

Power Amplifier

20-50GHz/35dB Gain/23dBm P1dB

Model: TLPA20G50G-35-23

TLPA20G50G-35-23 is a power amplifier with a typical small signal gain of 35 dB and a nominal P1dB of 23 dBm across the frequency range of 20 to 50 GHz. The DC power requirement for the amplifier is +12 VDC/400 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Frequency range: 20-50GHz
- Gain: 35dB Typ
- Output Power P1dB: 23dBm 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	20		50	GHz
Small Signal Gain		35		dB
Gain Flatness		±2.5		dB
Output P1dB		23		dBm
Input VSWR		2.0		:1
Output VSWR		2.0		:1
DC Voltage		+12		V DC
DC Supply Current		400		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
DC Bias	Solder Pin	
Size	38*58.5*12.5	mm
Weight	200	g

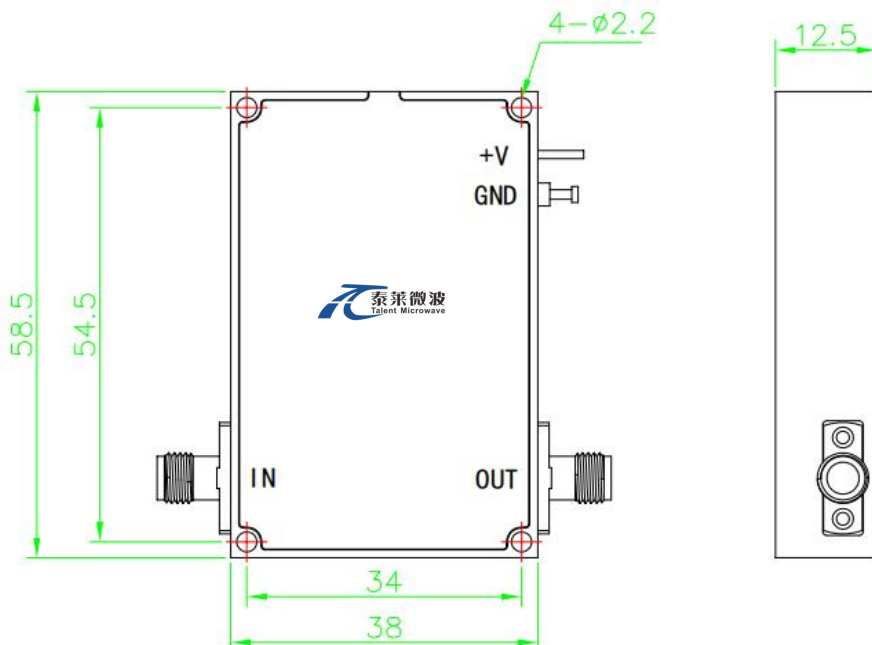
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+18 V
RF Input Power	+15 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

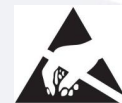


Outline Drawing:

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			

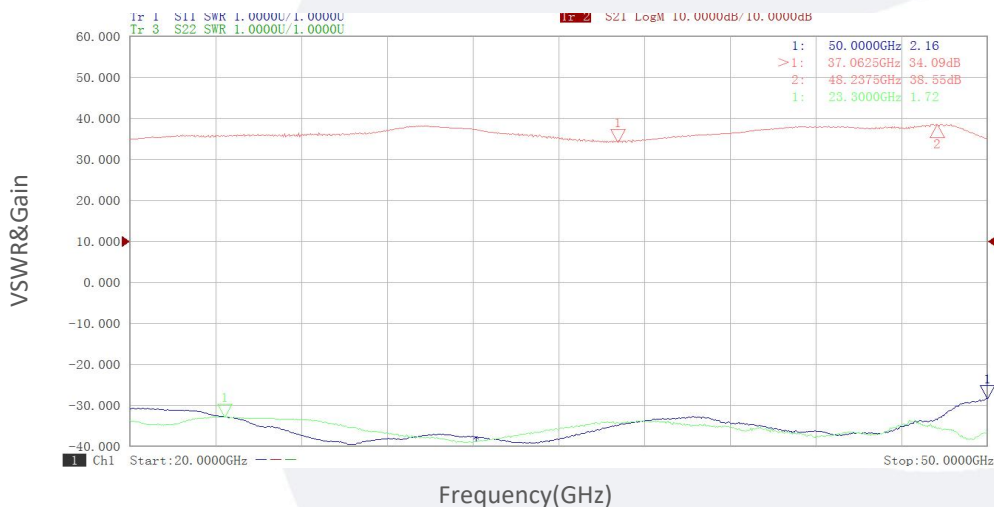
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA20G50G-35-23	Power amplifier 20-50GHz, Gain:35dB,P1dB:23dBm,+12V DC,Without Heatsink	Rev.1.1
TLPA20G50G-35-23-HS	Power amplifier 20-50GHz, Gain:35dB,P1dB:23dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

