

Power Amplifier

0.01-40GHz/28dB Gain/20dBm Psat

Model: TLPA10M40G-28-20

TLPA10M40G-28-20 is a power amplifier with a typical small signal gain of 28 dB and a nominal Psat of 20 dBm across the frequency range of 0.01 to 40 GHz. The DC power requirement for the amplifier is +12 VDC/400 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 0.01-40GHz
- Gain: 28dB Typ
- Output Power Psat: 20dBm 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	0.01		40	GHz
Small Signal Gain		28		dB
Gain Flatness		±2		dB
Output P1dB		18		dBm
Output Psat		20		dBm
Spurious		-60		dBc
Noise Figure		6		dB
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		+12		V DC
DC Supply Current		400		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92 Female/2.92 Female	
DC Bias	Solder Pin	
Size	44*36*12	mm

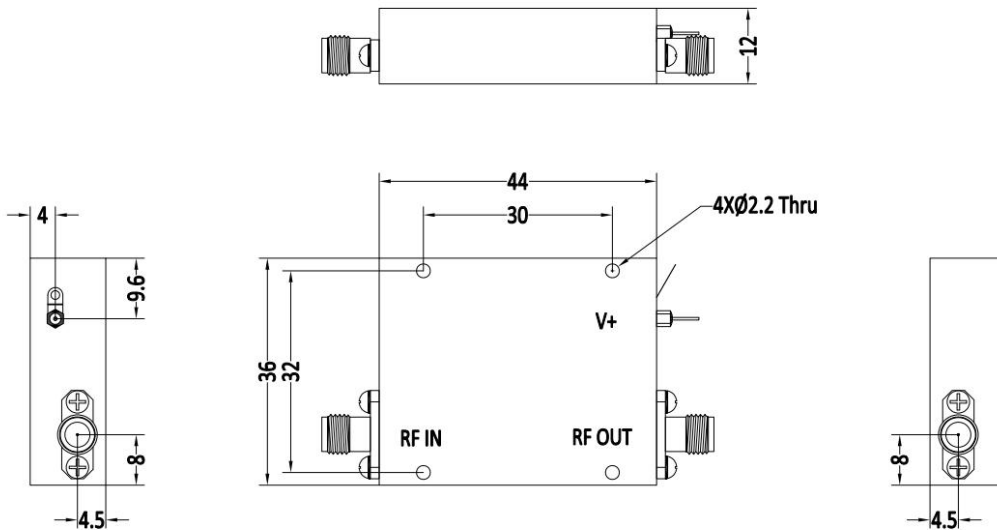
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+12 V
RF Input Power	+10 dBm
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.

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-45		+85	°C
Non-operating Temperature*	-55		+125	°C
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			

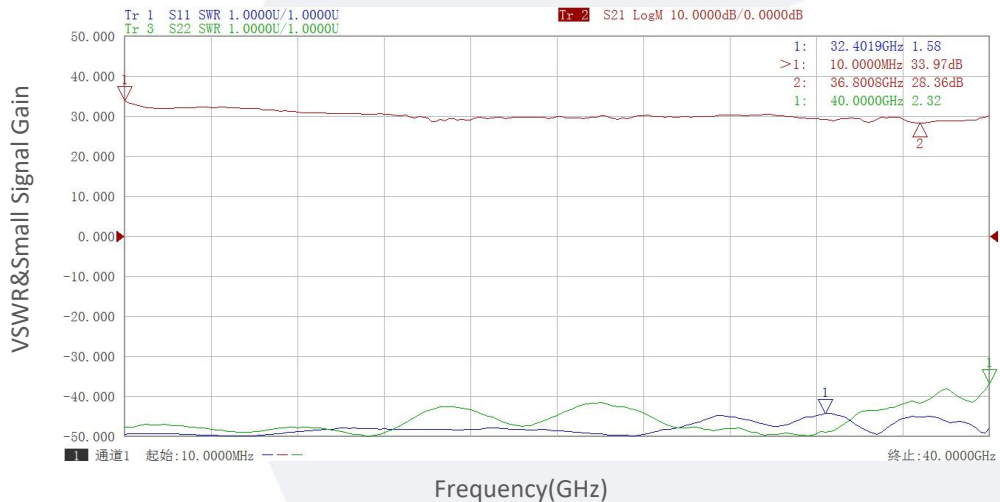
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA10M40G-28-20	Power amplifier 10MHz-40GHz,Gain:28dB,Psat:20dBm,+12V DC,Without Heatsink.	Rev.1.1
TLPA10M40G-28-20-HS	Power amplifier 10MHz-40GHz,Gain:28dB,Psat:20dBm,+12V DC,With Heatsink.	Rev.1.1

Typical Performance Data:

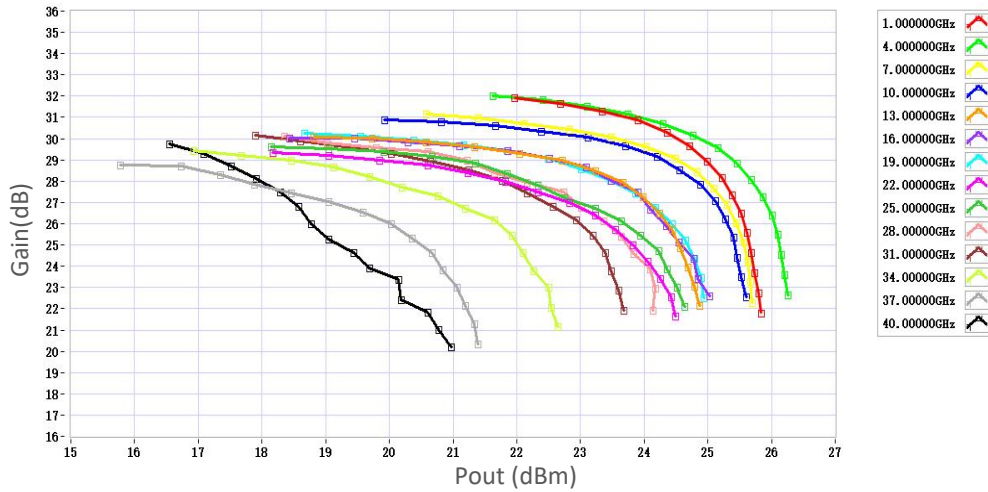
VSWR&Small Signal Gain vs Frequency



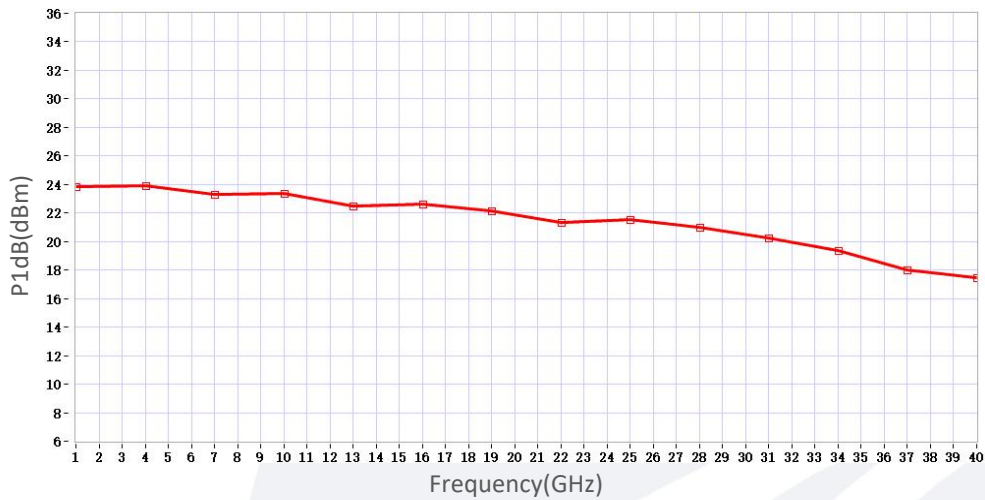
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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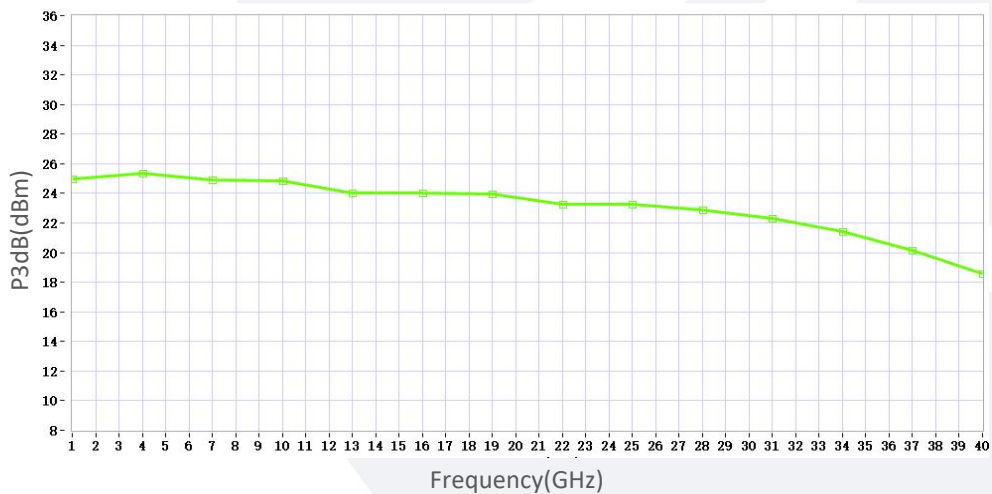
Gain vs Output Power



P1dB vs Frequency



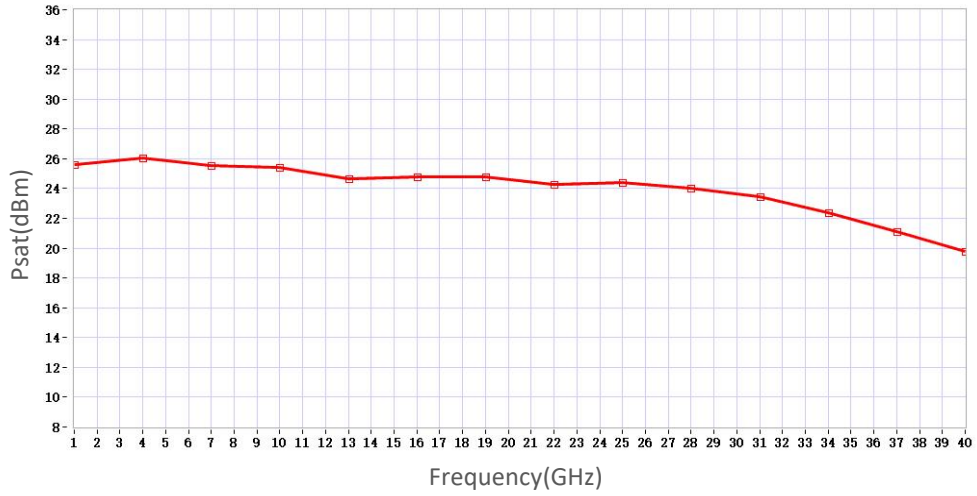
P3dB vs Frequency



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Typical Performance Data:

Psat vs Frequency



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