

## Power Amplifier

WR-12/76-81GHz/20dB Gain/32dBm Psat

Model: TMPA-076081-2033-12

TMPA-076081-2033-12 is a power amplifier with a typical small signal gain of 20 dB and a nominal Psat of 32 dBm across the frequency range of 76 to 81 GHz. The DC power requirement for the amplifier is +18 VDC/290 mA. The input and output port configuration offers an inline structure with WR-12 waveguides and UG-387/U-M antcocking flanges.

### Features:

- Frequency range: 76-81GHz
- Gain: 20dB Typ
- Output Power Psat: 32dBm Typ
- Good Power and Gain Flatness

### Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	76		81	GHz
Small Signal Gain		20		dB
Output Psat		32		dBm
Input VSWR		4		:1
Output VSWR		2.5		:1
DC Voltage		18		V DC
DC Supply Current		290		mA

### Mechanical Specifications:

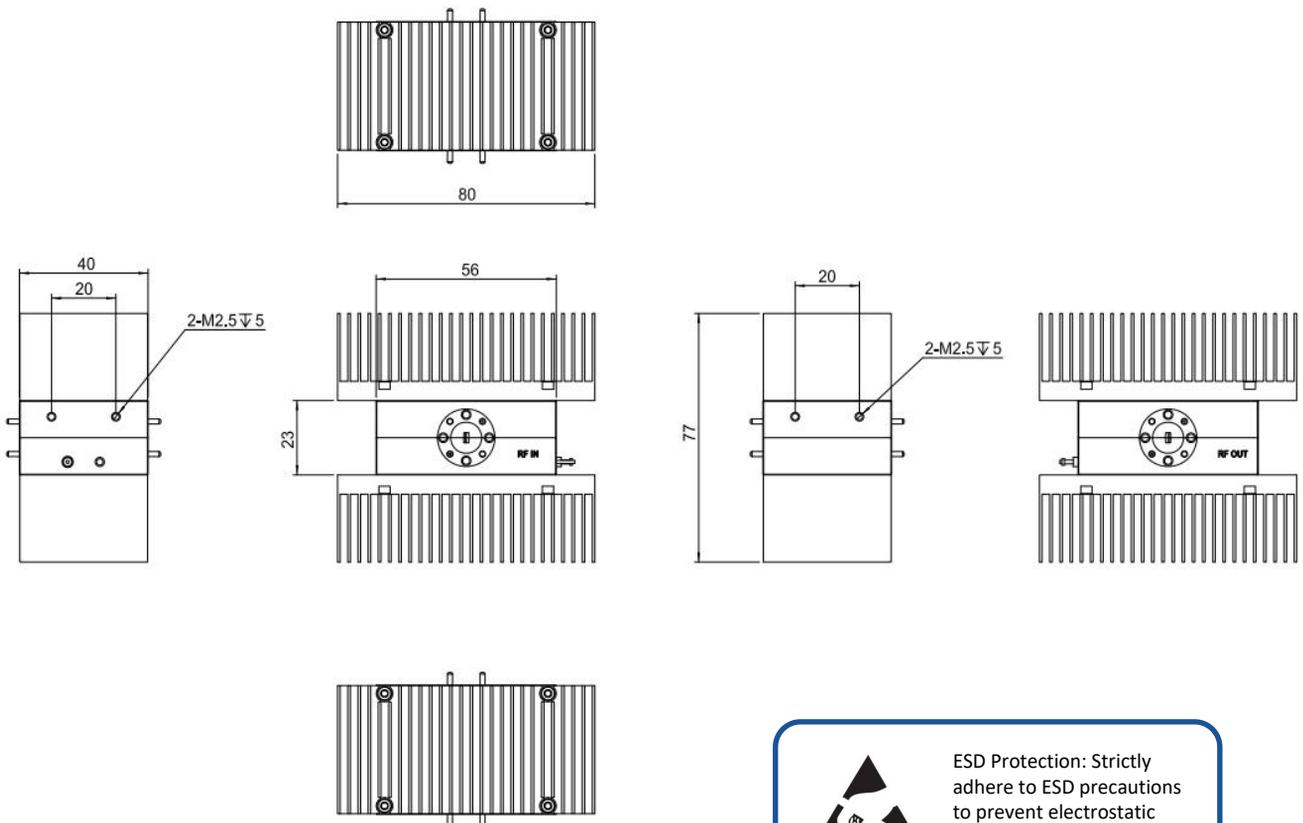
Parameter	Value	Units
Input /Output Connector	WR-12/UG-387/U	
DC Bias	Solder Pin	
Size	80*77*40(With heatsink) 56*23*40(Without heatsink)	mm

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+19 V
RF Input Power	+26 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:

