

## Low Noise Amplifier

**33-35GHz/2.0dB NF/36dB Gain/13dBm P1dB Model: TLLA33G35G-36-40-WR28-L**

TLLA33G35G-36-40-WR28-L is a low noise amplifier with a typical small signal gain of 13 dB and a nominal noise figure of 2.0 dB across the frequency range of 33 to 35 GHz. The DC power requirement for the amplifier is +5 V DC/85 mA. The input and output port configuration offers coax adapter structure with WR-28 UG-599U/2.92mm female.

### Features:

- Frequency range: 33-35GHz
- Gain: 36dB Typ
- Noise Figure: 2.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	33		35	GHz
Small Signal Gain		36		dB
Gain Flatness	±0.5@Band=1GHz			dB
Noise Figure		2.0		dB
Output P1dB	12	13		dBm
Output Psat		14		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		+5	+8	V DC
DC Supply Current		85		mA
Impedance	50			Ohms

### Mechanical Specifications:

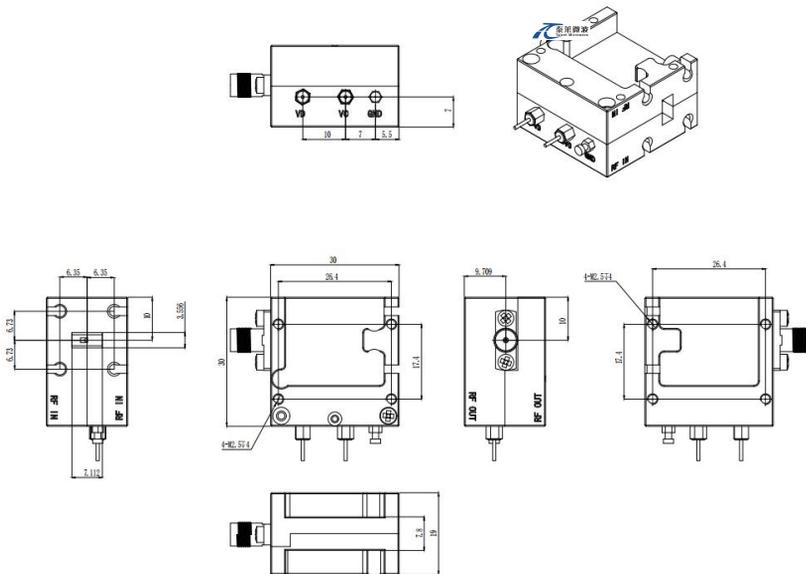
Parameter	Value	Units
Input /Output Connector	WR-28/UG-599/U/2.92mmFemale	
DC Bias	Solder Pin	
Size	30*30*19	mm

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	+20 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		50,000		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
TLLA33G35G-36-40-WR28-L	Low Noise Amplifier, 33-35GHz, Noise Figure:2.0dB, Gain:36 dB,P1dB:13dBm,+5V DC,Without Heatsink	Rev.1.1
TLLA33G35G-36-40-WR28-L-HS	Low Noise Amplifier, 33-35GHz, Noise Figure:2.0dB, Gain:36 dB,P1dB:13dBm,+5V DC,With Heatsink	Rev.1.1