

Power Amplifier

40-50GHz/38dB Gain/38dBm Psat

Model: TLPA40G50G-38-38

TLPA40G50G-38-38 is a power amplifier with a minimum power gain of 38 dB and a nominal Psat of 38 dBm across the frequency range of 40 to 50 GHz. The DC power requirement for the amplifier is +20 VDC/3.5 A. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Frequency range: 40-50GHz
- Gain: 38dB Min
- Output Power Psat: 38dBm 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	40		50	GHz
Power Gain	38			dB
Output Psat		38		dBm
Spurious@Pout=38dBm			-50	dBc
DC Voltage		+20	+21	V DC
DC Supply Current		3.5		A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
DC Bias	Feedthru capacitors	

Mechanical Specifications:

Parameter	Value	Units
Size	60*60*11(Without heatsink) 188*125*146(With heatsink)	mm
Weight	≤300	g

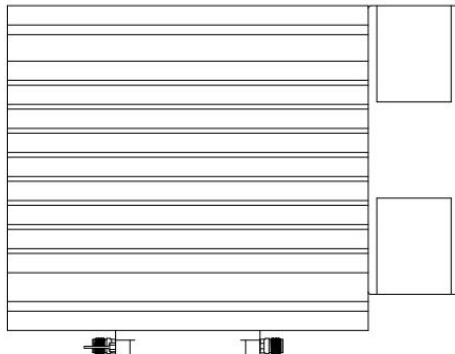
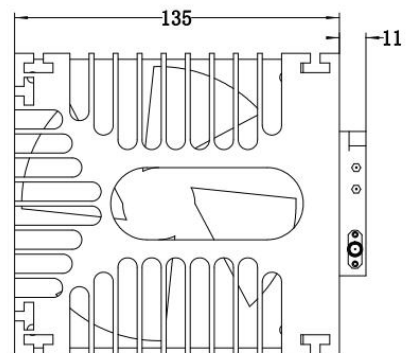
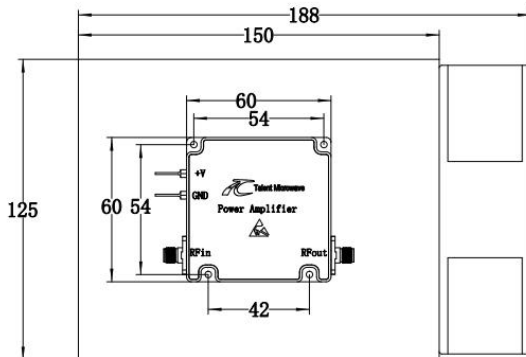
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+21 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm



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			

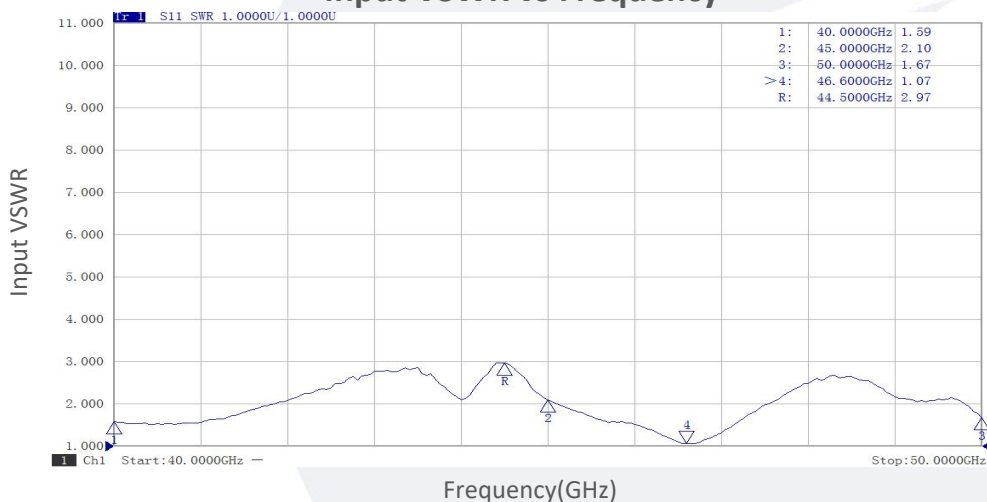
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA40G50G-38-38	Power amplifier 40-50GHz, Gain:38dB,Psat:38dBm,+20V DC,With Heatsink	Rev.1.1