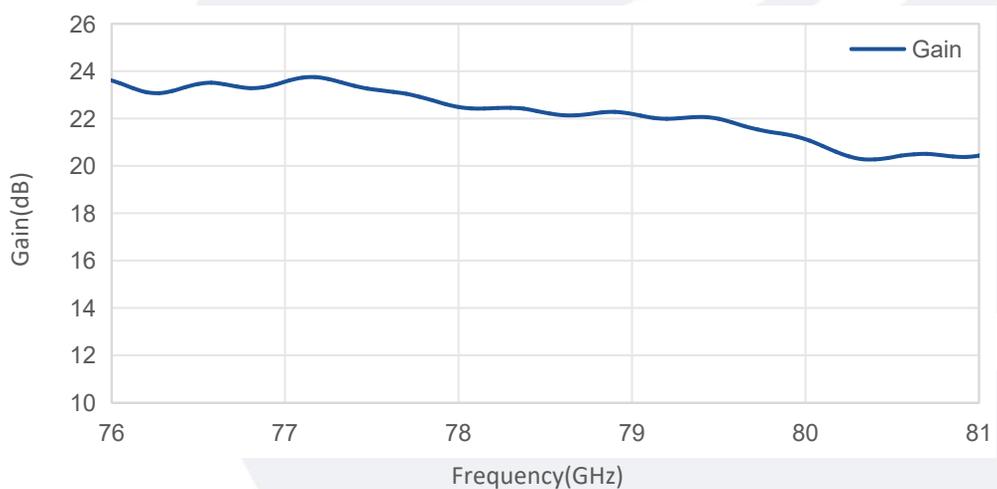
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

### Ordering Information:

Base Number	Description	Revision
TMPA-076081-2033-12	Power Amplifier, 76-81GHz, Gain: 20dB Type, P <sub>sat</sub> : 32dBm Type, +18V DC,WR-12	Rev.1.1

### Typical Performance Data:

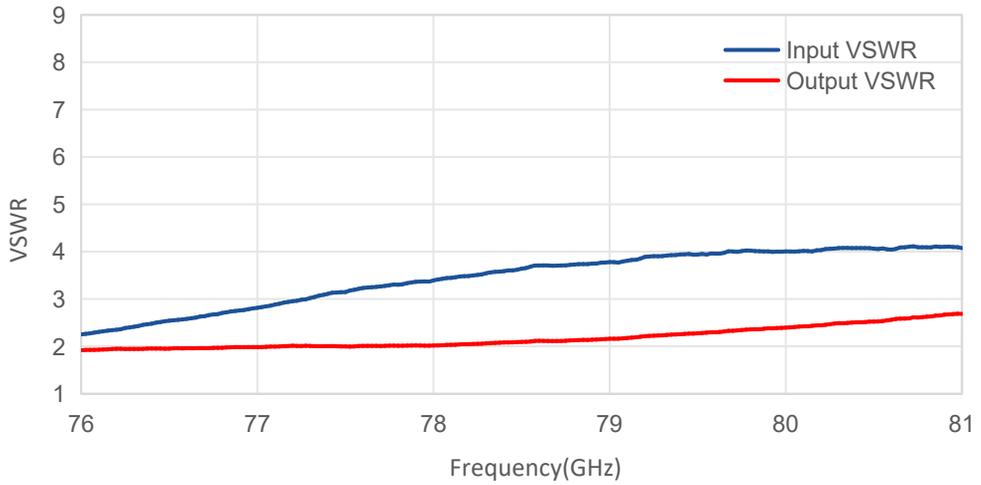
Gain vs Frequency



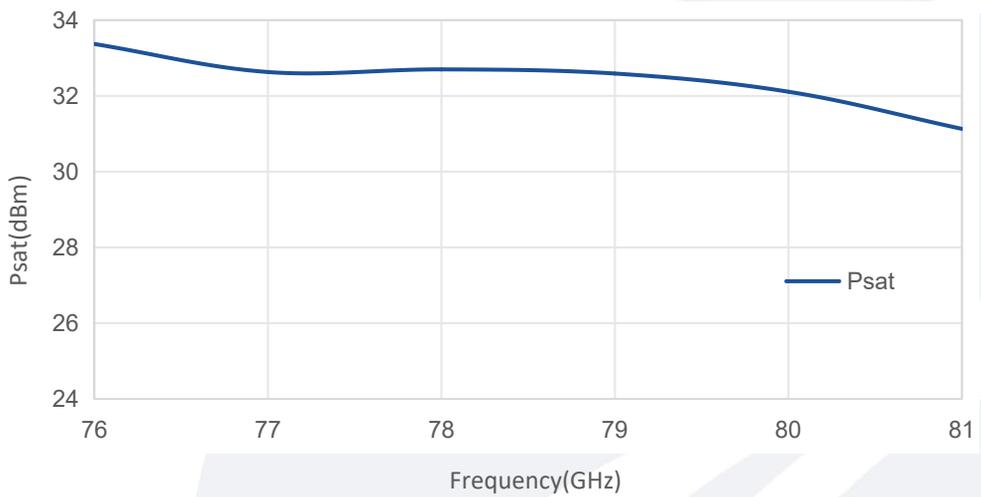
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**Typical Performance Data:**

**VSWR vs Frequency**



**Psat vs Frequency**



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