

Low Noise Amplifier

0.5-18GHz/4.0dB NF/31dB Gain/15dBm P1dB

Model: TLLA0.5G18G-31-40

TLLA0.5G18G-31-40 is a low noise amplifier with a typical small signal gain of 31 dB and a nominal noise figure of 4.0 dB across the frequency range of 0.5 to 18 GHz. The DC power requirement for the amplifier is +12 V DC/140 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.5-18GHz
- Gain: 31dB Typ
- Noise Figure: 4.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.5		18	GHz
Small Signal Gain	26	31		dB
Gain Flatness		±1.0	±2.0	dB
Noise Figure		4.0	5.5	dB
Output P1dB	13	15		dBm
Output IP3		26		dBm
Input VSWR		1.8	2.0	:1
Output VSWR		1.8	2.0	:1
DC Voltage		+12		V DC
DC Supply Current		140		mA
Impedance	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	30*30*8	mm

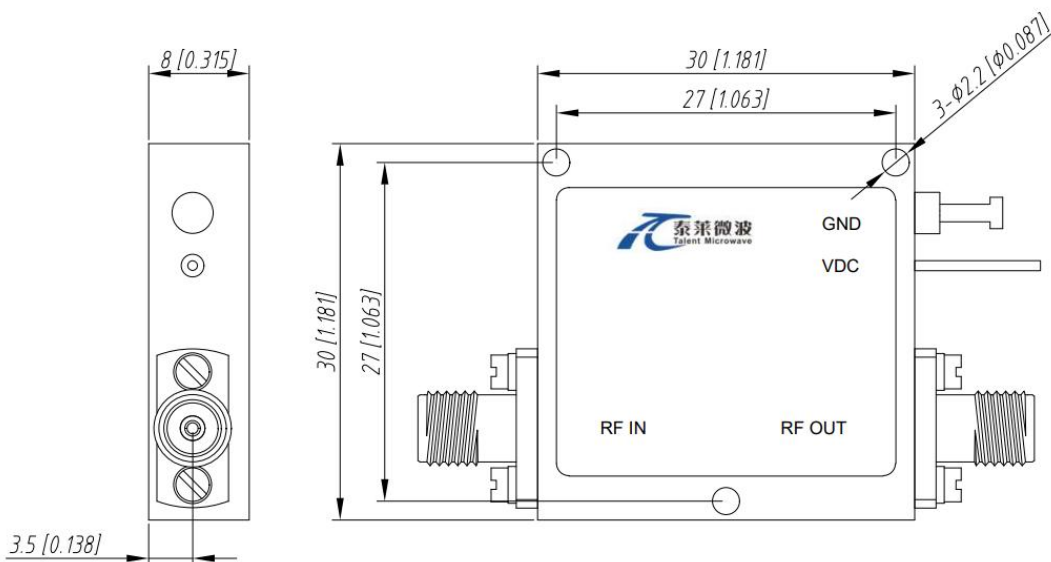
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	-10 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
TLLA0.5G18G-31-40	Low Noise Amplifier, 0.5-18GHz, Noise Figure:4.0dB, Gain:31 dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.5G18G-31-40-HS	Low Noise Amplifier, 0.5-18GHz, Noise Figure:4.0dB, Gain:31 dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1