Typical Performance Data:

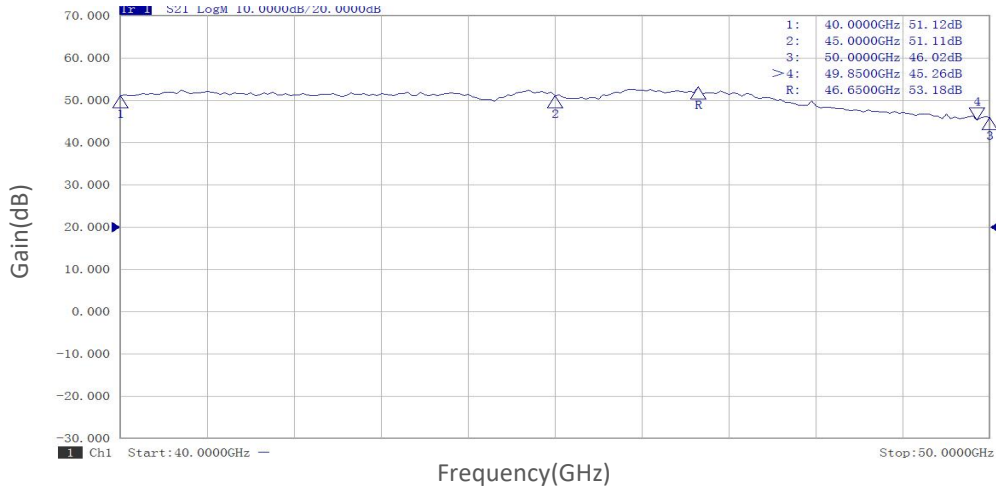
Input VSWR vs Frequency



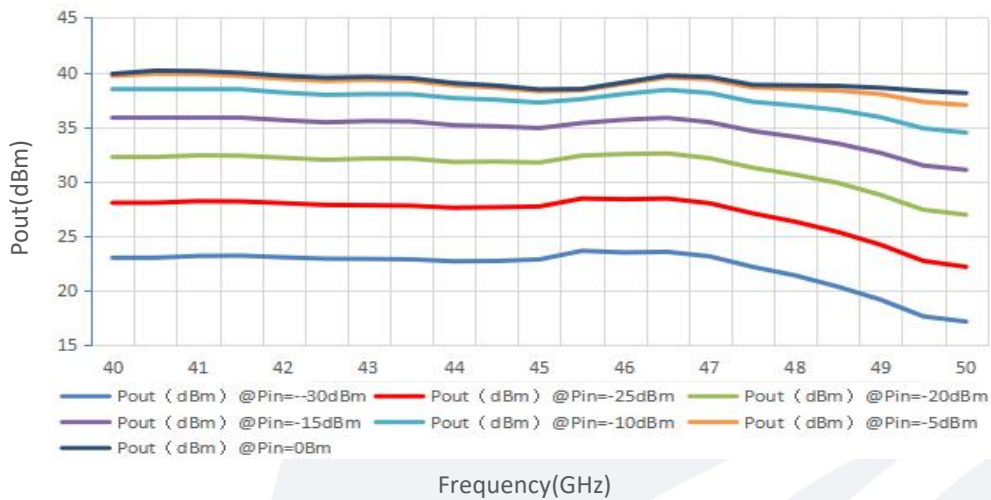
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

