

V-Band Power Amplifier

WR-15/50-75GHz/18dB Gain/16dBm Psat

Model: TMPA-050075-1616-15

TMPA-050075-1616-15 is a V-Band power amplifier with a typical small signal gain of 18 dB and a minimum Psat of 16 dBm across the frequency range of 50 to 75 GHz. The DC power requirement for the amplifier is +12 VDC/70 mA. The input and output port configuration offers an inline structure with WR-15 waveguides and UG-385/U-M antickocking flanges.

Features:

- Frequency range: 50-75GHz
- Gain: 18dB Typ
- Output Power Psat: 16dBm Min
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	50		75	GHz
Small Signal Gain		18		dB
Gain Flatness		±2		dB
Output Psat	16	17		dBm
Input VSWR		2.2		:1
Output VSWR		1.8		:1
DC Voltage		12		V DC
DC Supply Current		70		mA

Mechanical Specifications:

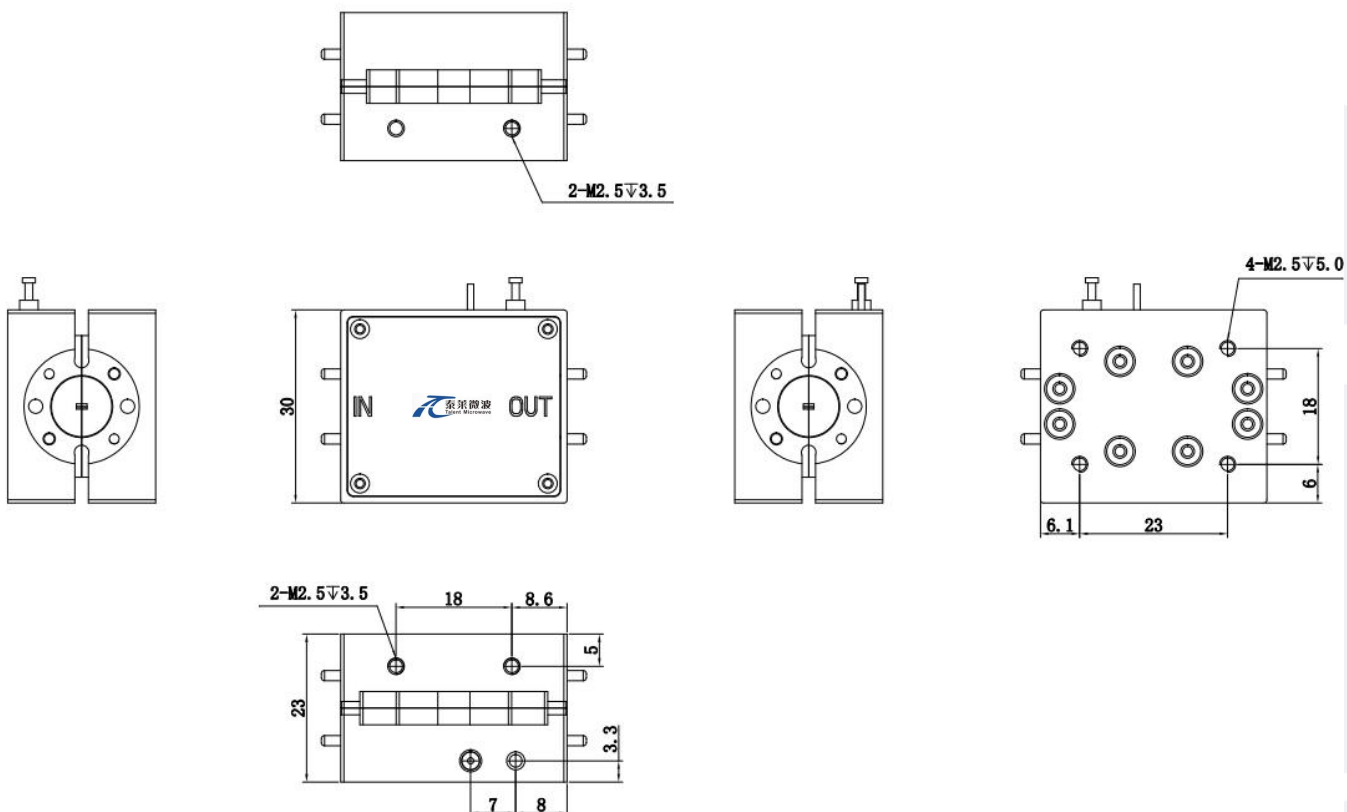
Parameter	Value	Units
Input /Output Connector	WR-15/UG-385/U	
DC Bias	Solder Pin	
Size	35.2*30*23	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

