

Power Amplifier

47-52GHz/20dB Gain/18dBm P1dB

Model: TLPA47G52G-20-18

TLPA47G52G-20-18 is a power amplifier with a minimum gain of 20 dB and a minimum P1dB of 18 dBm across the frequency range of 47 to 52 GHz. The DC power requirement for the amplifier is +12 VDC/0.7 A. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Frequency range: 47-52GHz
- Gain: 20dB Min
- Output Power P1dB: 18dBm 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	47		52	GHz
Gain	20			dB
Output P1dB	18			dBm
Spurious			-50	dBc
DC Voltage		+12		V DC
DC Supply Current			0.7	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
DC Supply Connector	Solder Pin	
Size	60*65*11	mm
Weight	500	g

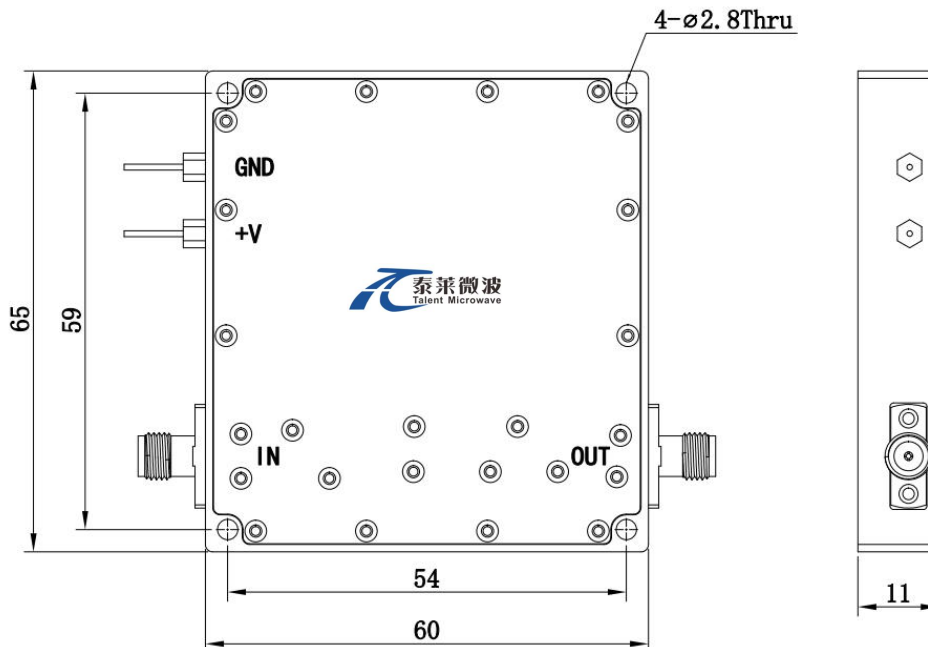
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+12 V
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			

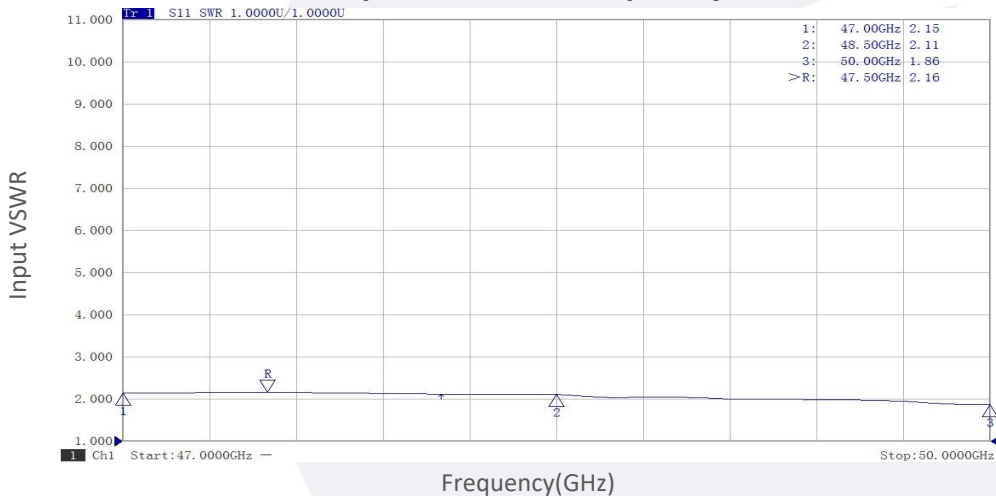
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA47G52G-20-18	Power amplifier 47-52GHz, Gain:20dB,P1dB:18dBm,+12V DC,Without Heatsink	Rev.1.1
TLPA47G52G-20-18-HS	Power amplifier 47-52GHz, Gain:20dB,P1dB:18dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

