

## Low Noise Amplifier

20-50GHz/5.5dB NF/30dB Gain/21dBm P1dB

Model: TLLA20G50G-30-55

TLLA20G50G-30-55 is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 5.5 dB across the frequency range of 20 to 50 GHz. The DC power requirement for the amplifier is +12 V DC/200 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

### Features:

- Frequency range: 20-50GHz
- Gain: 30dB Typ
- Noise Figure: 5.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	20		50	GHz
Small Signal Gain	27	30		dB
Noise Figure		5.5		dB
Output P1dB		21		dBm
Output Psat		22		dBm
Input VSWR		1.6		:1
Output VSWR		1.8		:1
DC Voltage		+12	+16	V DC
DC Supply Current		200		mA
Impedance		50		Ohms

### Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
DC Bias	Solder Pin	
Size	50*55*14	mm

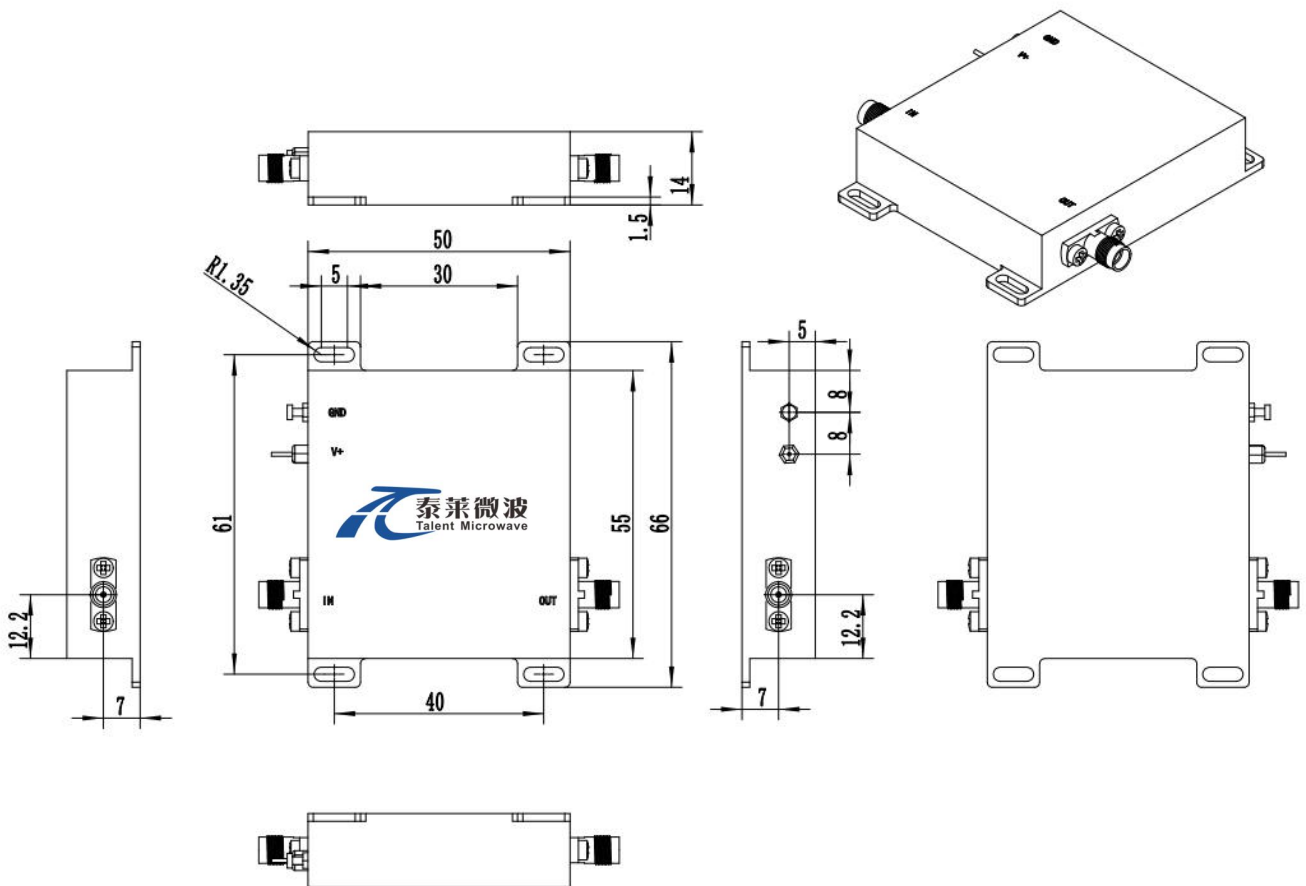
### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+16 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



### Outline Drawing:

Unit:mm



**\*\*\*Heat Sink Required During Operation**



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			

### Ordering Information:

Base Number	Description	Revision
TLLA20G50G-30-55	Low Noise Amplifier, 20-50GHz, Noise Figure:5.5dB, Gain:30 dB,P1dB:21dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA20G50G-30-55-HS	Low Noise Amplifier, 20-50GHz, Noise Figure:5.5dB, Gain:30 dB,P1dB:21dBm,+12V DC,With Heatsink	Rev.1.1