

Power Amplifier

WR-3.4/218-222GHz/24dB Gain/15dBm Psat

Model: TMPA-218222-2410-03

TMPA-218222-2410-03 is a power amplifier with a minimum small signal gain of 24 dB and a minimum Psat of 15 dBm across the frequency range of 218 to 222 GHz. The DC power requirement for the amplifier is +12 VDC/310 mA. The input and output port configuration offers an inline structure with WR-3.4 waveguides and UG-387/U-M anticocking flanges.

Features:

- Frequency range: 218-220GHz
- Gain: 24dB Min
- Output Power Psat: 15dBm Min
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	218		222	GHz
Small Signal Gain	24			dB
Output Psat	15			dBm
Input VSWR			2	:1
Output VSWR		2.5		:1
DC Voltage		12		V DC
DC Supply Current		310		mA

Mechanical Specifications:

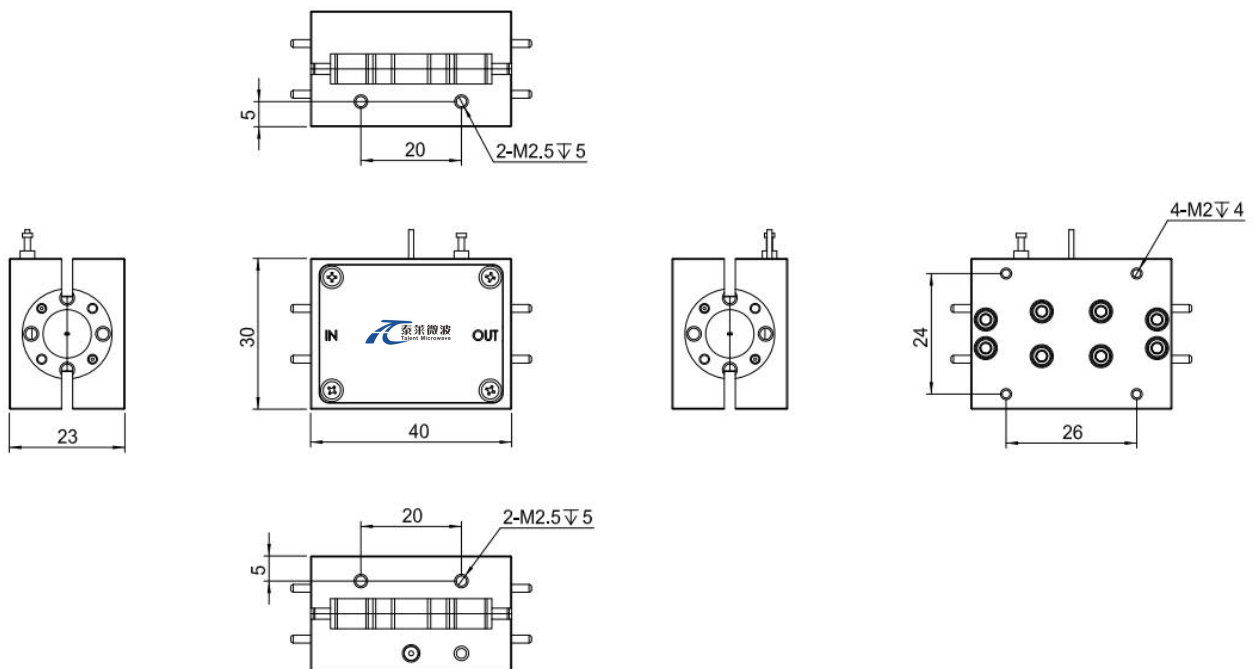
Parameter	Value	Units
Input /Output Connector	WR-3.4/UG-387/U	
DC Bias	Solder Pin	
Size	40*30*23(Without Heatsink)	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	-5 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.

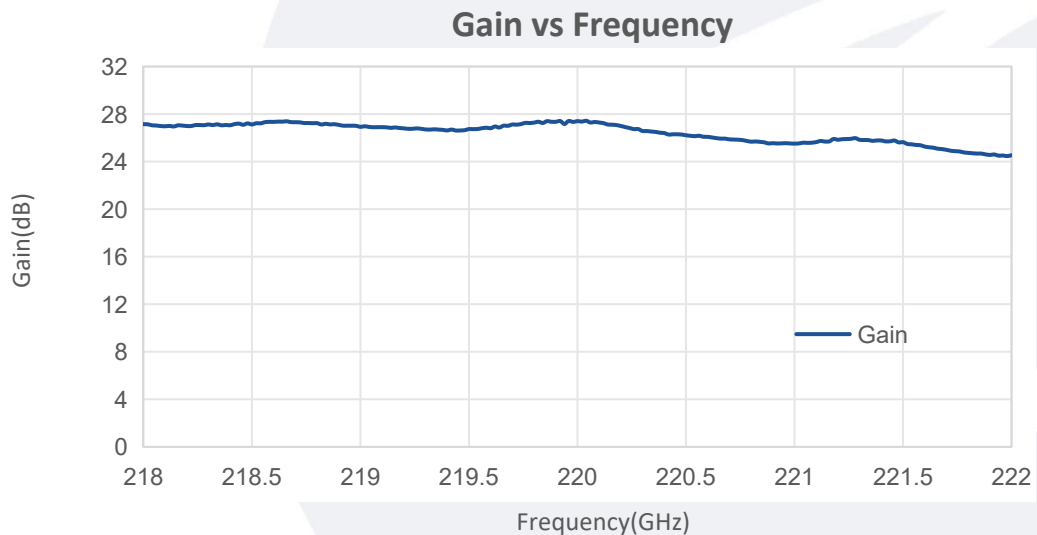
Environmental Conditions:

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-218222-2410-03	Power Amplifier, 218-222GHz, Gain:24 dB Min, Psat:15 dBm Min, +12V DC,WR-3.4, Without heatsink	Rev.1.1
TMPA-218222-2410-03-HS	Power Amplifier, 218-222GHz, Gain:24 dB Min, Psat:15 dBm Min, +12V DC,WR-3.4, With heatsink	Rev.1.1

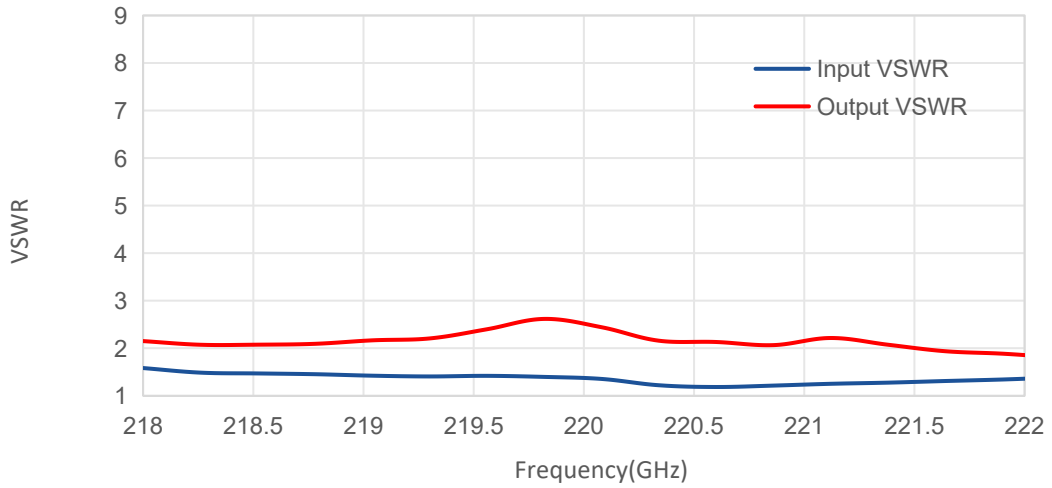
Typical Performance Data:



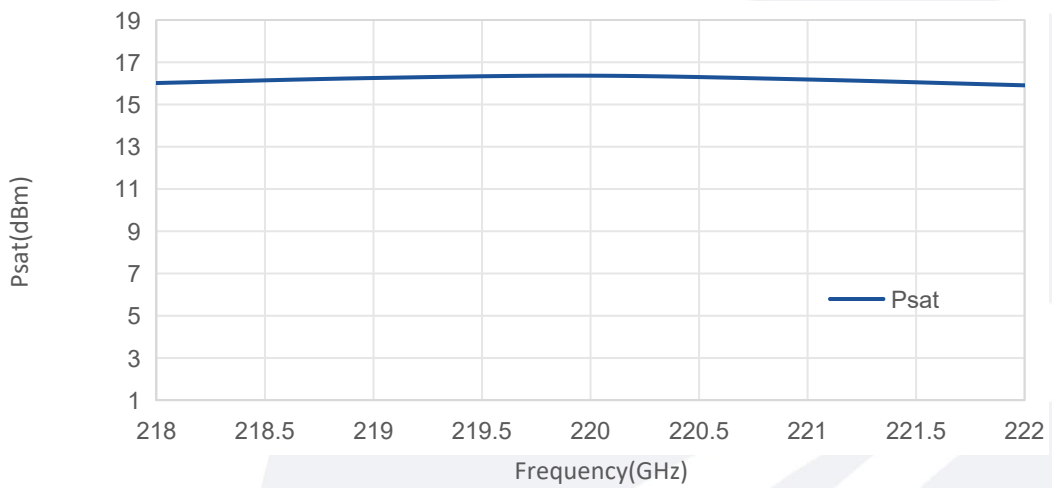
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

VSWR vs Frequency



Psat vs Frequency



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