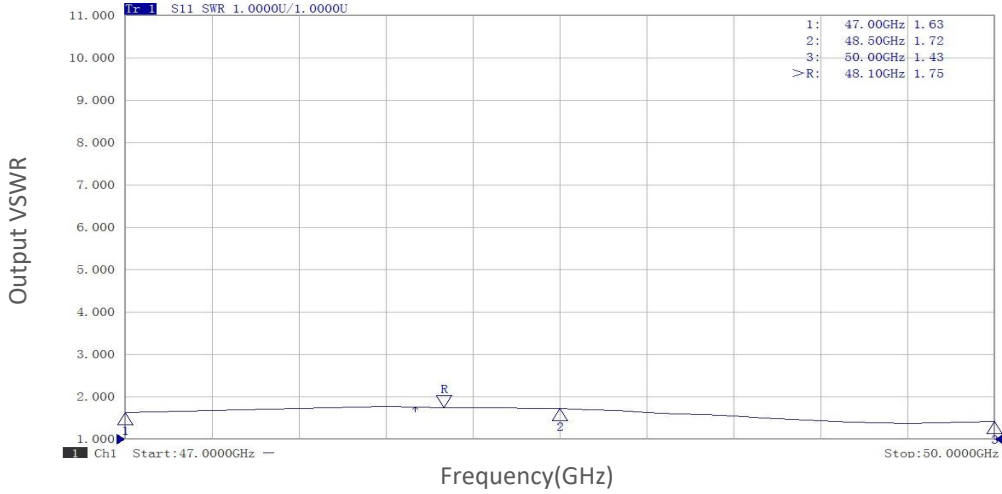
Input VSWR vs Frequency



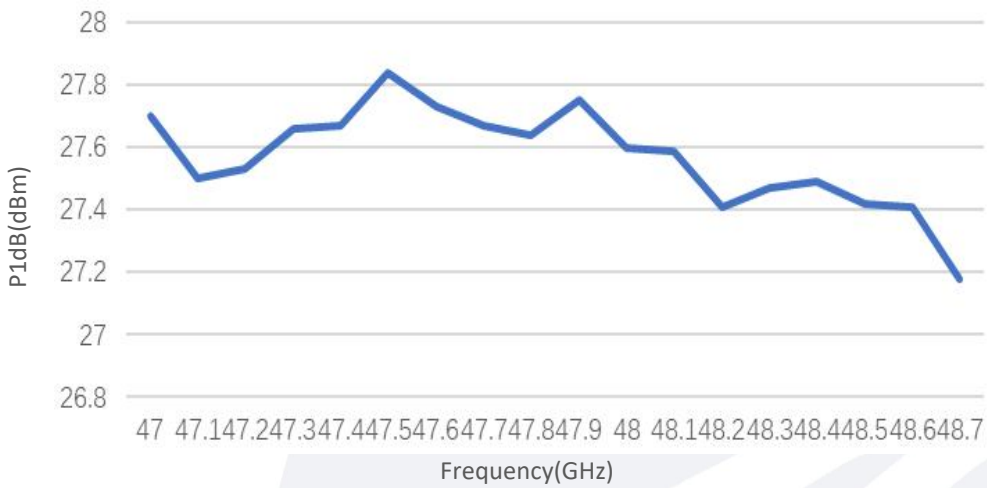
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

