Rev.A

Power Amplifier

Model: PA-40G-50G-2

40-50GHz 2W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 40-50GHz
- High output power at saturation, 2W Min.
- High gain, 33 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview：

The PA-40G-50G-2 is a power amplifier with a minimum power gain of 33 dB and a minimum Psat of 2W across the frequency range of 40 to 50GHz. The DC power requirement for the amplifier is +18 VDC/2.5 A. The input and output port configuration offers coax adapter structure with 2.4mm female.

Electrical Specifications at 25℃:

Parameter	Min	Typ	Max	Units
Frequency range	40		50	GHz
Power Gain	33			dB
Power Gain Flatness		±2.5		dB
Output Psat	33	34		dBm
Spurious			-50	dBc
Input VSWR		3		:1
DC Voltage		+18	+20	V DC
DC Supply Current			2.5	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-40℃ to +60℃	
Non-operating Temperature*	-50℃ to +70℃	
Relative humidity	95%	
RF Input/Output Connector	2.4mm Female/2.4mm Female	
DC Bias	Feedthru capacitors	
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	
Dimensions W x H x D	60*60*11(Without heatsink) 188*125*146(With heatsink)	mm
Weight	≤300	g

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

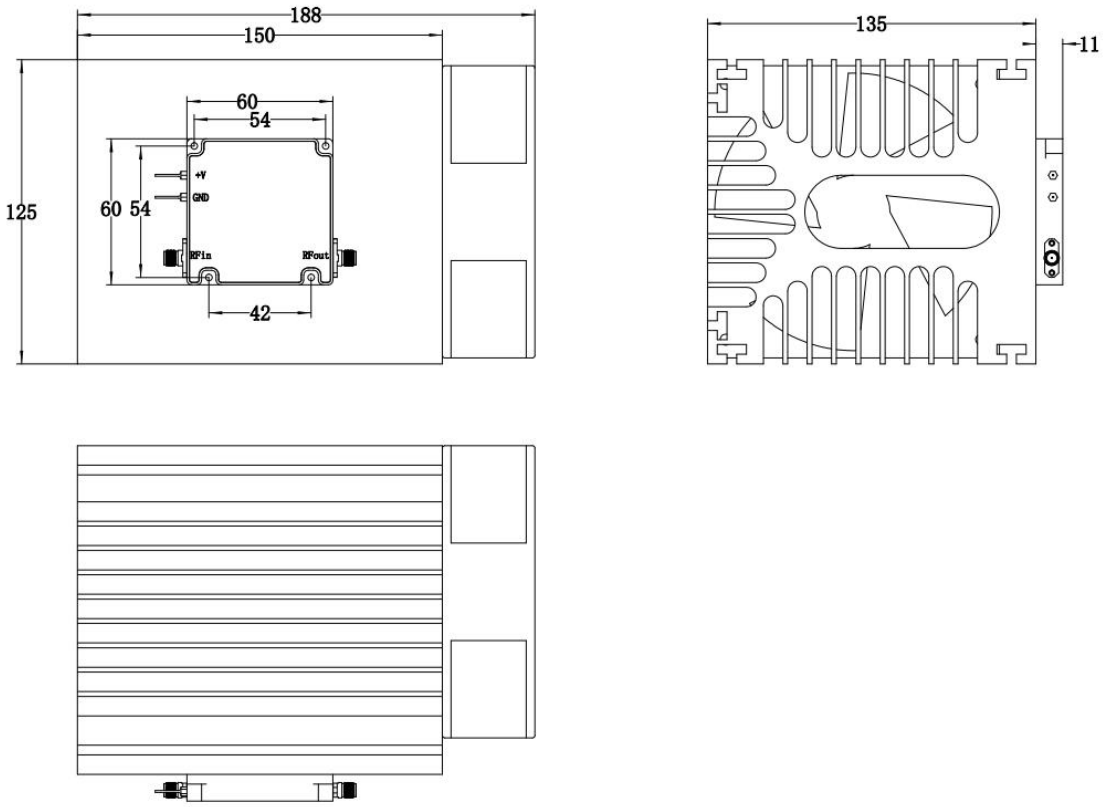
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+20 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