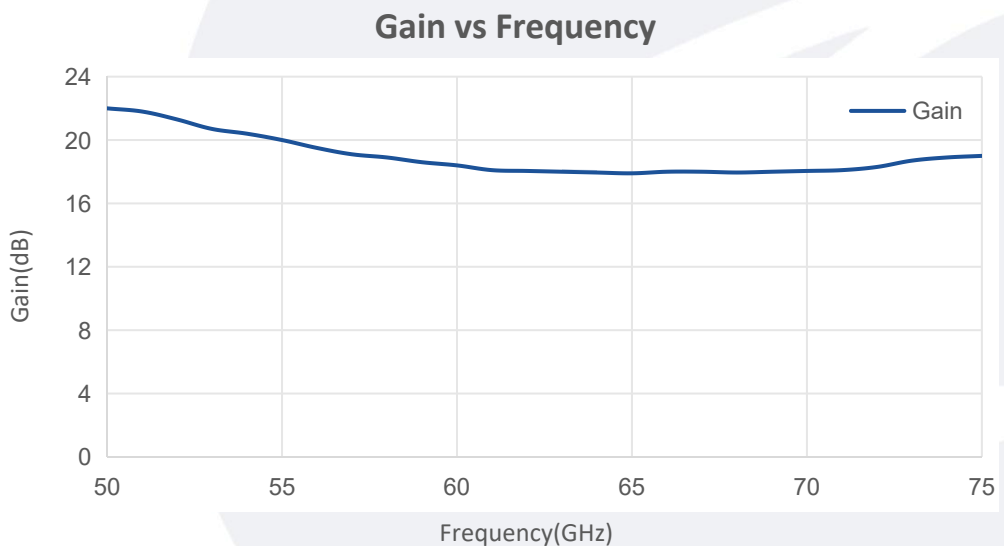
Environmental Conditions:

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-050075-1616-15	Power Amplifier, 50-75GHz, Gain: 18dB Type, Psat: 16dBm Min, +12V DC,WR-15,Without heatsink	Rev.1.1
TMPA-050075-1616-15-HS	Power Amplifier, 50-75GHz, Gain: 18dB Type, Psat: 16dBm Min, +12V DC,WR-15,With heatsink	Rev.1.1

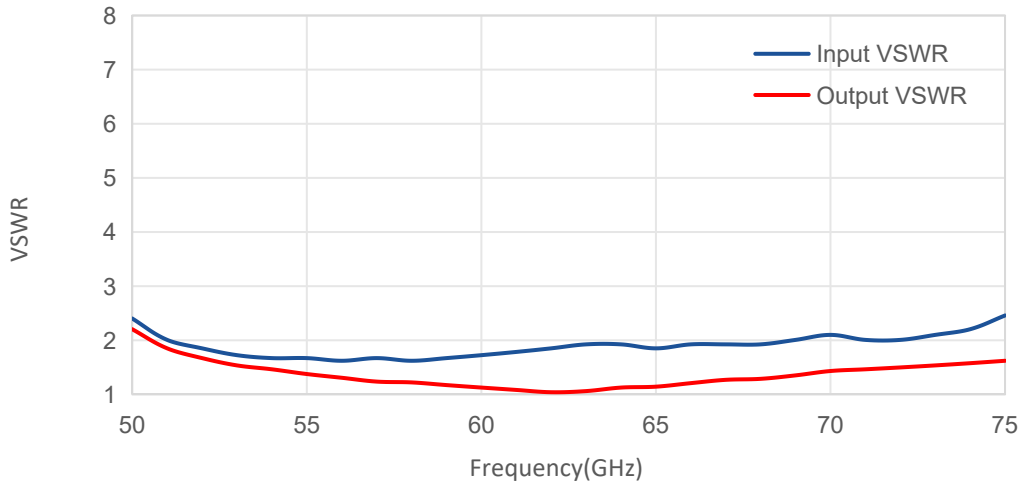
Typical Performance Data:



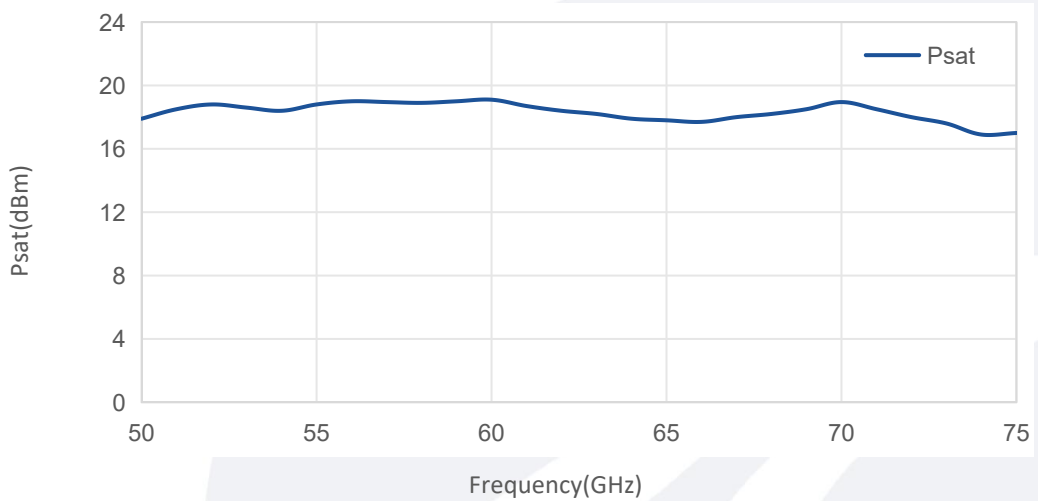
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

VSWR vs Frequency



Psat vs Frequency



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