

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

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	70-110			GHz
增益 Gain		19		dB
增益平坦度 Gain Flatness		±3		dB
线性输出功率 Output P1dB		11		dBm
饱和输出功率 Output Psat		23		dBm
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		1.5		:1
直流电压 DC Voltage		16		V DC
直流电流 DC Supply Current		80		mA

机械特性 Mechanical Specifications:

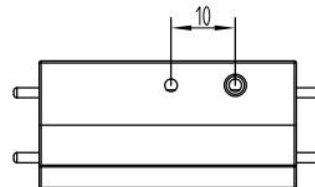
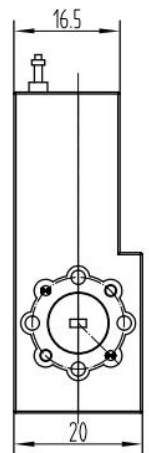
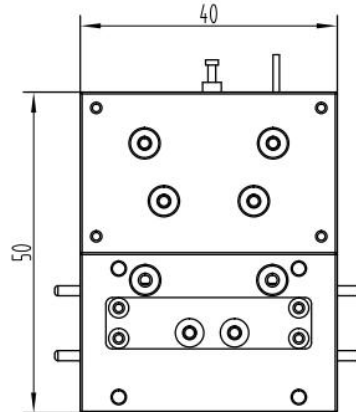
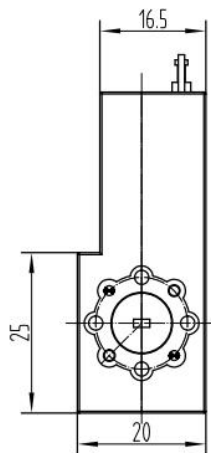
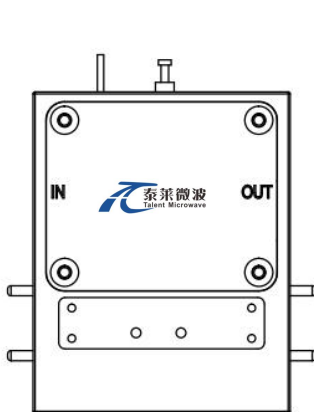
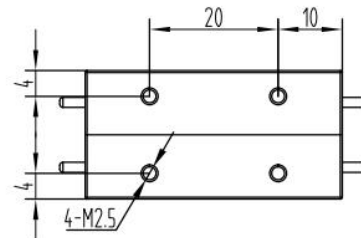
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	WR-10/UG-387/U	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	40-50-20	mm
重量 Weight	/	g

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+18 V
输入功率 RF Input Power	+20 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



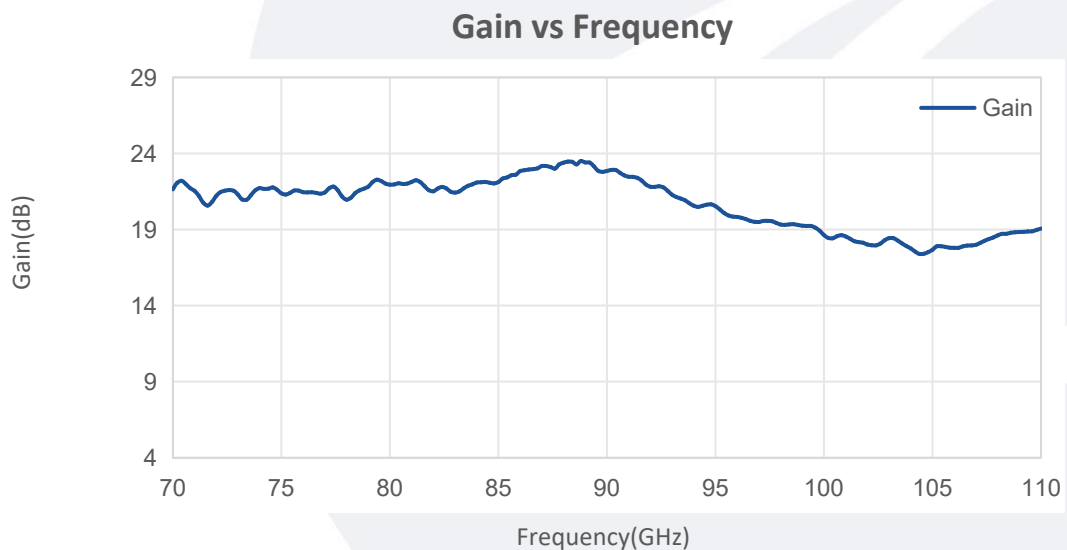
温度环境 Environmental Conditions:

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

订货信息 Ordering Information:

标准型号 Base Number	描述 Desciption	版本号 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