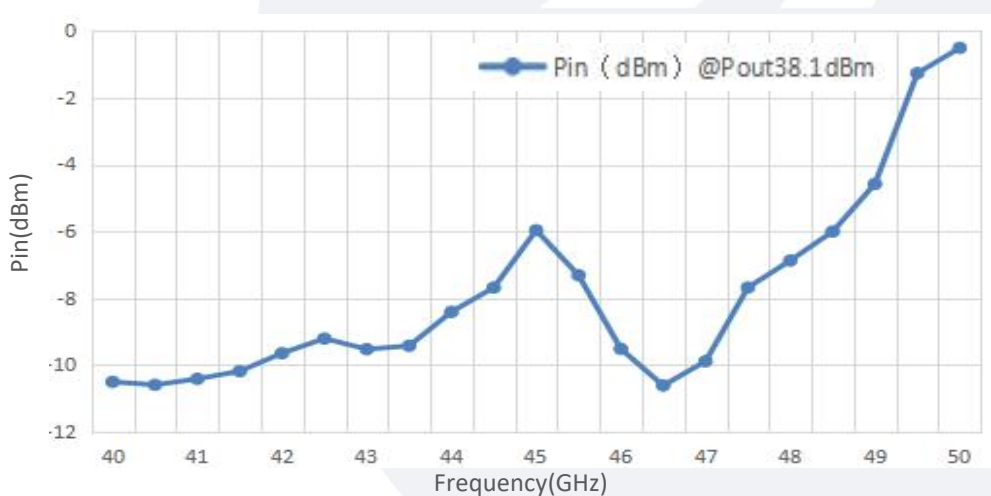
Small Signal Gain vs Frequency



Pout@Equal-Pin



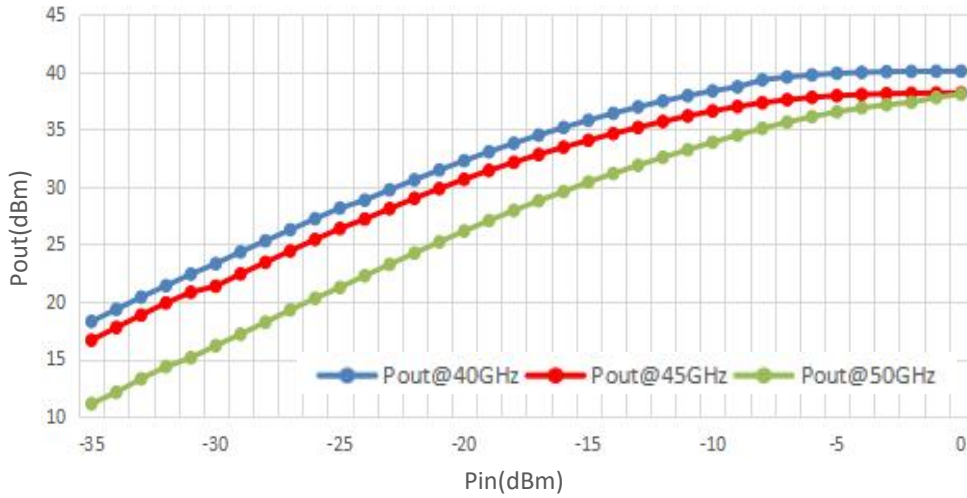
Pin@Equal-Pout



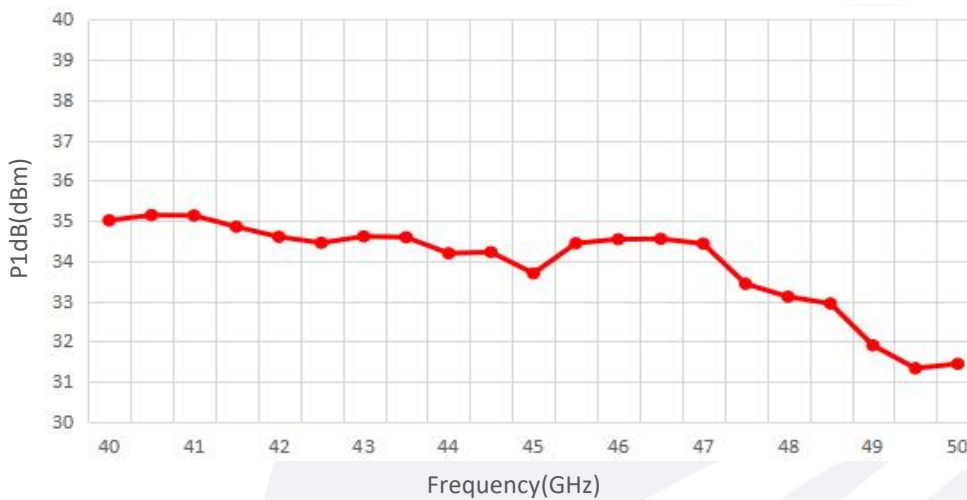
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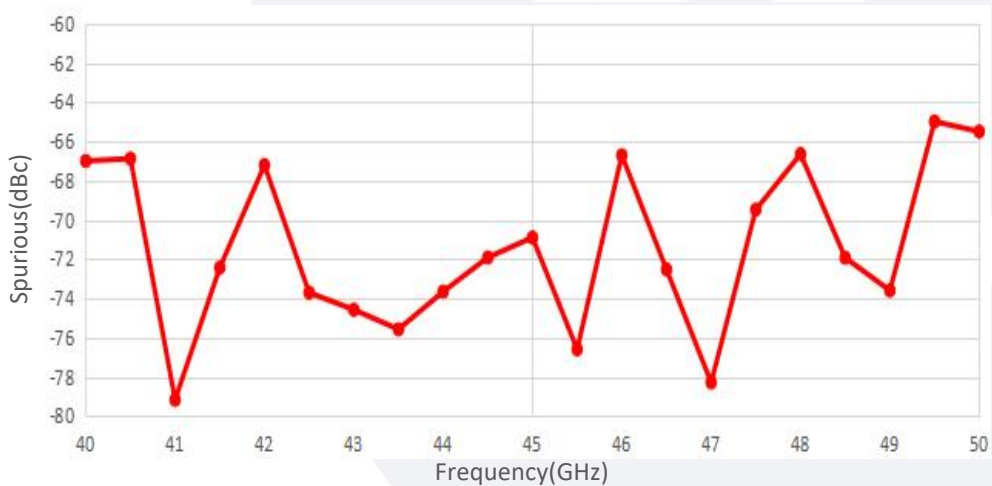
