

## Ka-band Bidirectional Amplifier

**32-38GHz/40dB Gain/36 dBm P1dB(TX)**

**Model:TLBPA32G38G-40-40-38**

TLBPA32G38G-40-40-38 is a Ka-band bidirectional amplifier with typical small signal gain of 40 dB and noise figure of 4.0dB across the frequency range of 32 to 38 GHz. The DC power requirement for the amplifier is +28 V DC/2.5A. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Gain: 40dB Typ.
- Noise Figure(RX): 4dB 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	32		38	GHz
增益 Gain (RX)		40		dB
噪声系数 Noise Figure (RX)			4	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)	36			dBm
饱和输出功率 Output Psat (TX)	38			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			2.5	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:

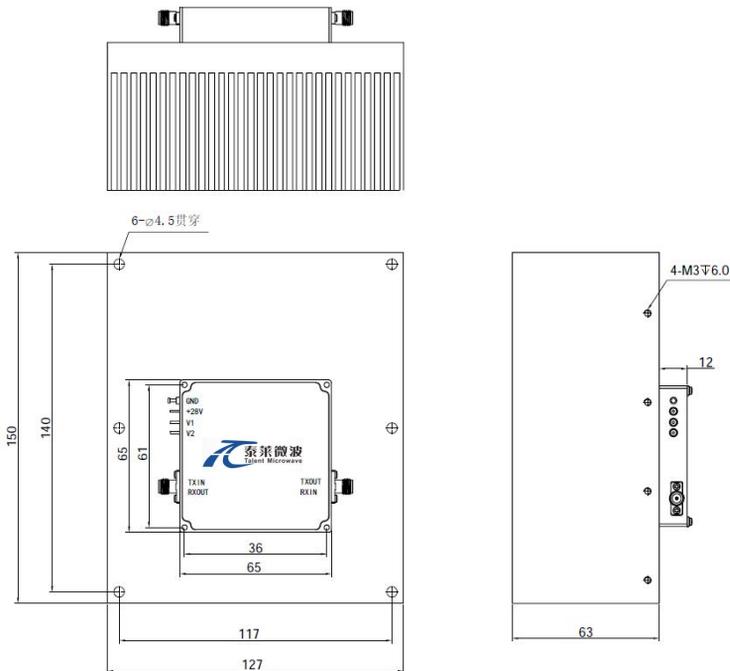
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.92mm Female/2.92mm Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	65*65*12(Without heatsink) 127*150*75(With heatsink)	mm

## 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
TLBPA32G38G-40-40-38	Ka-band Bidirectional Amplifier, 32-38GHz, Gain: 40dB, Output P-1 dB (RX): 15dBm, Output P-1 dB (TX): 36dBm,+28V DC	Rev.1.1