

Power Amplifier

43-52GHz /37dB Gain/40 dBm Psat

Model: TLPA43G52G-37-40

TLPA43G52G-37-40 is a power amplifier with power gain of 37 dB and Psat of 40 dBm across the frequency range of 43 to 52 GHz. The DC power requirement for the amplifier is +18 VDC/500 W. The input and output port configuration offers coax adapter structure with 1.85mm female.

Features:

- Ultra Wide Band: 43-52GHz
- Gain: 37dB Min
- Output Power Psat: 40dBm 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	43-52			GHz
Power Gain	37			dB
Gain Flatness		±5		dB
Output Psat	40			dBm
Spurious			-50	dBc
Input VSWR		2		:1
DC Voltage		18		V DC
Power Consumption			500	W
Impedance	50			Ohms

Mechanical Specifications:

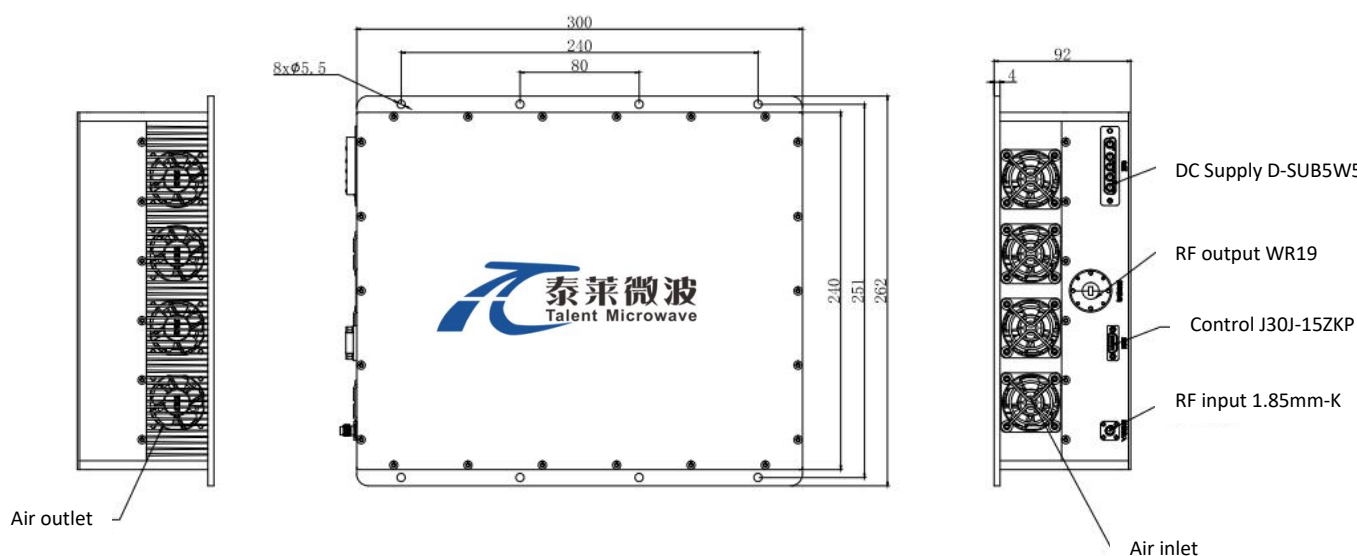
Parameter	Value	Units
Input /Output Connector	1.85 Female/WR19	
DC Supply	DSUB-5W5	A1~3:+18V A4~5:GND
Control Connector	J30J-15ZKP	1:TTL(power switch) 2~5:GND 6~15:NC
Size	300*262*92	mm
Weight	≤20	Kg

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



*****Heat Sink Required During Operation**



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

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			

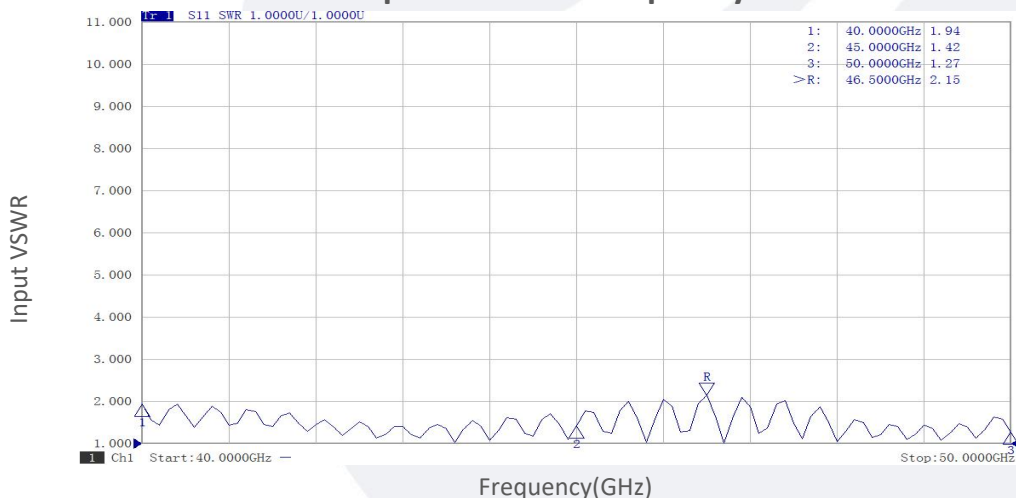
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA43G52G-37-40	Power amplifier 43-52GHz,Gain:37dB,Psat:40dBm, +18V DC,Without Heatsink	Rev.1.1
TLPA43G52G-37-40-HS	Power amplifier 43-52GHz,Gain:37dB,Psat:40dBm, +18V DC,With Heatsink	Rev.1.1