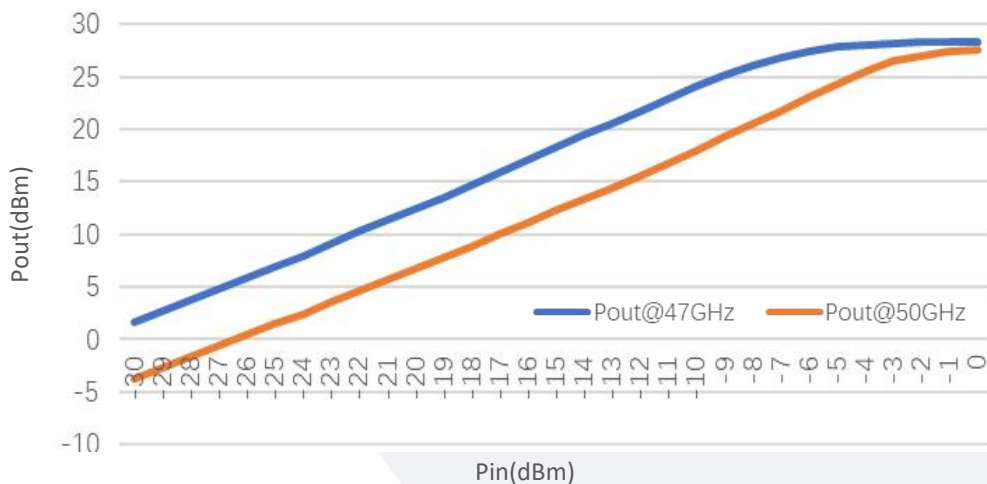
Output VSWR vs Frequency



P1dB vs Frequency

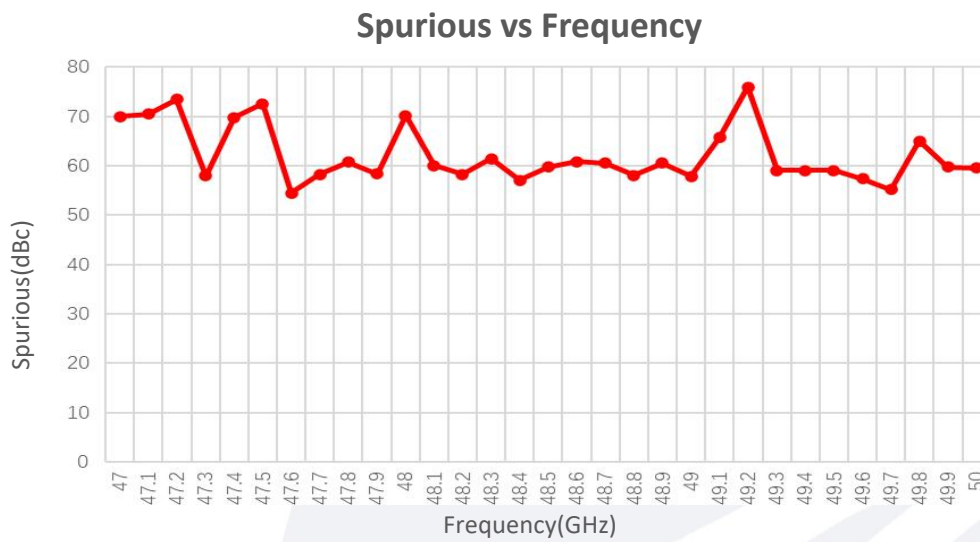
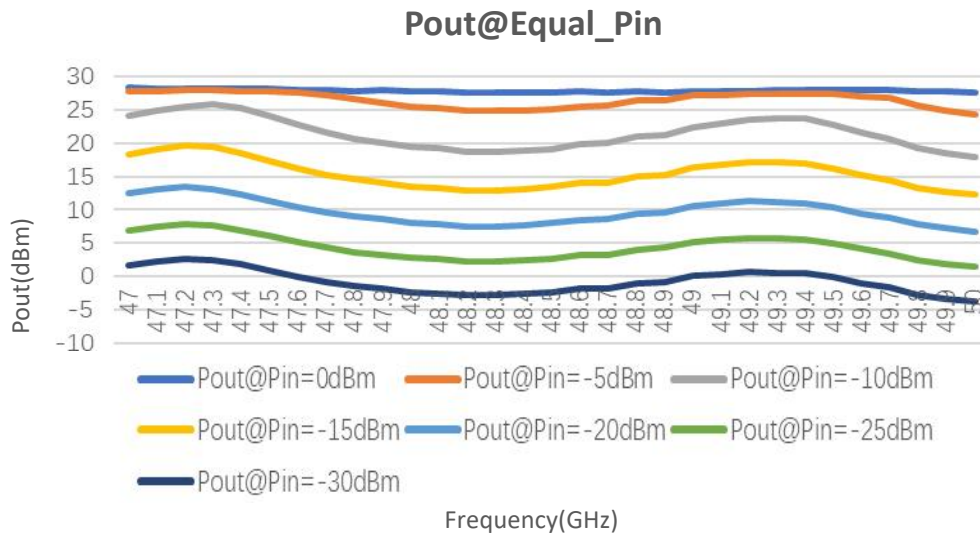


Pout@Pin



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