Suzhou Talent Microwave,Inc
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Power Amplifier

WR-5.1/146-220GHz/12dB Gain/13dBm Psat Model: TMPA-146220-1913-05

TMPA-146220-1913-05 is a power amplifier with a typical small signal gain of 12 dB and a nominal Psat of 13 dBm across the frequency range of 146 to 220 GHz. The DC power requirement for the amplifier is +12 VDC/360 mA. The input and output port configuration offers an inline structure with WR-5.1 waveguides and UG-387/U-M anticocking flanges.

Features:

- Frequency range: 146-220GHz
- Gain: 12dB Typ
- Output Power Psat: 13dBm Typ
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	146		220	GHz
Small Signal Gain		12		dB
Power Gain		9		dB
Output Psat		13		dBm
VSWR		3		:1
DC Voltage		12		V DC
DC Supply Current		360		mA

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	WR-5.1/UG-387/U	
DC Bias	Solder Pin	
Size	35.2*30*23(Without heatsink) 35.2*70*43(With heatsink)	mm

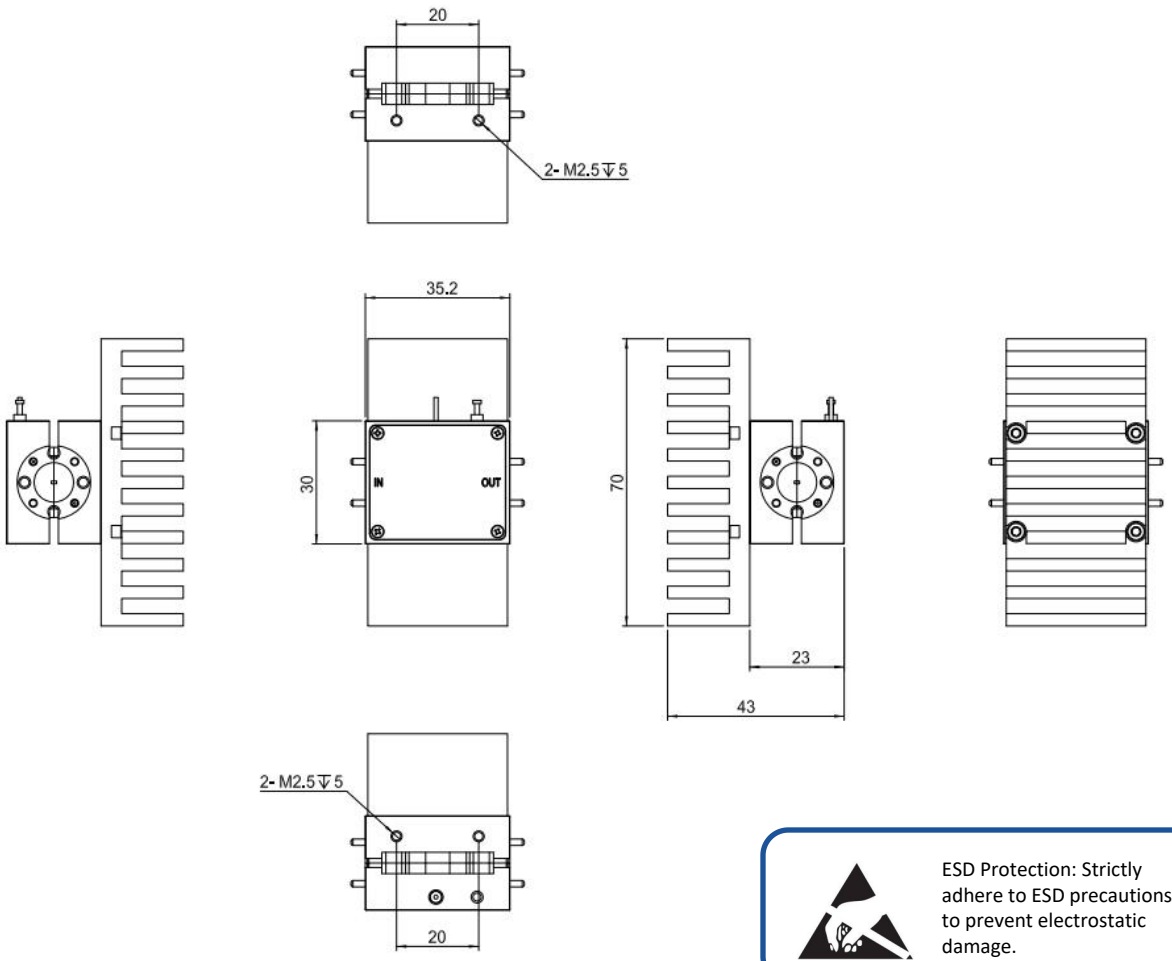
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Absolute Maximum Ratings:

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



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

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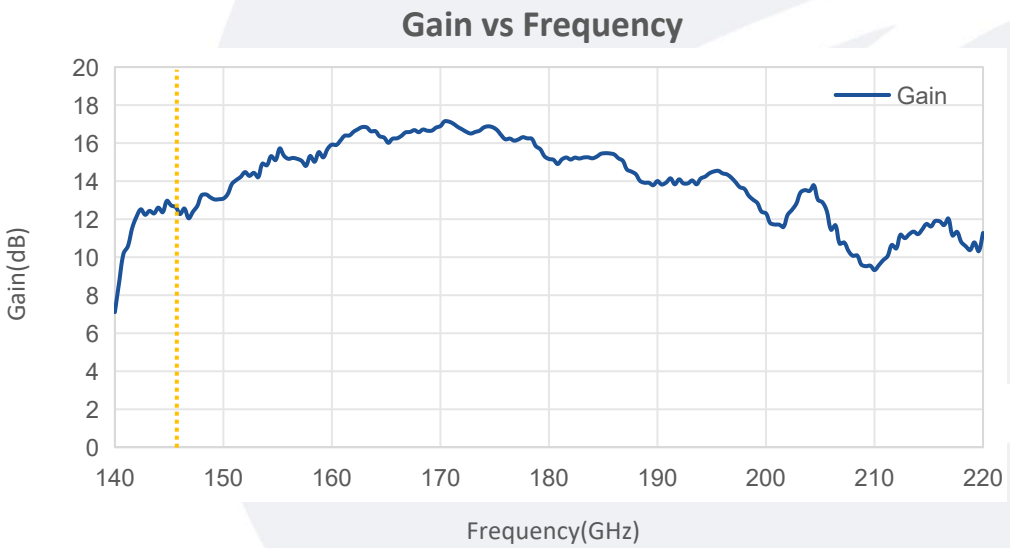
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	℃
Non-operating Temperature	-45		+85	℃
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-146220-1913-05	Power Amplifier, 146-220GHz, Gain: 12dB Type, Psat: 13dBm Type, +12V DC,WR-5.1, Without heatsink	Rev.1.2
TMPA-146220-1913-05-HS	Power Amplifier, 146-220GHz, Gain: 12dB Type, Psat: 13dBm Type, +12V DC,WR-5.1, With heatsink	Rev.1.2

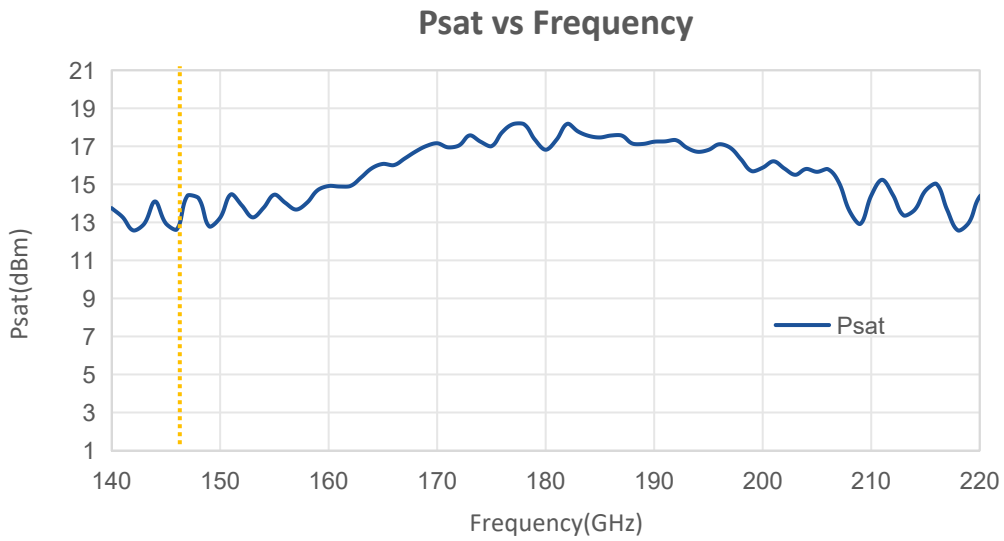
Typical Performance Data:

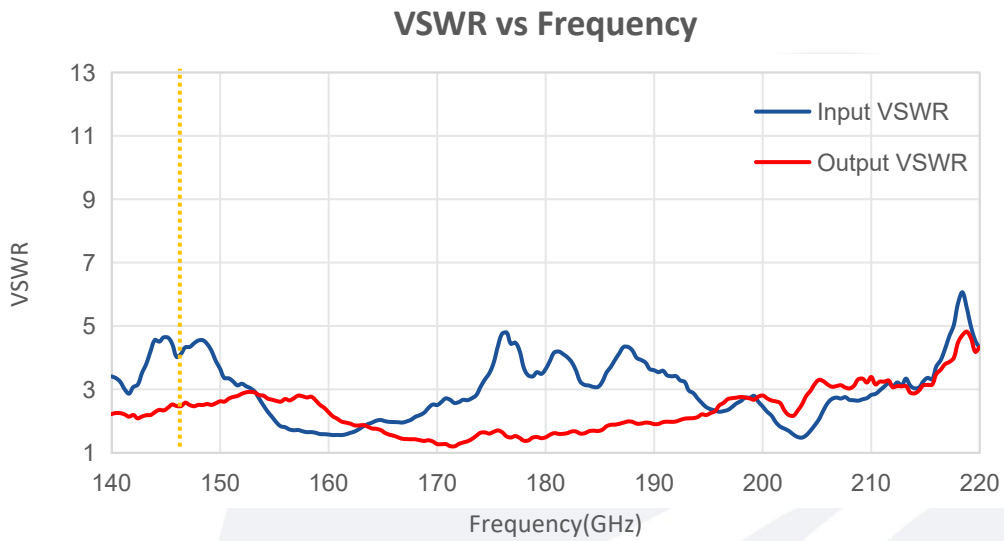


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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