

W-Band Power Amplifier

WR-10/75-110GHz/30dB Gain/27dBm Psat**Model: TMPA-075110-3528-10**

TMPA-075110-3528-10 is a W-Band power amplifier with a typical small signal gain of 30 dB and a nominal Psat of 27 dBm across the frequency range of 75 to 110 GHz. The DC power requirement for the amplifier is +16 VDC/1.2 A. The input and output port configuration offers an inline structure with WR-10 waveguides and UG-387/U-M antickocking flanges.

Features:

- Frequency range: 75-110 GHz
- Gain: 30dB Typ
- Output Power Psat: 27dBm 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	75		110	GHz
小信号增益 Small Signal Gain		30		dB
功率增益 Power Gain		23		dB
输出功率1dB压缩点 Output P1dB		25		dBm
饱和输出功率 Output Psat		27		dBm
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2.2		:1
直流电压 DC Voltage		16	18	V DC
直流电流 DC Supply Current		1.2		A

机械特性 Mechanical Specifications:

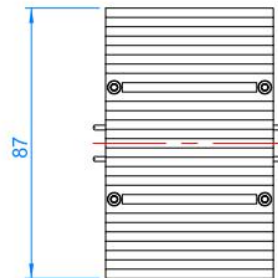
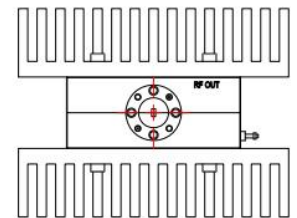
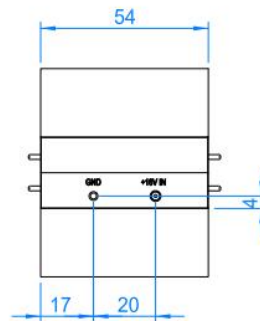
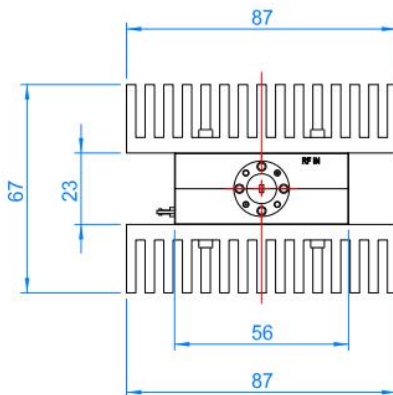
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	WR-10/UG-387/U	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	56*54*24(Without Heatsink) 87*54*68(With Heatsink)	mm

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+18V
输入功率 RF Input Power	+10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

温度环境 Environmental Conditions:

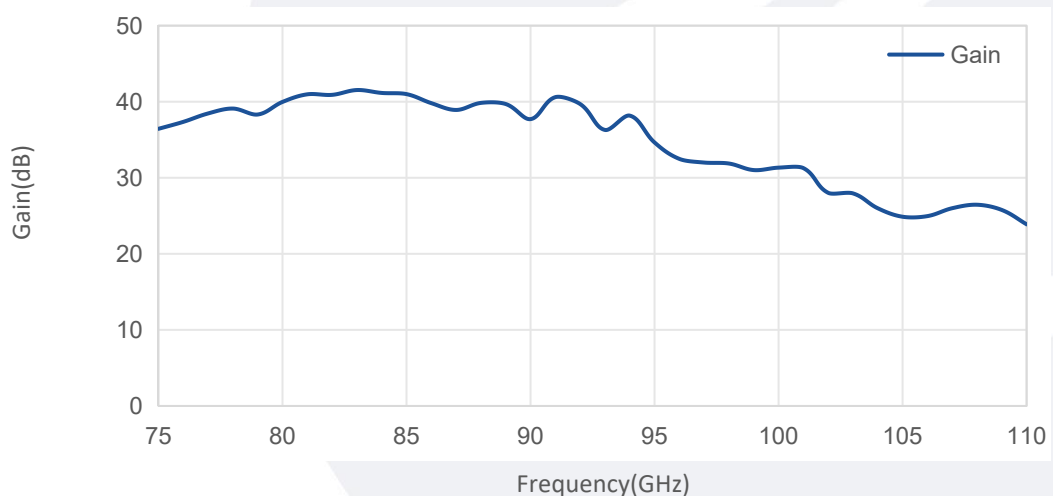
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	°C
存储温度 Non-operating Temperature	-45		+85	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half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

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TMPA-075110-3528-10	Power Amplifier, 75-110 GHz, Gain:30 dB Type, Psat:27dBm Typ, +16V DC,WR-10,Without Heatsink	Rev.1.1
TMPA-075110-3528-10-HS	Power Amplifier, 75-110 GHz, Gain:30 dB Type, Psat:27dBm Typ, +16V DC,WR-10,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