Typical Performance Data:

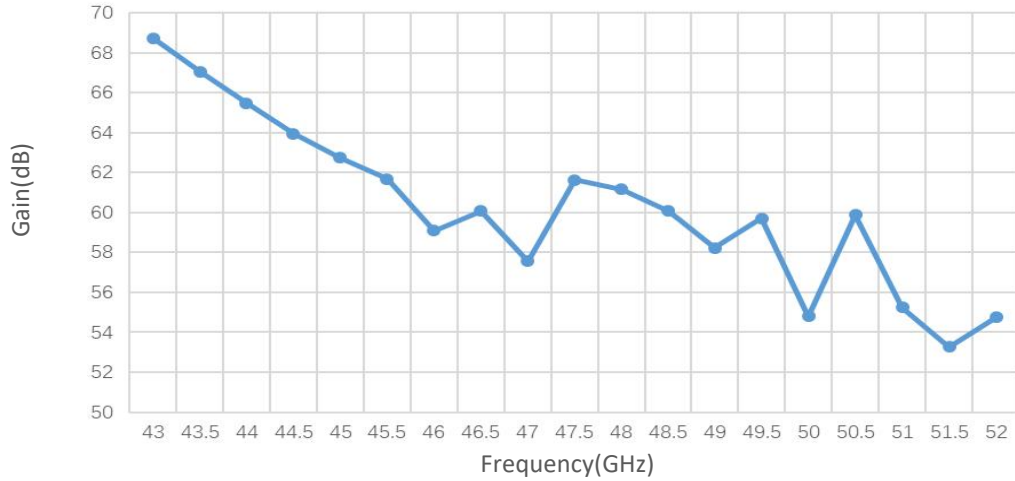
Input VSWR vs Frequency



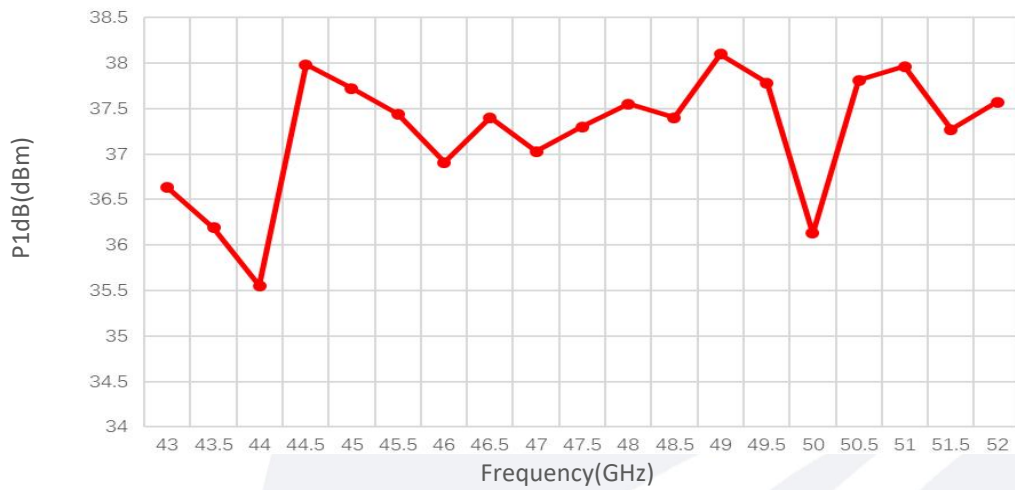
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