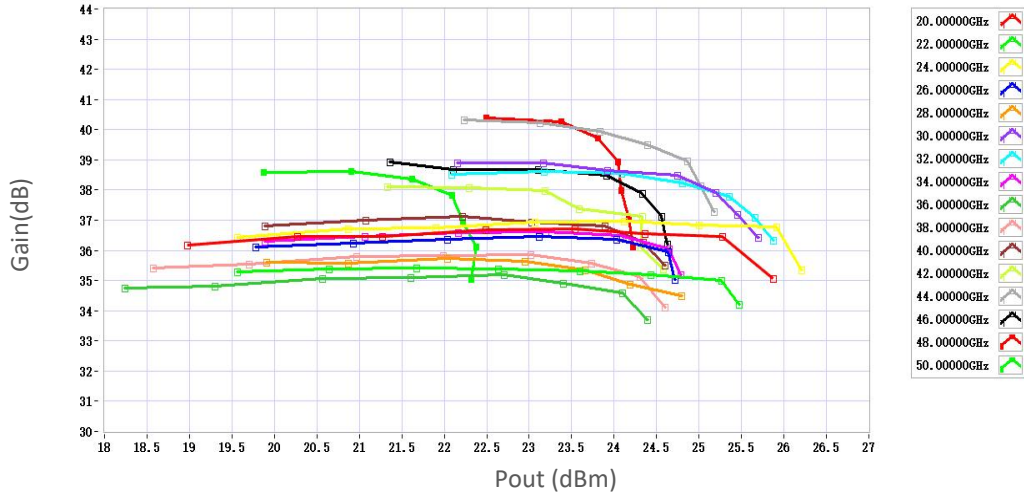
VSWR&Gain vs Frequency



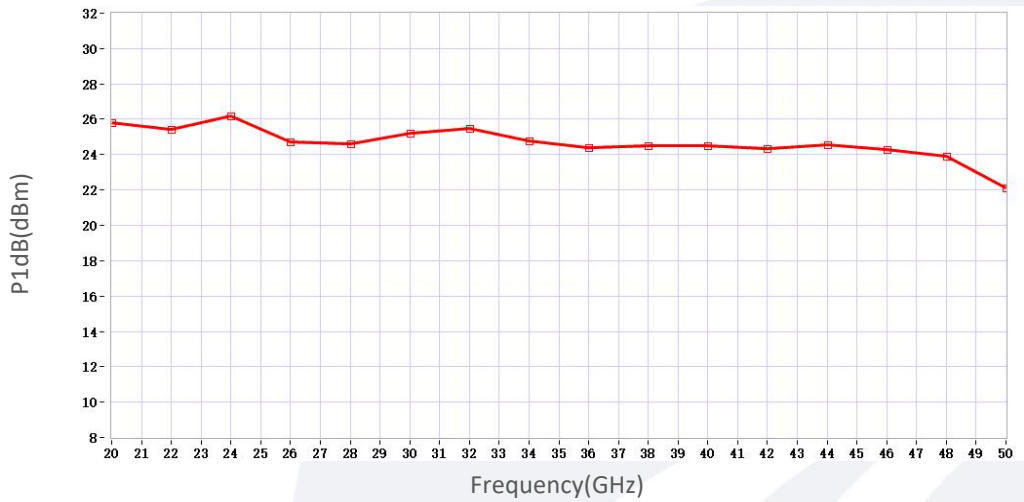
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency



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