

Power Amplifier

WR-12/60-87GHz/20dB Gain/27dBm Psat

Model: TMPA-060087-2227-12

TMPA-060087-2227-12 is a power amplifier with a typical small signal gain of 20 dB and a nominal Psat of 27 dBm across the frequency range of 60 to 87 GHz. The DC power requirement for the amplifier is +17 VDC/320 mA. The input and output port configuration offers an inline structure with WR-12 waveguides and UG-387/U-M anticocking flanges.

Features:

- Frequency range: 60-87GHz
- Gain: 20dB Typ
- Output Power Psat: 27dBm Typ
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	60		87	GHz
Small Signal Gain		20		dB
Output P1dB		21		dBm
Output Psat		27		dBm
Input VSWR		2.2		:1
Output VSWR		2		:1
DC Voltage		17		V DC
DC Supply Current		320		mA

Mechanical Specifications:

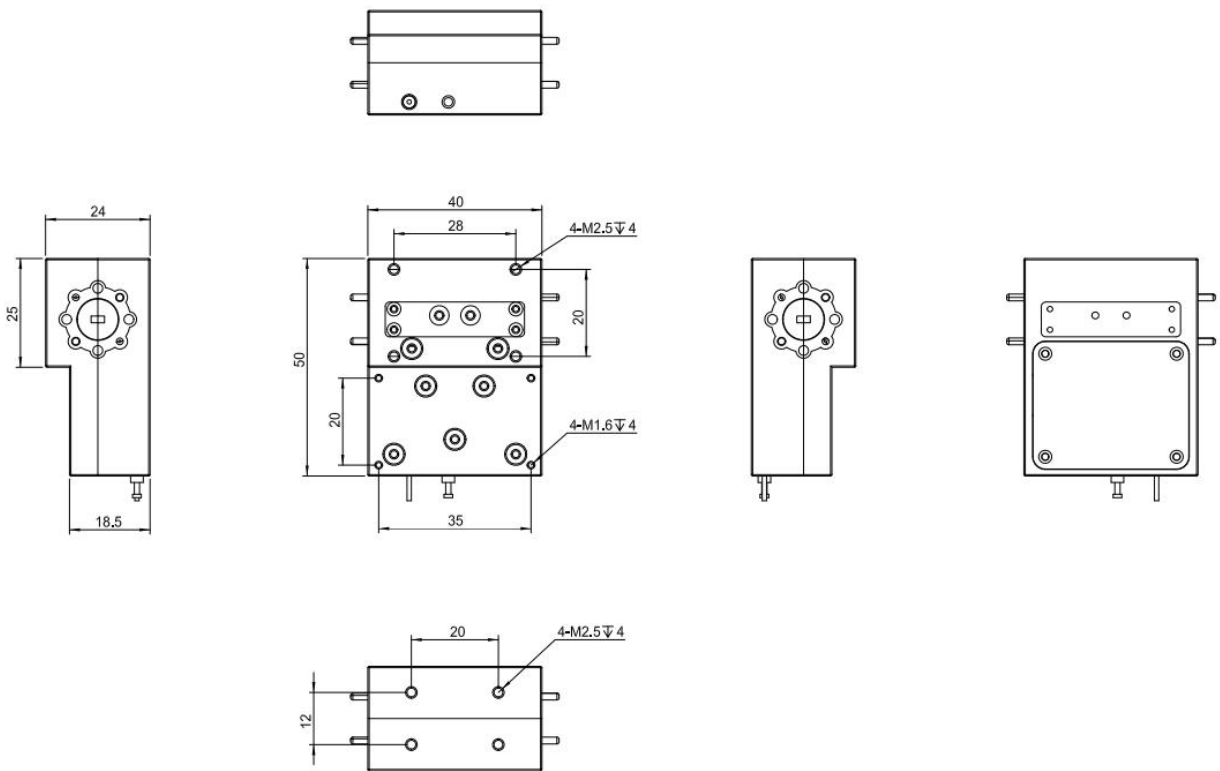
Parameter	Value	Units
Input /Output Connector	WR-12/UG-387/U	
DC Bias	Solder Pin	
Size	40*50*24	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+19 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:

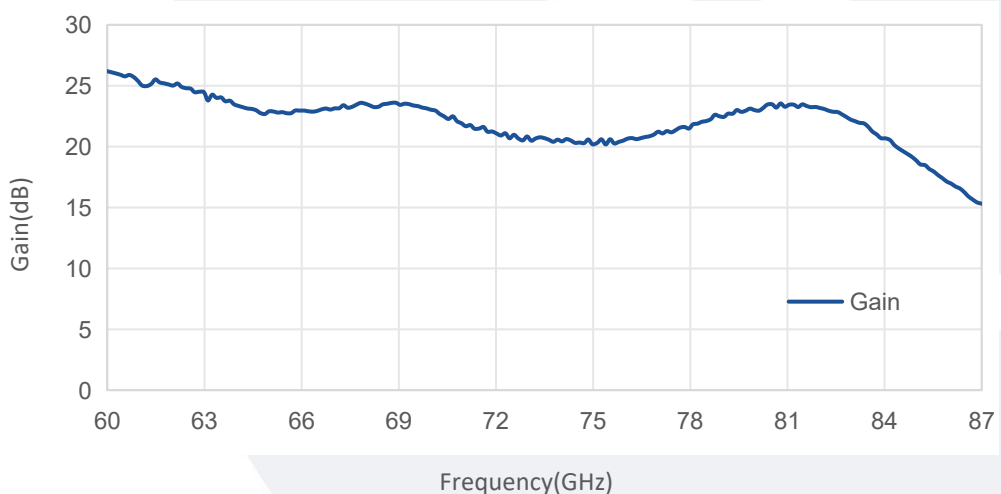
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TMPA-060087-2227-12	Power Amplifier, 60-87GHz, Gain: 20dB Type, P _{sat} : 27dBm Type, +17V DC,WR-12,Without heatsink	Rev.1.1
TMPA-060087-2227-12-HS	Power Amplifier, 60-87GHz, Gain: 20dB Type, P _{sat} : 27dBm Type, +17V DC,WR-12,With heatsink	Rev.1.1

