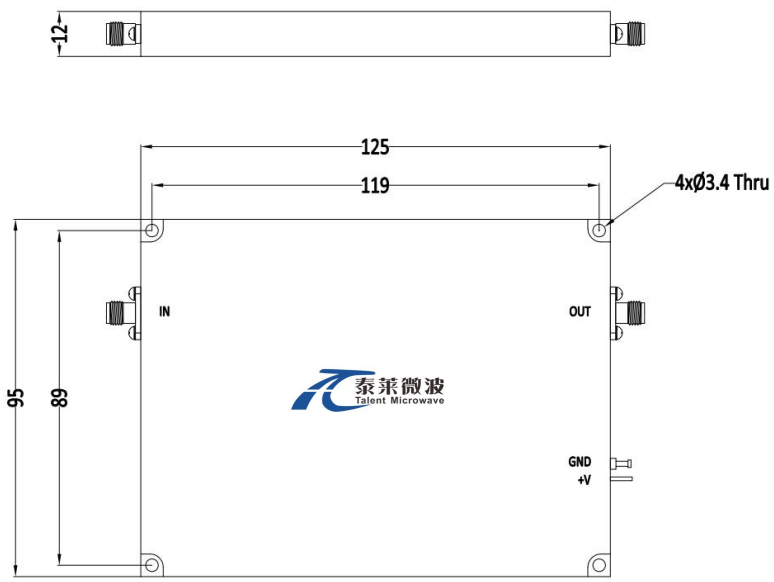
Parameter	Value
Supply Bias Voltage	+32 V
RF Input Power	+8 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm; Tolerance:±0.1mm





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

***Heat Sink Required During Operation

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Instruction Manual:

Power on	
1	Connect ground and RF input connector
2	Connect the RF output port to the load (The VSWR of the load should be less than 3:1)
3	Connect the 30V power supply to the fan
4	Turn on the RF signal and ensure that the input signal does not exceed 8dBm

Power off	
1	Turn off RF signal
2	Disconnect the 28V power supply to the amplifier
3	Disconnect the RF connectors

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	℃
Non-operating Temperature*	-50		+60	℃
Relative humidity		95		%
Altitude	50,000			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:

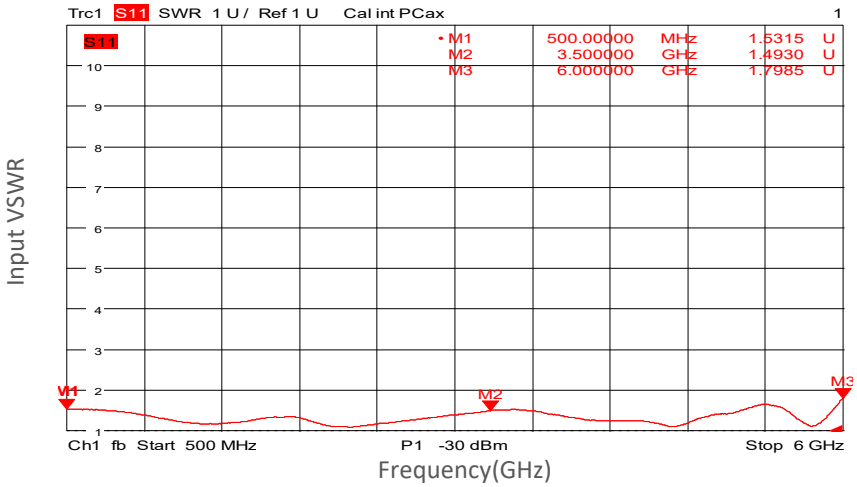
Base Number	Description	Revision
TLPA0.5G6G-40-40-A	Power amplifier 0.5-6GHz, Gain:40dB,Psat:40dBm,+30V DC,Without Heatsink	Rev.1.1
TLPA0.5G6G-40-40-A-HS	Power amplifier 0.5-6GHz, Gain:40dB,Psat:40dBm,+30V DC,With Heatsink	Rev.1.1