Pout@Pin



P1dB VS Frequency



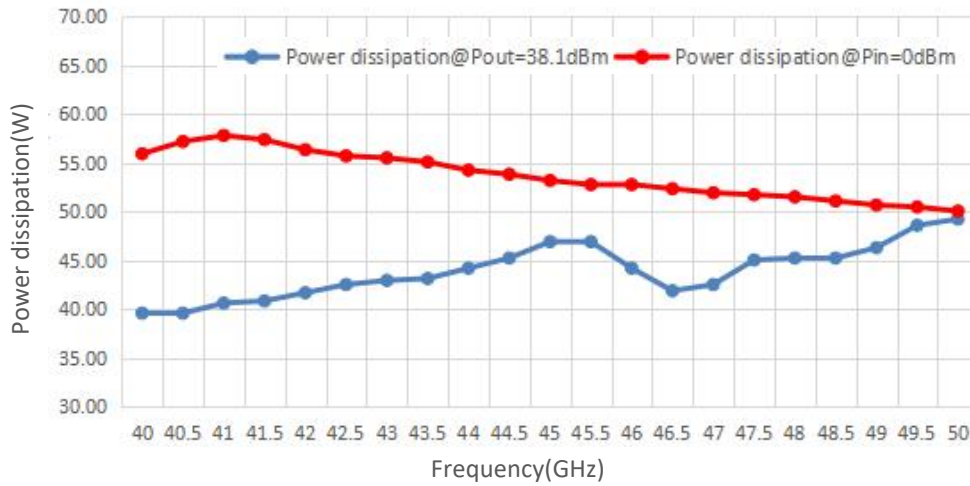
Spurious vs Frequency



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Typical Performance Data:

Power dissipation



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