

Power Amplifier

1-18GHz/40dB Gain/34dBm Psat

Model: TLPA1G18G-40-34

TLPA1G18G-40-34 is a power amplifier with a minimum small signal gain of 40 dB and a nominal Psat of 34 dBm across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +20 VDC/0.8 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-18GHz
- Gain: 40dB Min
- Output Power Psat: 34dBm 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	1		18	GHz
Small Signal Gain	40	41		dB
Gain Flatness		±2.5	±3	dB
Output P1dB		31		dBm
Output Psat		34		dBm
Spurious@Psat		-60		dBc
Input VSWR		2	2.5	:1
Output VSWR		2	2.5	:1
DC Voltage		+20		V DC
DC Supply Current		0.8		A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
nput /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	58.5*38*12	mm

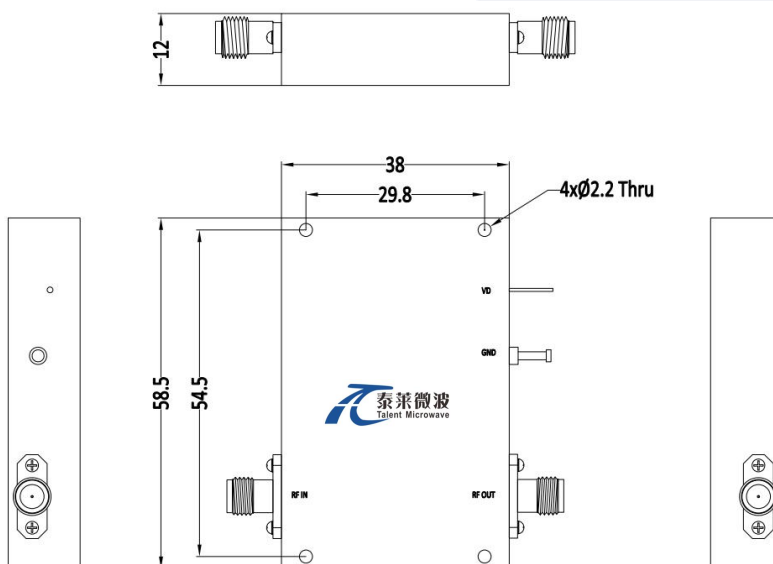
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	+5 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*	-40		+60	°C
Non-operating Temperature*	-50		+70	°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			

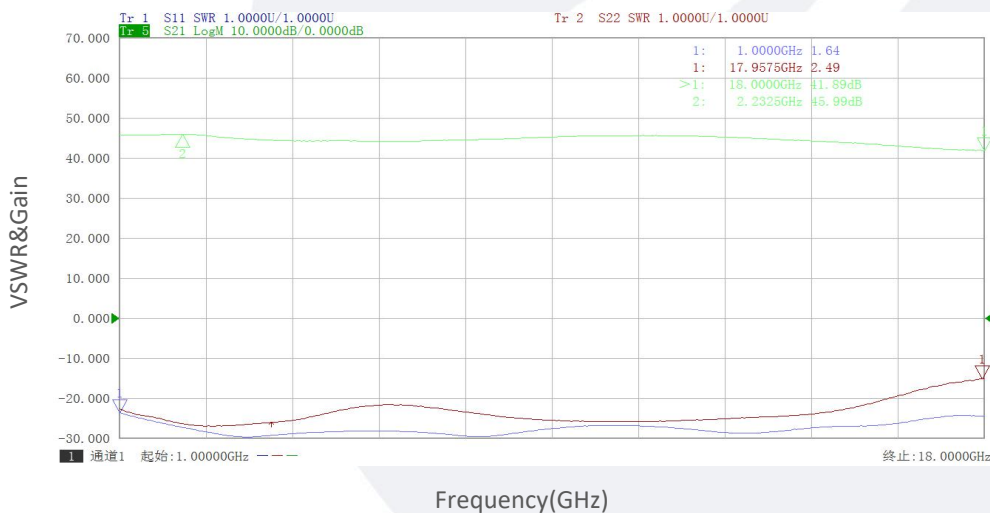
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA1G18G-40-34	Power amplifier 1-18GHz, Gain:40dB,Psat:34dBm,+20V DC,Without Heatsink	Rev.1.1
TLPA1G18G-40-34-HS	Power amplifier 1-18GHz, Gain:40dB,Psat:34dBm,+20V DC,With Heatsink	Rev.1.1

Typical Performance Data:

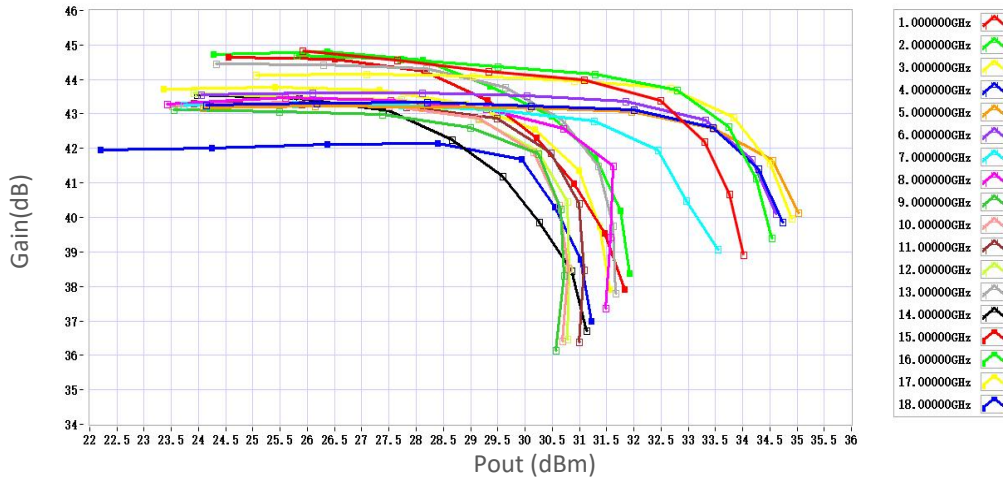
VSWR&Gain vs Frequency



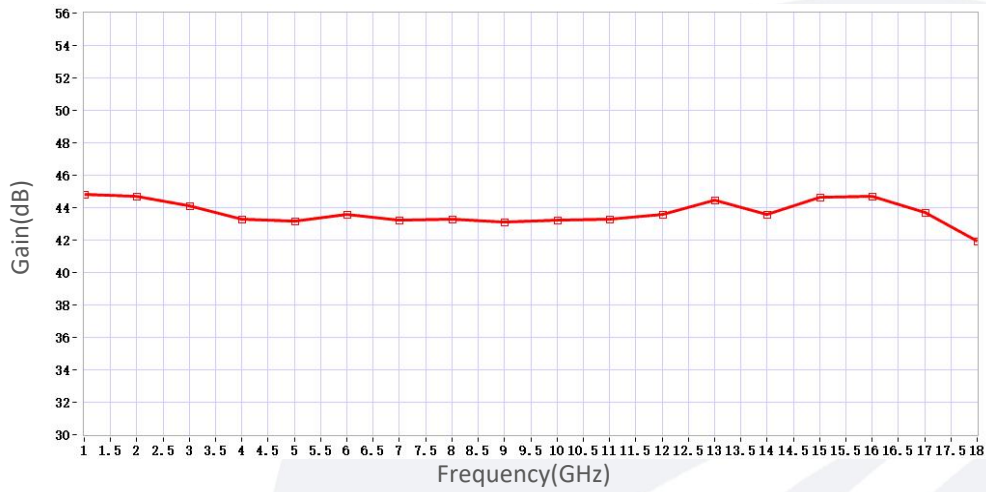
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

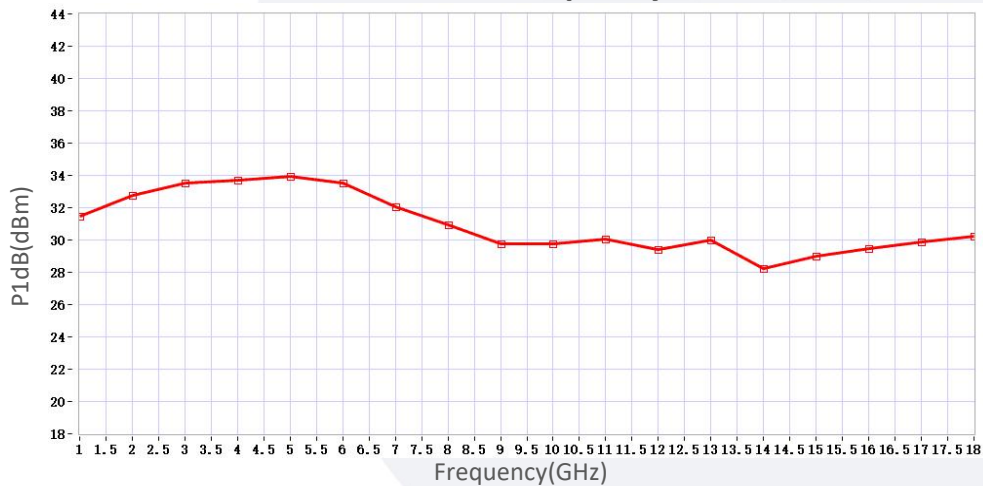
Gain vs Output Power



Gain vs Frequency



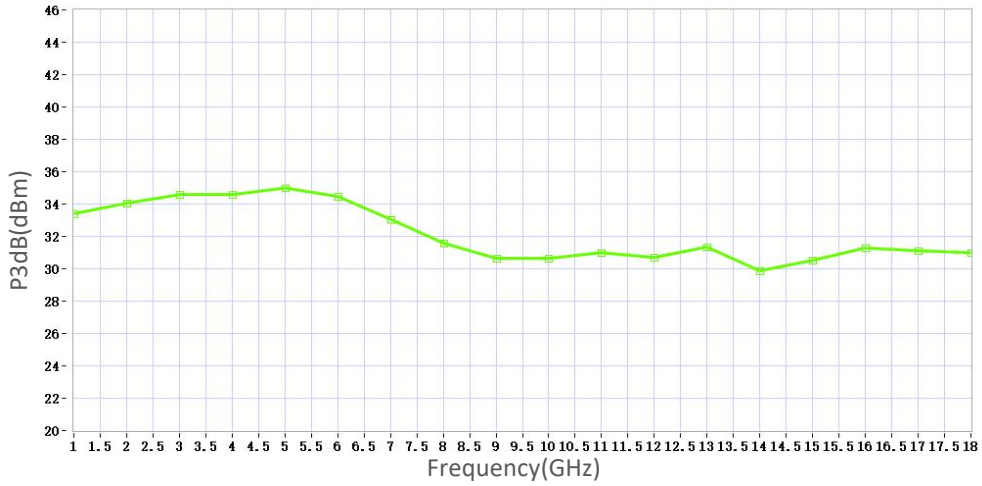
P1dB vs Frequency



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Typical Performance Data:

P3dB vs Frequency



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