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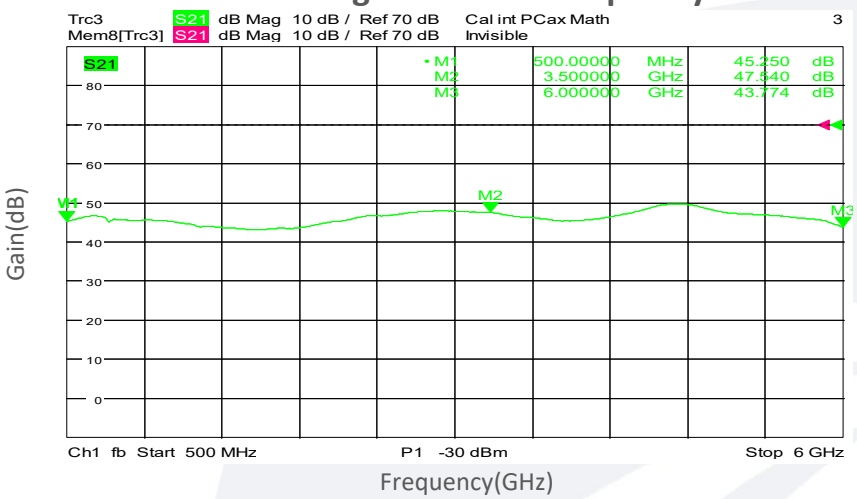
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Typical Performance Data:

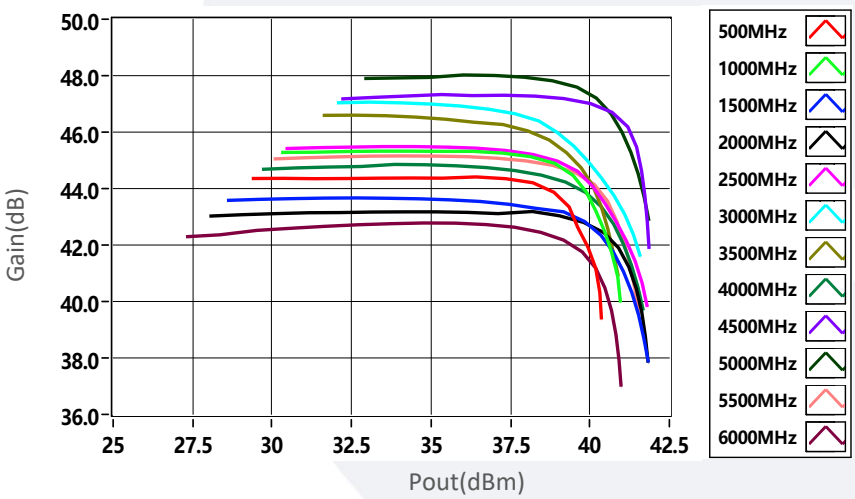
Input VSWR vs Frequency



Small Signal Gain vs Frequency



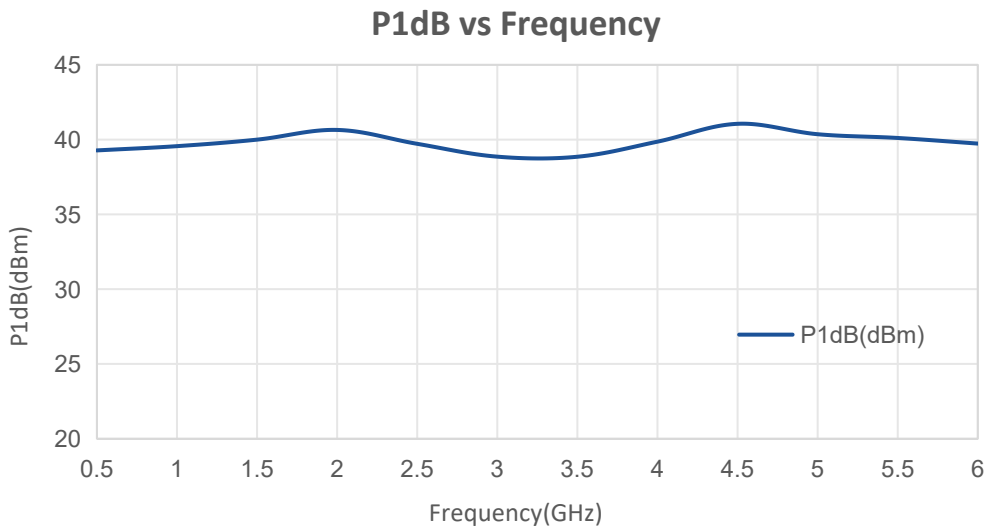
Gain vs Output Power

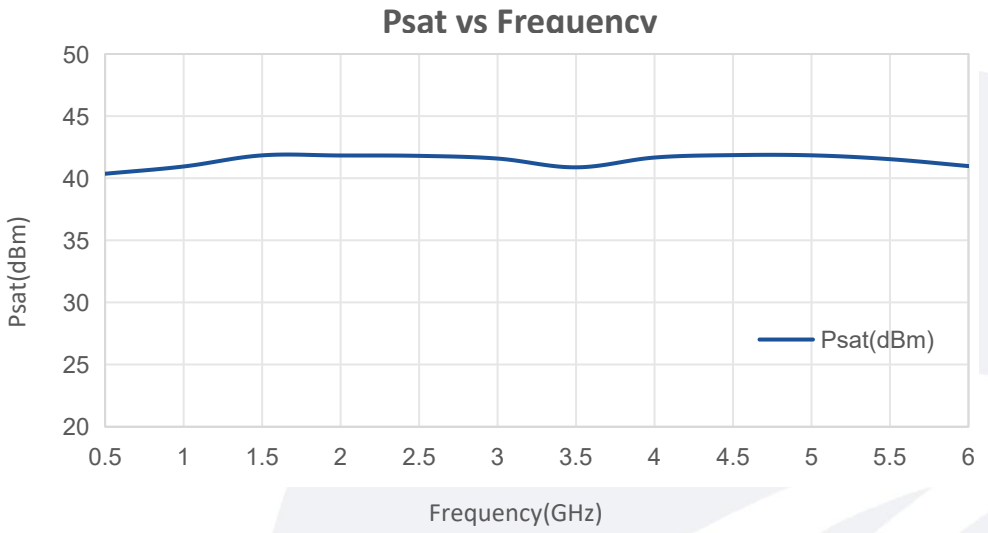


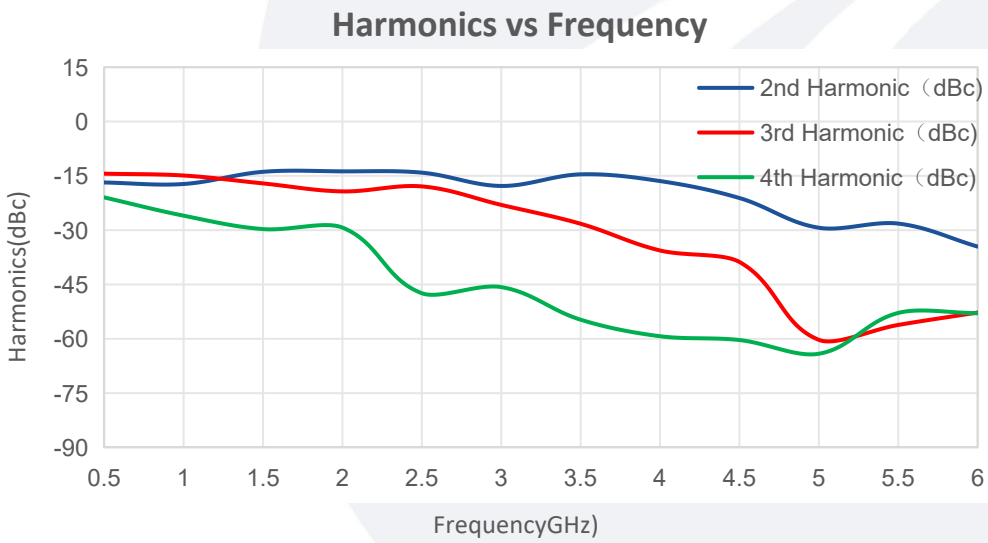
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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