

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

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	32		38	GHz
Gain (RX)		40		dB
Noise Figure (RX)			4	dB
Output P-1 dB (RX)	15			dBm
Gain (TX)		40		dB
Output P-1 dB (TX)	36			dBm
Output Psat (TX)	38			dBm
Input/Output VSWR		2.0		:1
DC Voltage		+28		V DC
DC Supply Current			2.5	A
Impedance	50			Ohms
Control Mode	Pulsed Control (High: 3.3V; Low: 0V)			

Mechanical Specifications:

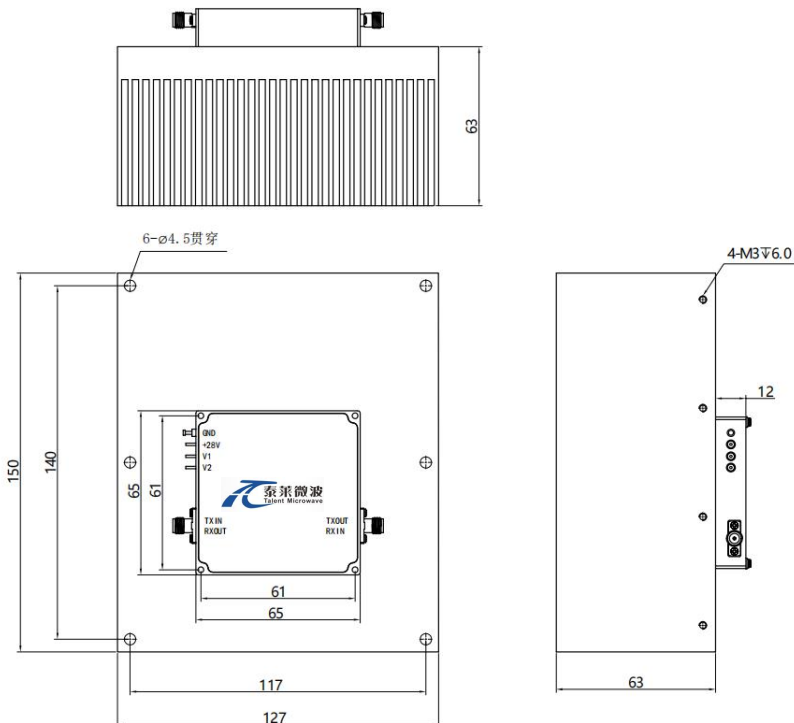
Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	65*65*12(Without heatsink) 127*150*75(With heatsink)	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+32V
RF Input Power	+15dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Truth Table		
Function	TTL1	TTL2
RX	1	0
TX	0	1



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

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°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			

Key Features:

Parameter	Advantages
Protection function	Over voltage

Ordering Information:

Base Number	Description	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