

X-band Bidirectional Amplifier

8-12.5GHz/40dB Gain/26 dBm P1dB(TX)

Model: TLBPA8G12.5G-40-35-28

TLBPA8G12.5G-40-35-28 is a X-band bidirectional amplifier with typical small signal gain of 40 dB and noise figure of 3.5dB across the frequency range of 8 to 12.5 GHz. The DC power requirement for the amplifier is +28 V DC/0.8A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Gain: 40dB Typ.
- Noise Figure(RX): 3.5dB Max.
- 50 Ohm Matched Input / Output
- Bidirectional amplification (shared channel for Tx/Rx)
- Protection: over voltage protection

Applications:

- Communication systems
- Test and Measurement

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	8		12.5	GHz
增益 Gain (RX)		40		dB
噪声系数 Noise Figure (RX)			3.5	dB
输出1dB压缩点 Output P-1 dB (RX)	15			dBm
增益 Gain (TX)		40		dB
输出1dB压缩点 Output P-1 dB (TX)	26			dBm
饱和输出功率 Output Psat (TX)	28			dBm
输入/输出驻波 Input/Output VSWR		2.0		:1
直流电压 DC Voltage		+28		V DC
直流电流 DC Supply Current			0.8	A
阻抗 Impedance		50		Ohms
控制方式 Control Mode	Pulsed Control (High: 3.3V; Low: 0V)			

机械特性 Mechanical Specifications:

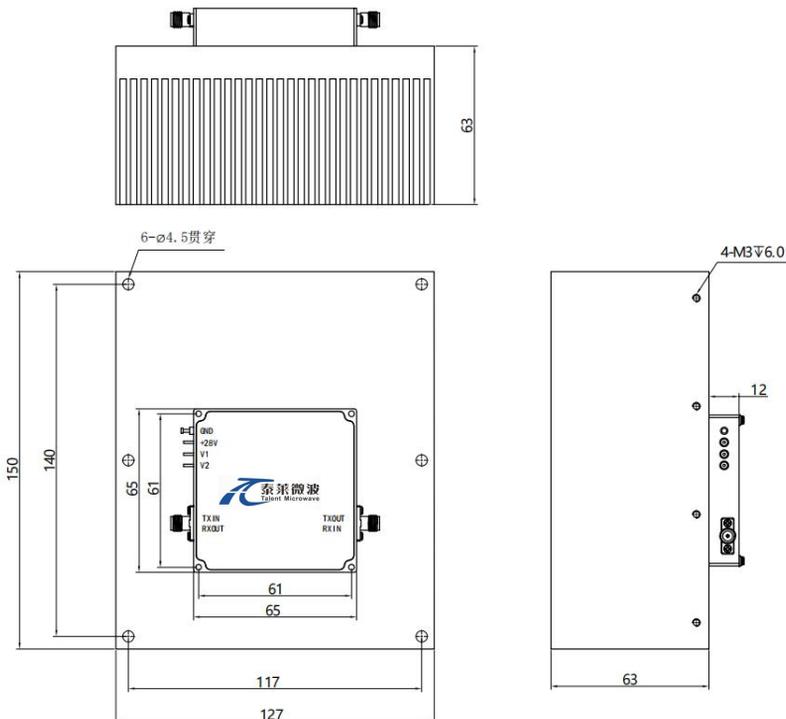
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	65*65*12(Without heatsink) 127*150*75(With heatsink)	mm

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+32V
输入功率 RF Input Power	+15dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



真值表 Truth Table

功能 Function	TTL1	TTL2
RX	1	0
TX	0	1



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	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°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			

主要功能 Key Features:

参数 Parameter	特点 Advantages
内置保护功能 Protection function	Over voltage

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLBPA8G12.5G-40-35-28	X-band Bidirectional Amplifier, 8-12.5GHz, Gain: 40dB, Output P-1 dB (RX): 15dBm, Output P-1 dB (TX): 26dBm,+28V DC	Rev.1.1