Suzhou Talent Microwave,Inc
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W-Band Power Amplifier

WR-10/75-110GHz /30dB Gain/21 dBm Psat Model: TMPA-075110-3021-10

TMPA-075110-3021-10 is a W-Band power amplifier with a typical small signal gain of 30 dB and a Psat of 21 dBm across the frequency range of 75 to 110 GHz. The DC power requirement for the amplifier is +12 VDC/290mA. The input and output port configuration offers an inline structure with WR-10 waveguides and UG-387/U-M anticocking flanges.

Features:

- Ultra Wide Band: 75-110GHz
- Gain: 30dB Typ
- Output Power Psat: 21dBm Min
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		75-110		GHz
Small Signal Gain		30		dB
Output Psat	21			dBm
Input VSWR			2	:1
Output VSWR		2		:1
DC Voltage		12		V DC
DC Current		290		mA

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	WR-10/UG-387/U	
DC Bias	Solder Pin	
Size	45*30*23(Without Heatsink) 45*70*43(With Heatsink)	mm

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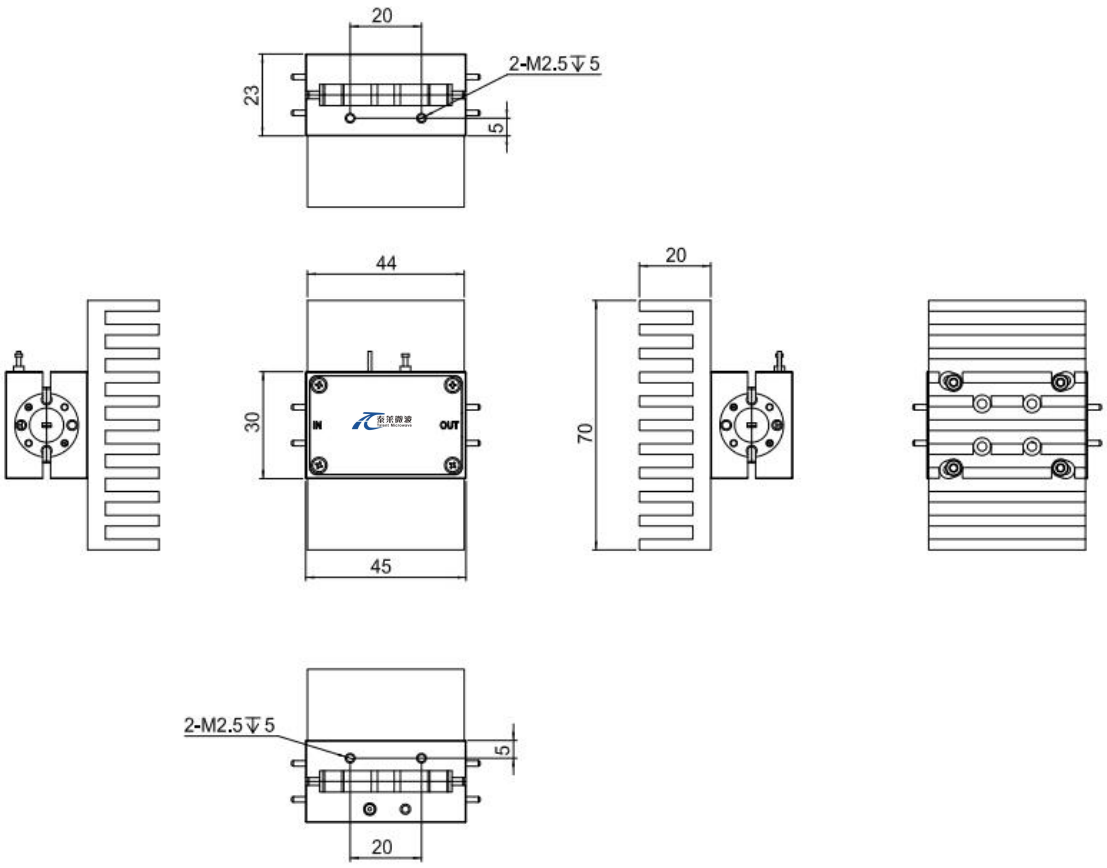
Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm



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

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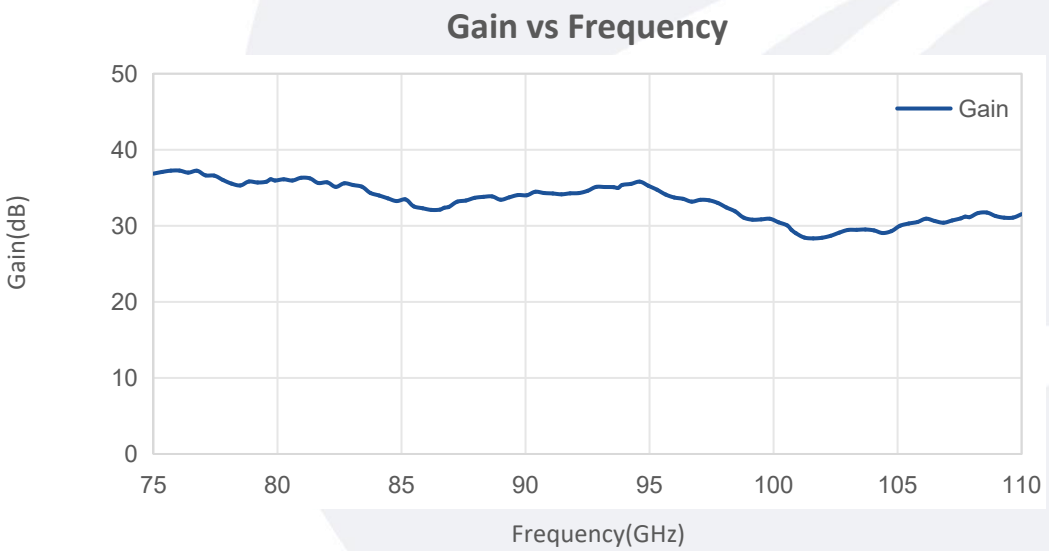
Environmental Conditions:

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	Desciption	Revision
TMPA-075110-3021-10	Power Amplifier, 75-110 GHz, Gain:30 dB Type, Psat:21 dBm Type, +12V DC,WR-10,Without Heatsink	Rev.1.1
TMPA-075110-3021-10-HS	Power Amplifier, 75-110 GHz, Gain:30 dB Type, Psat:21 dBm Type, +12V DC,WR-10,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.

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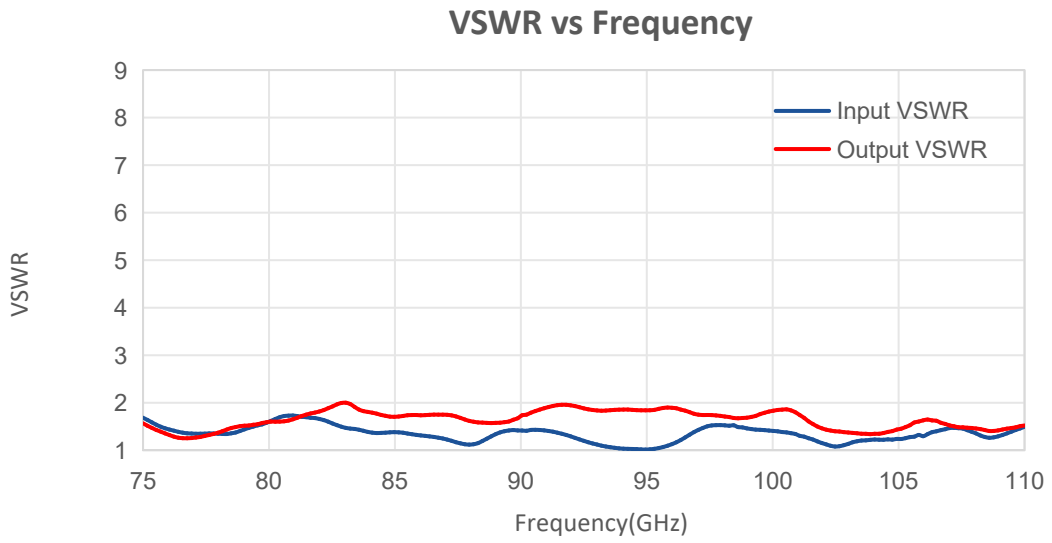

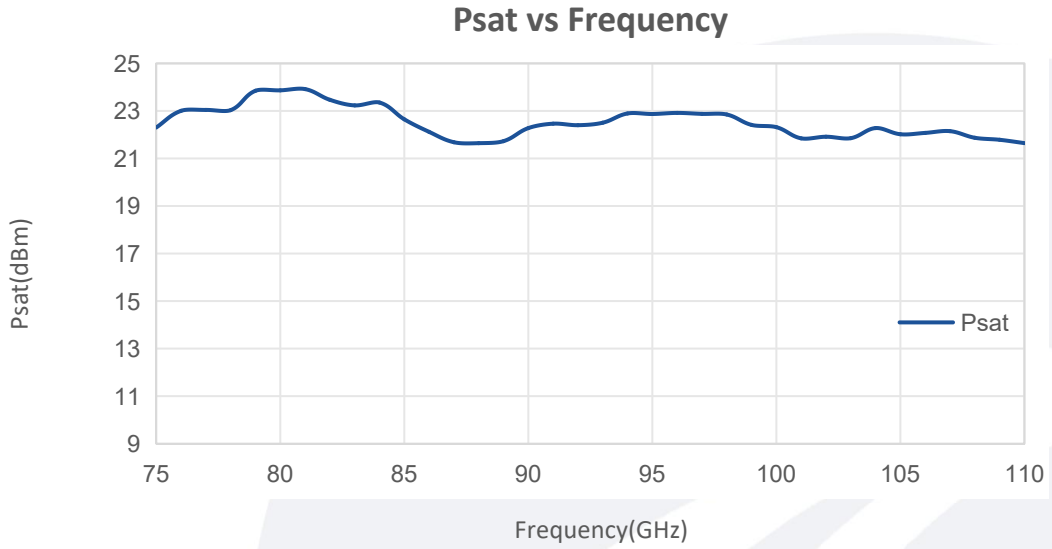

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