

Low Noise Amplifier

1-18GHz/2.5dB NF/30dB Gain/20dBm P1dB

Model: TLLA1G18G-27-25

TLLA1G18G-27-25 is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 2.5 dB across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +12V DC/250 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-18GHz
- Gain: 30dB Typ
- Noise Figure: 2.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1		18	GHz
Small Signal Gain	27	30		dB
Gain Flatness		±2	±3	dB
Noise Figure		2.5	3.5	dB
Output P1dB	15	20		dBm
Output IP3		25		dBm
Input VSWR		1.6	2	:1
Output VSWR		1.6	2	:1
DC Voltage		12		V DC
DC Supply Current		250		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

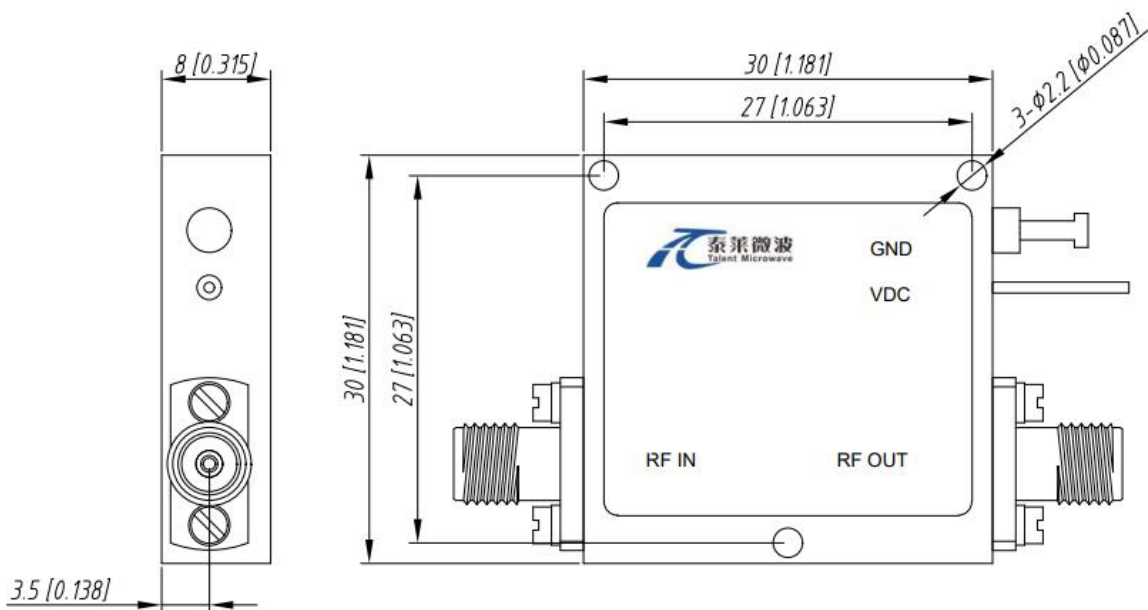
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	0 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
TLLA1G18G-27-25	Low Noise Amplifier, 1-18GHz, Noise Figure:2.5dB, Gain:30 dB,P1dB:20dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA1G18G-27-25-HS	Low Noise Amplifier, 1-18GHz, Noise Figure:2.5dB, Gain:30 dB,P1dB:20dBm,+12V DC,With Heatsink	Rev.1.1