Typical Performance Data:

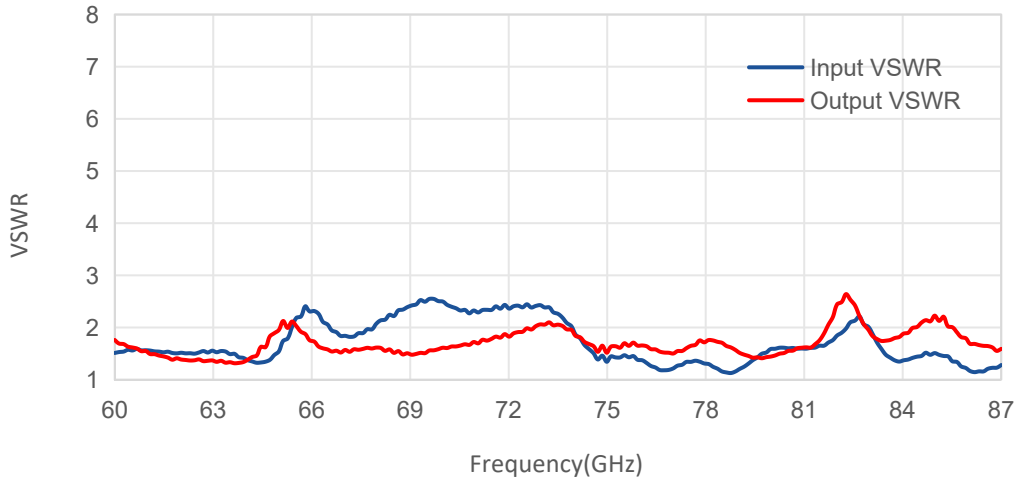
Gain vs Frequency



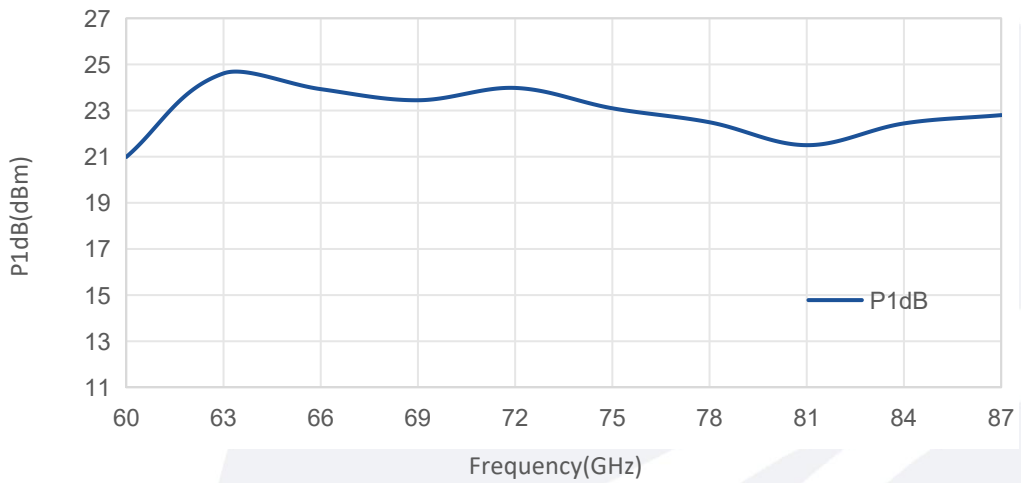
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

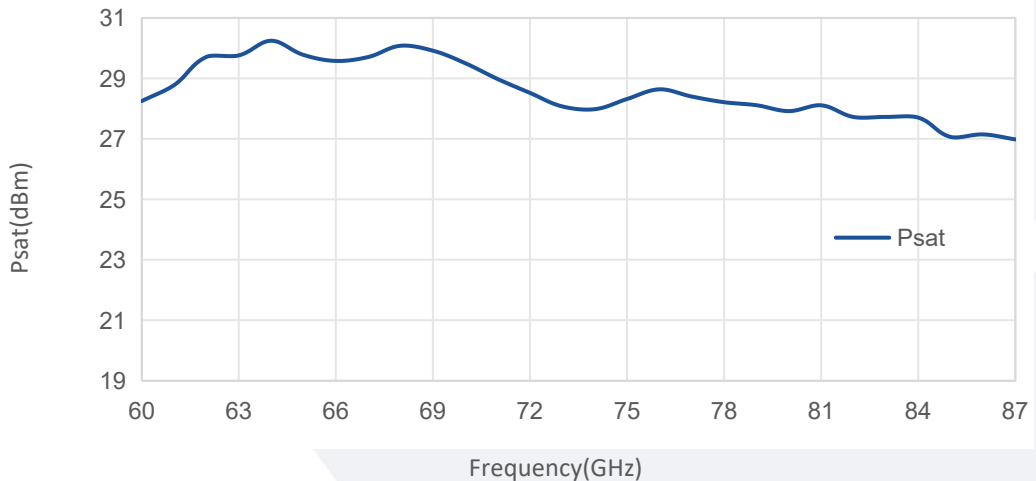
VSWR vs Frequency



P1dB vs Frequency



Psat vs Frequency



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