PA-40G-50G-2

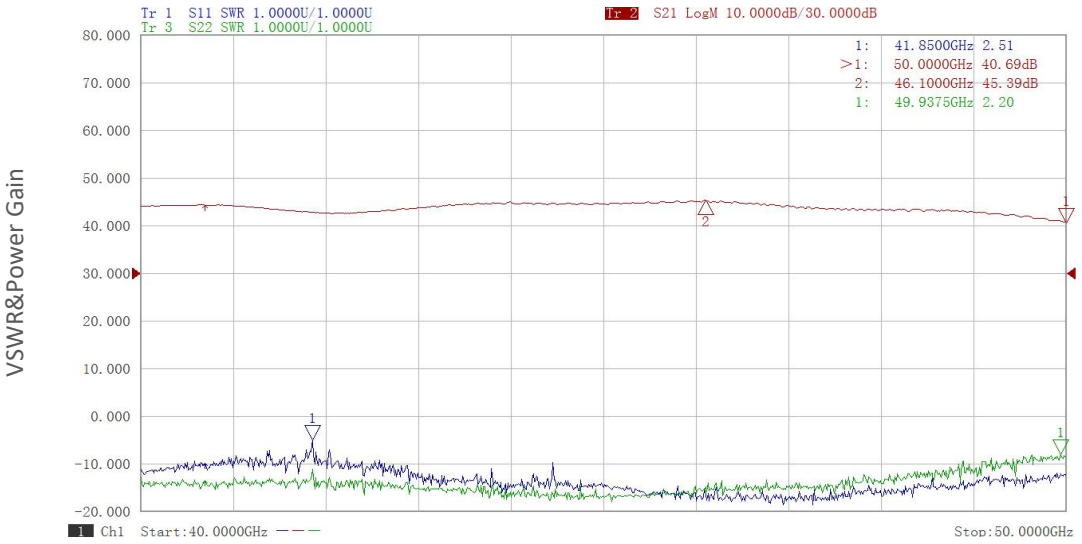


Ordering Information:

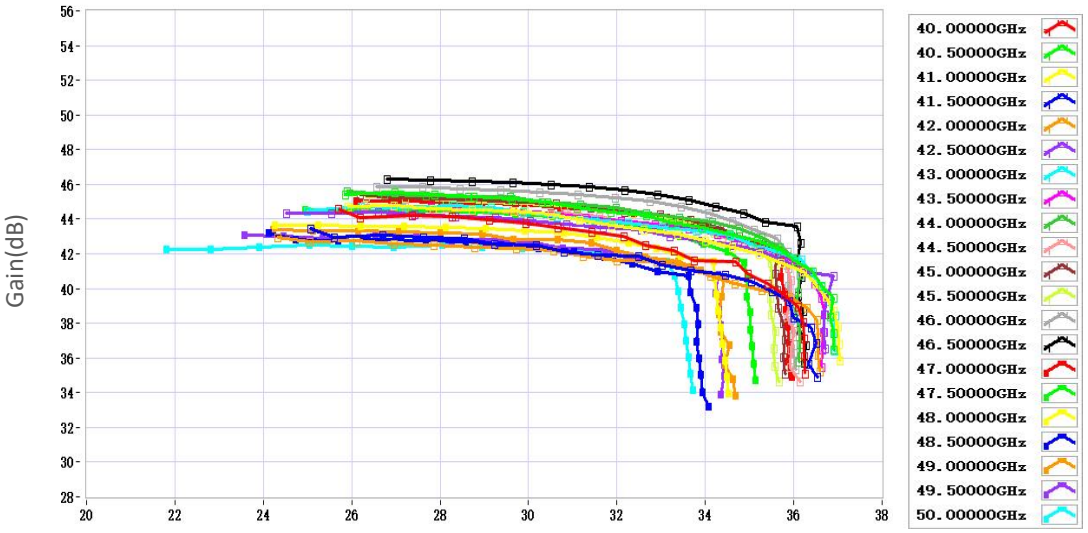
Base Number	Description	Optional
PA-40G-50G-2	Power Amplifier, 40-50GHz, Gain:33dB,Psat:2W,+18V DC	Without Heatsink
PA-40G-50G-2-HS	Power Amplifier, 40-50GHz, Gain:33dB,Psat:2W,+18V DC	With Heatsink

Typical Performance Data:

VSWR&Power Gain vs Frequency



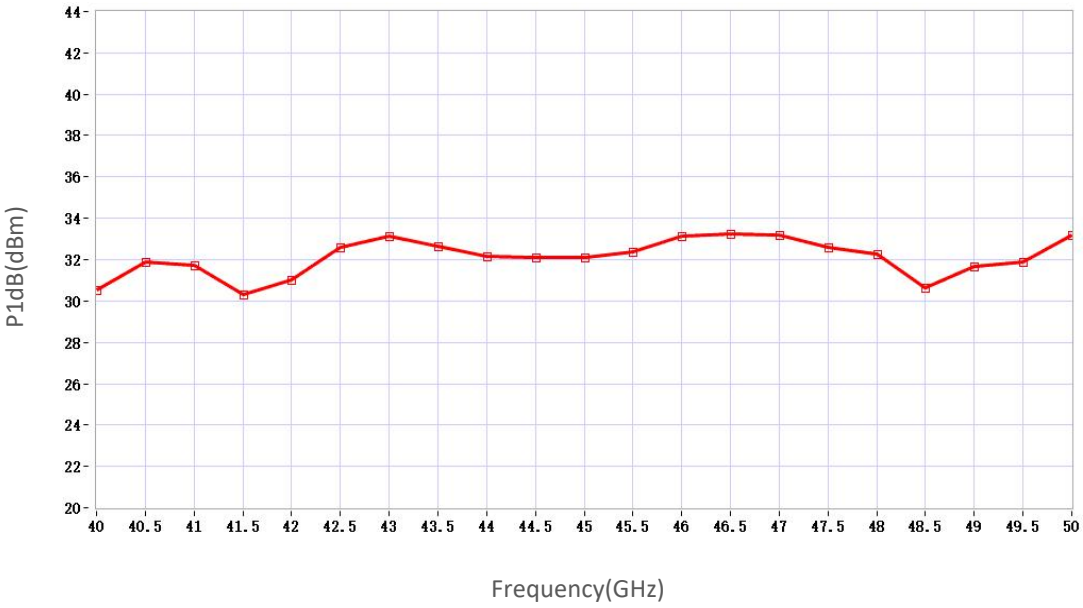
Gain vs Output Power



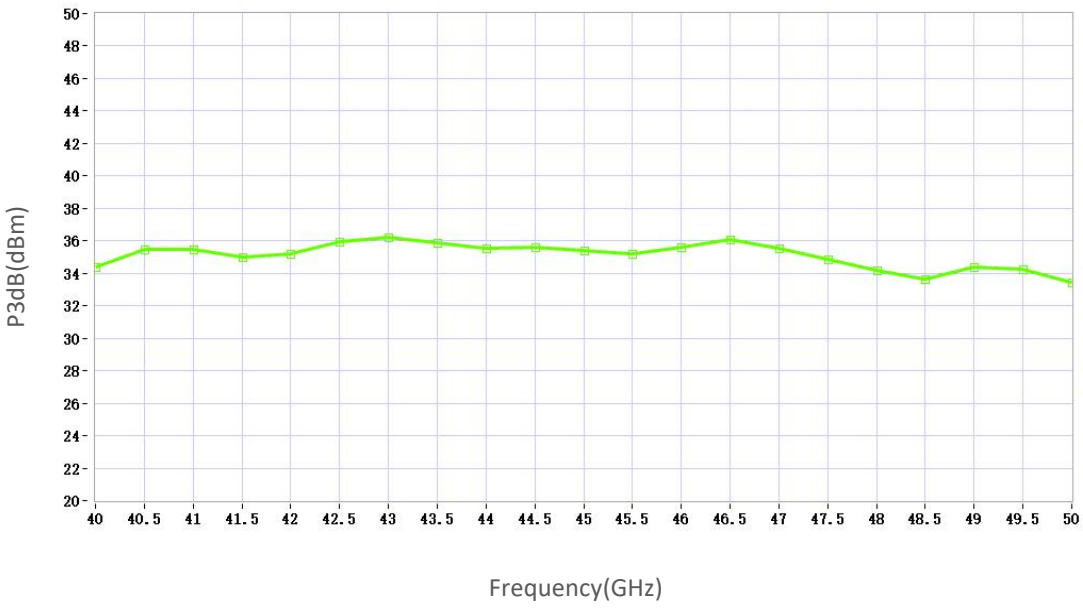
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency



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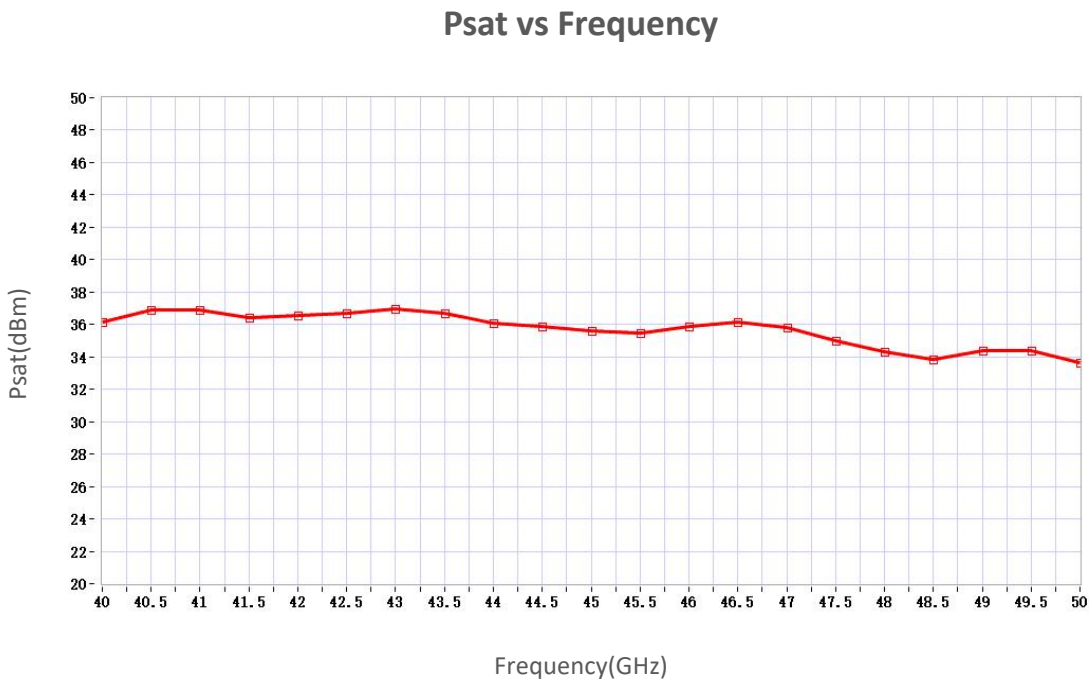
Typical Performance Data:



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