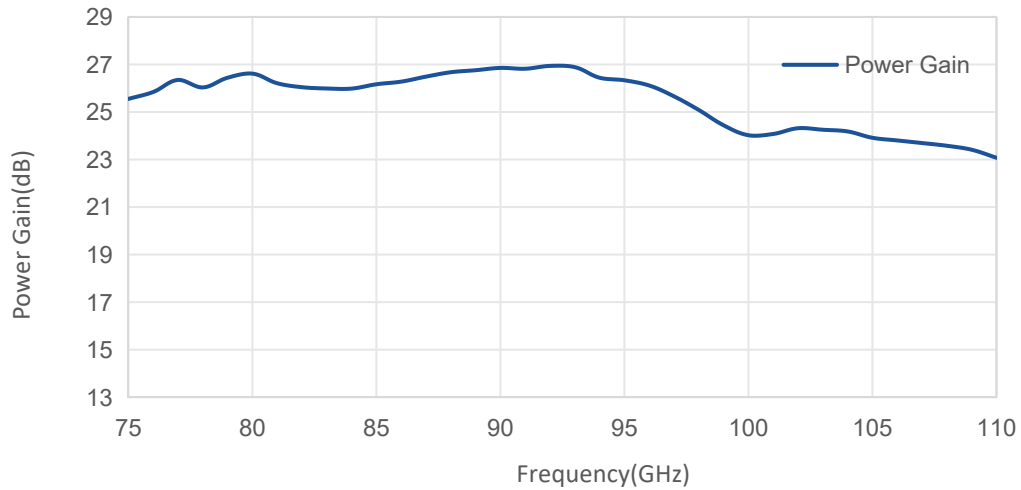
Small Signal Gain vs Frequency



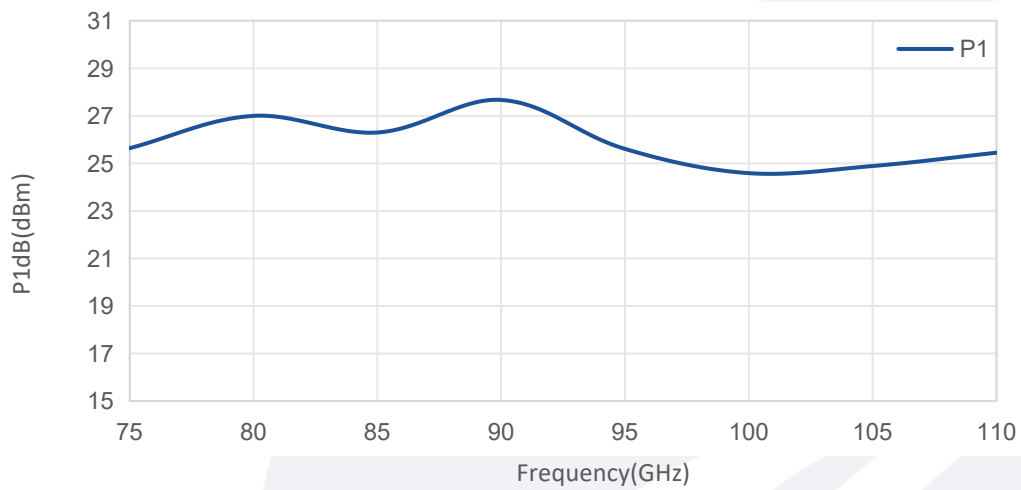
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

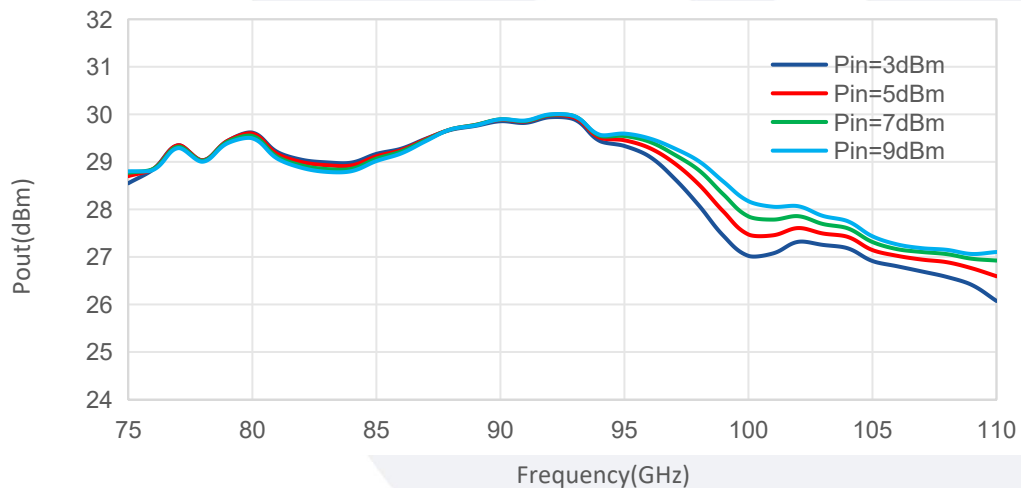
Power Gain vs Frequency



P1dB vs Frequency



Pout@Pin 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.