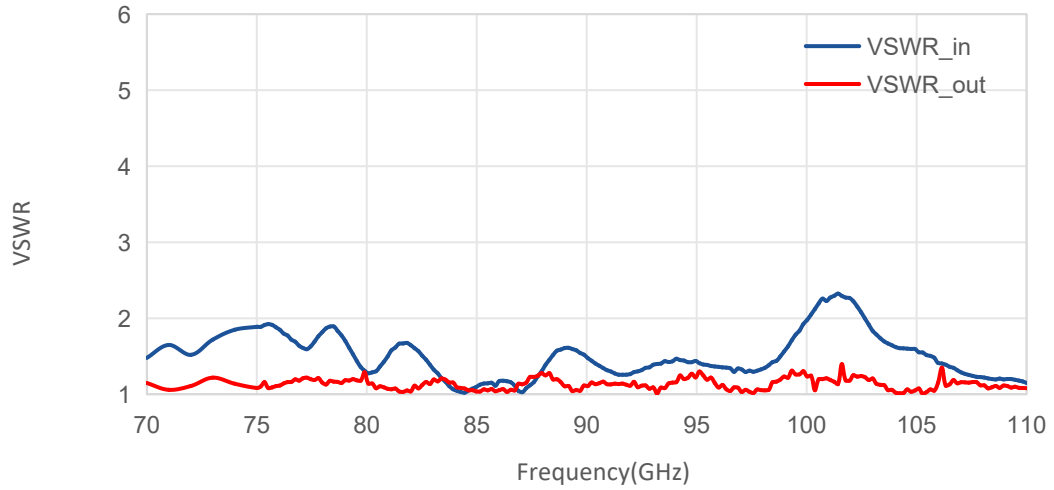
典型曲线 Typical Performance Data:



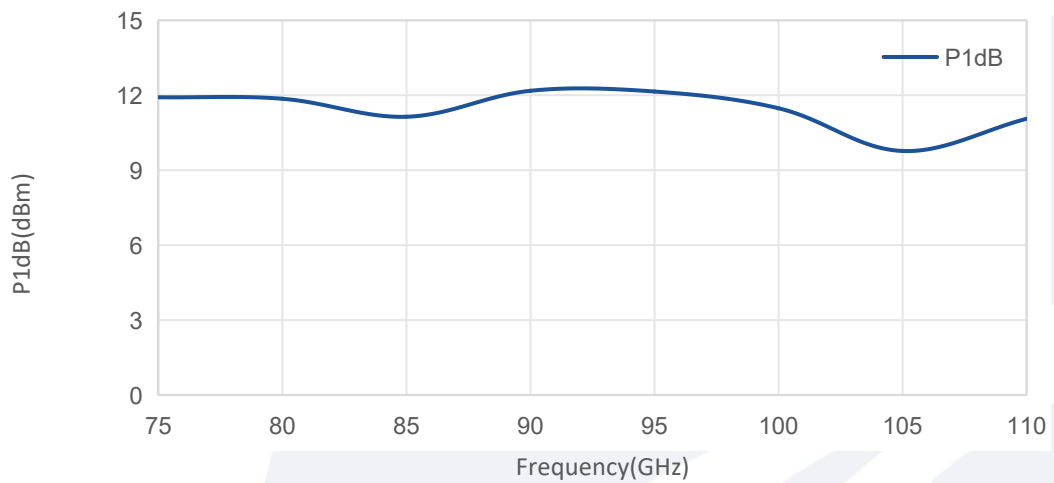
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

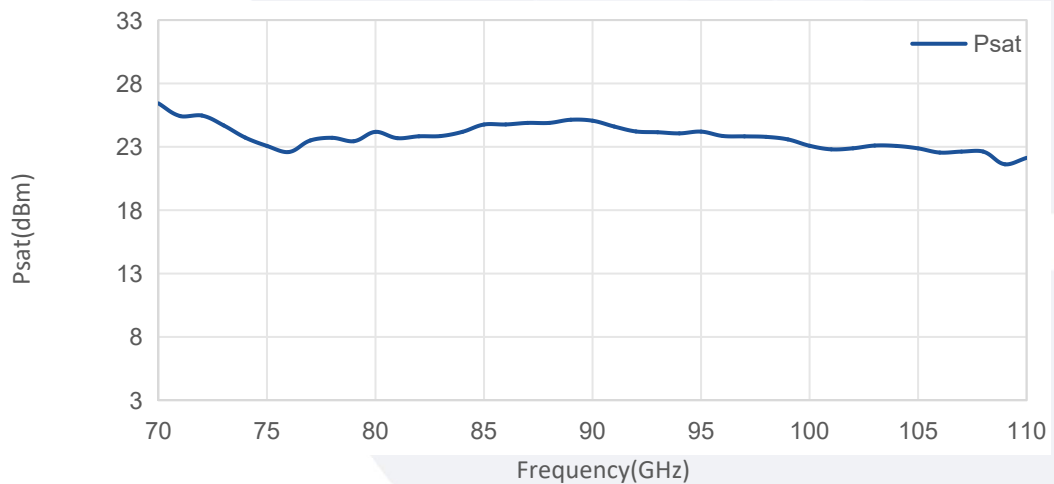
VSWR vs Frequency



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..