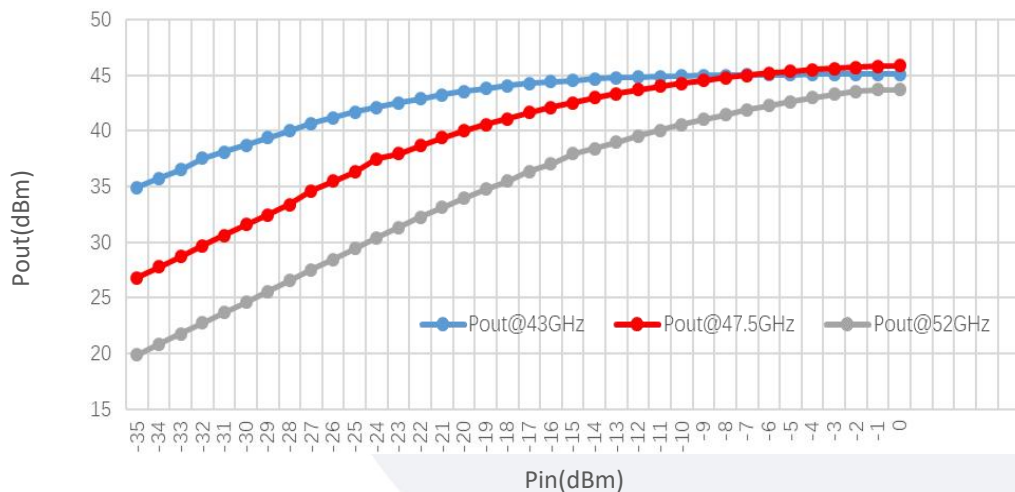
Small Signal Gain vs Frequency



P1dB vs Frequency



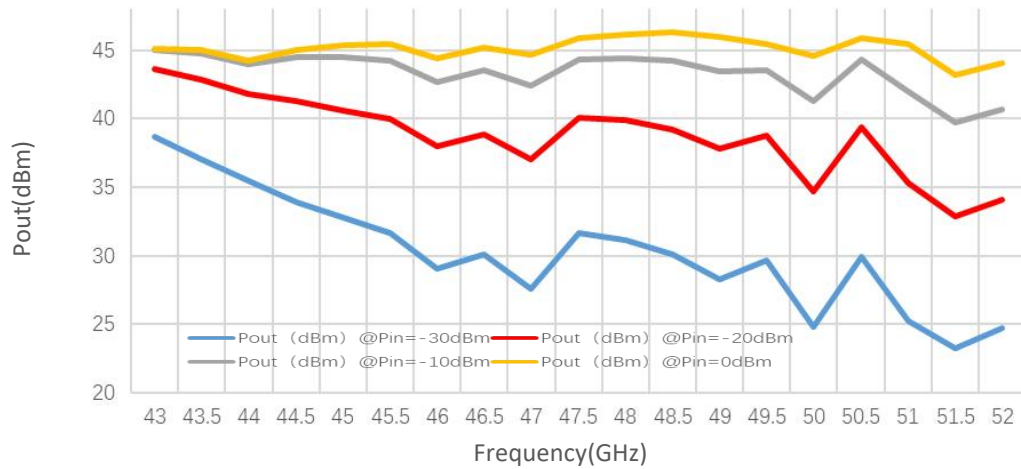
Pout@Pin



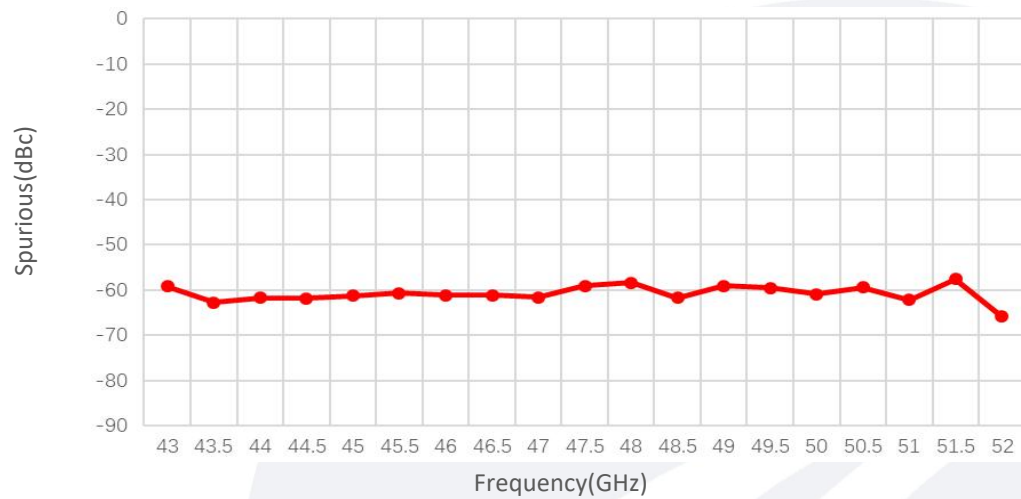
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Typical Performance Data:

Pout@Equal_Pin



Spurious vs Frequency



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