

W-band Power Amplifier

WR-10/70-110GHz /19dB Gain/23 dBm Psat

Model: TMPA-070110-1620-10

TMPA-070110-1620-10 is a W-Band power amplifier with a typical small signal gain of 19 dB and a nominal Psat of 23 dBm across the frequency range of 70 to 110 GHz. The DC power requirement for the amplifier is +16 VDC/80 mA. 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: 70-110GHz
- Gain: 19dB Typ
- Output Power Psat: 23dBm Typ
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	单位 Units
Frequency range	70-110			GHz
Gain		19		dB
Gain Flatness		±3		dB
Output P1dB		11		dBm
Output Psat		23		dBm
Input VSWR		2		:1
Output VSWR		1.5		:1
DC Voltage		16		V DC
DC Supply Current		80		mA

Mechanical Specifications:

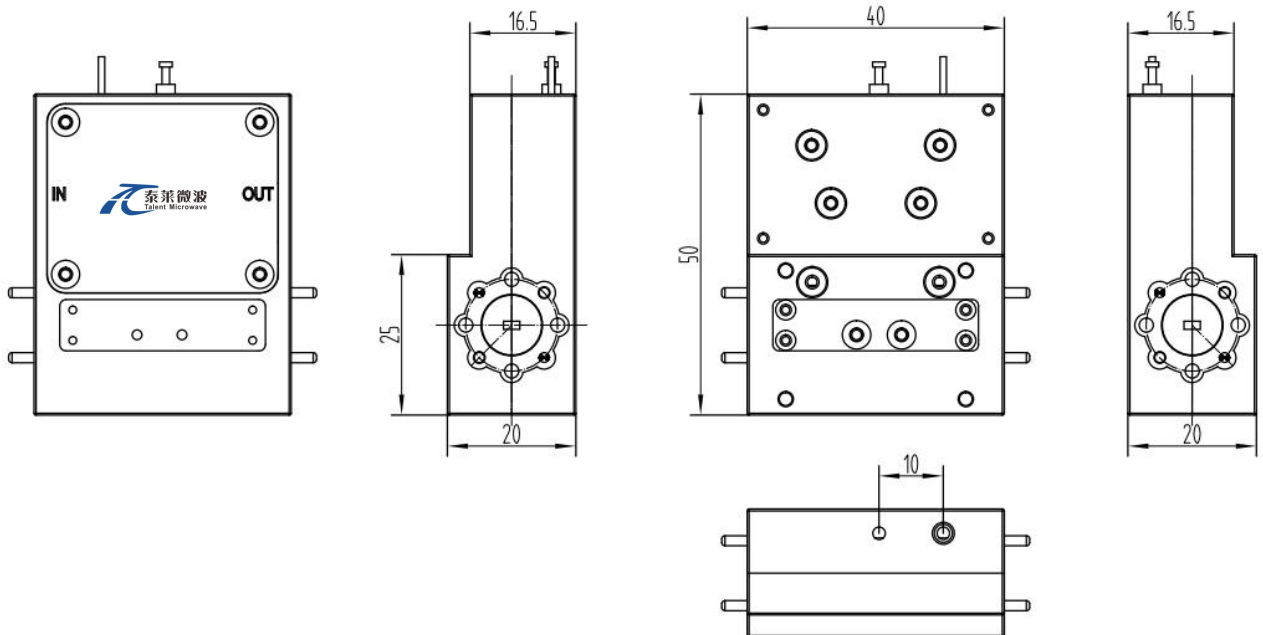
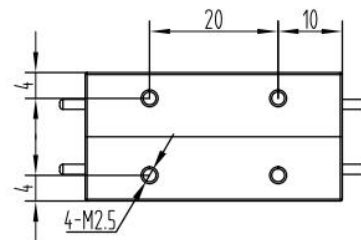
Parameter	Value	Units
Input /Output Connector	WR-10/UG-387/U	
DC Bias	Solder Pin	
Size	40-50-20	mm
Weight	/	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+18 V
RF Input Power	+20 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



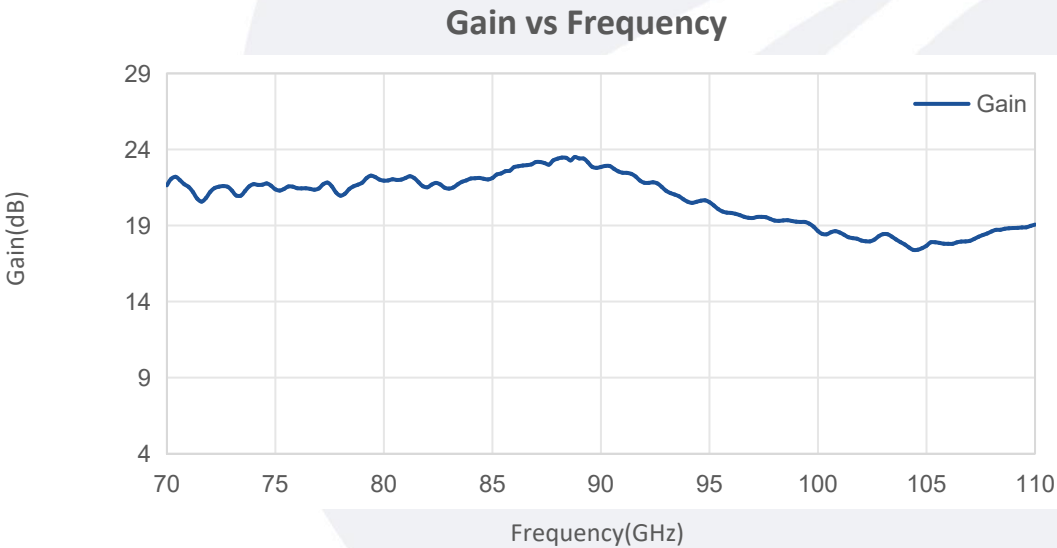
Environmental Conditions:

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-070110-1620-10	Power Amplifier, 70-110 GHz, Gain:19 dB Type, Psat:23 dBm Type,+16V DC,WR-10	Rev.1.1

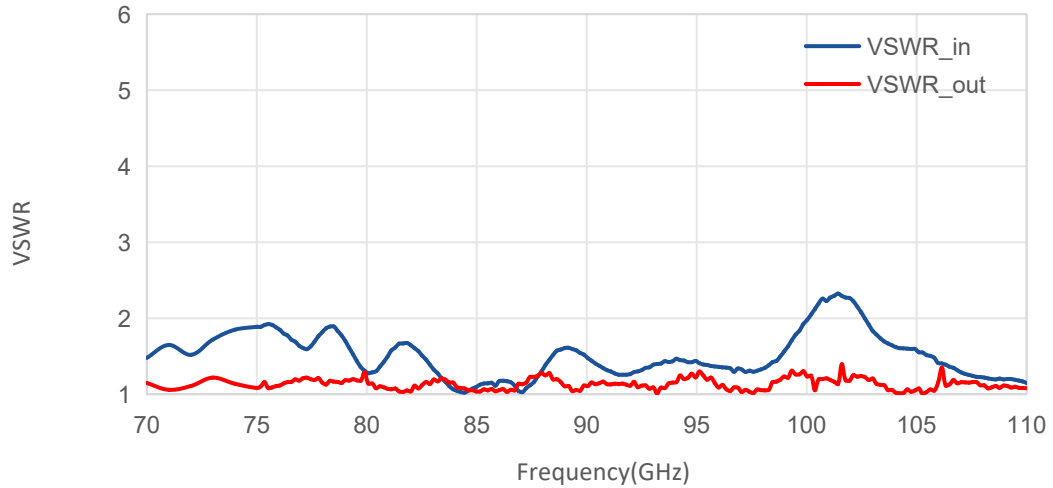
Typical Performance Data:



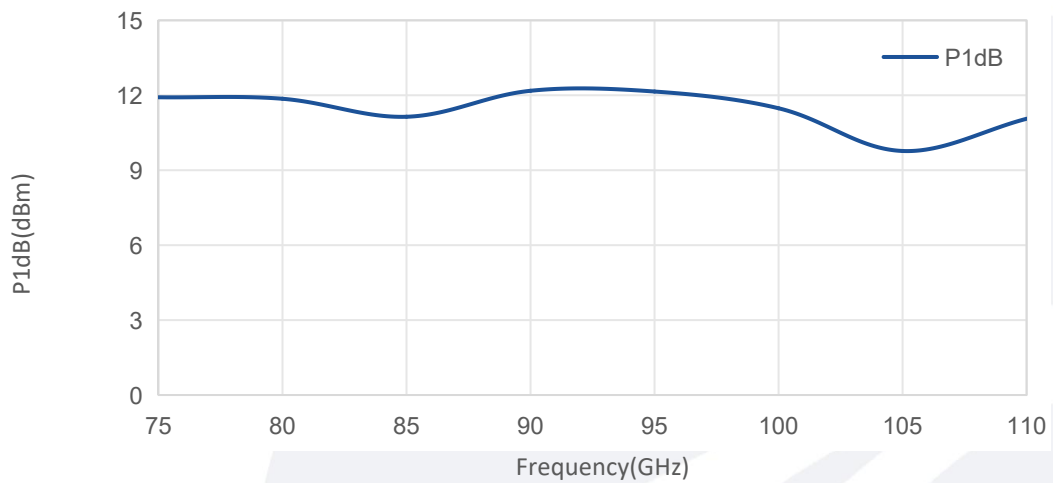
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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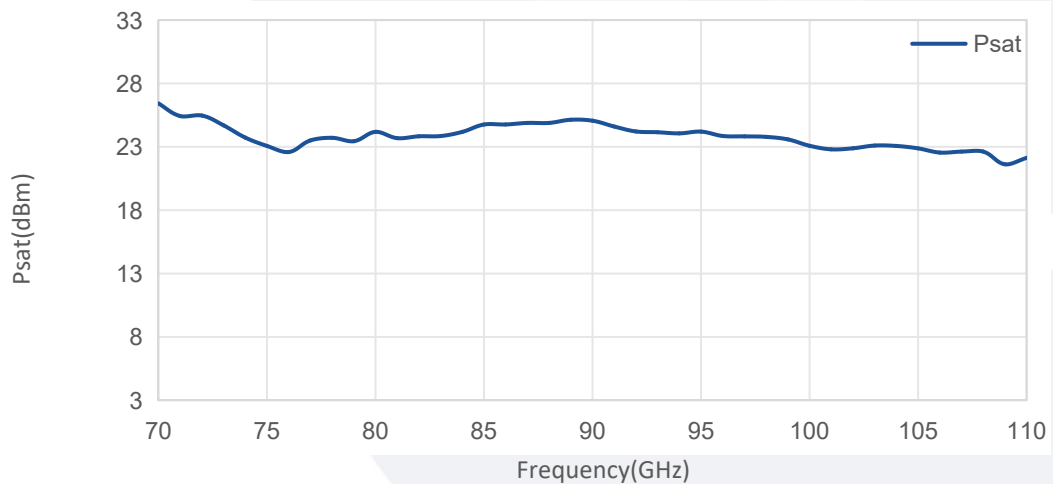
VSWR vs Frequency



P1dB vs Frequency



Psat 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, P1dB test points are taken at intervals of 5 GHz for curve testing..