

Low Noise Amplifier

0.5-6GHz/2.5dB NF/35dB Gain/20dBm P1dB

Model: TLLA0.5G6G-33-25

TLLA0.5G6G-33-2.5 is a low noise amplifier with a typical small signal gain of 35 dB and a maximum noise figure of 2.5 dB across the frequency range of 0.5 to 6GHz. The DC power requirement for the amplifier is +12V DC/200 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.5-60GHz
- Gain: 35dB Typ
- Noise Figure: 2.5dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	0.5		6	GHz
小信号增益 Small Signal Gain	30	35		dB
增益平坦度 Gain Flatness		±1.0	±2.0	dB
温度变化下的增益变化 Gain Variation Over Temperature		±1.0		dB
噪声系数 Noise Figure		2.2	2.5	dB
线性输出功率 Output P1dB	17	20		dBm
饱和输出功率 Output Psat		20		dBm
输出三阶交调 Output IP3		29		dBm
输入驻波 Input VSWR		1.6	2.0	:1
输出驻波 Output VSWR		1.5	2.2	:1
直流电压 DC Voltage		+12		V DC
直流电流 DC Supply Current		200		mA
阻抗 Impedance		50		Ohms

Mechanical Specifications:

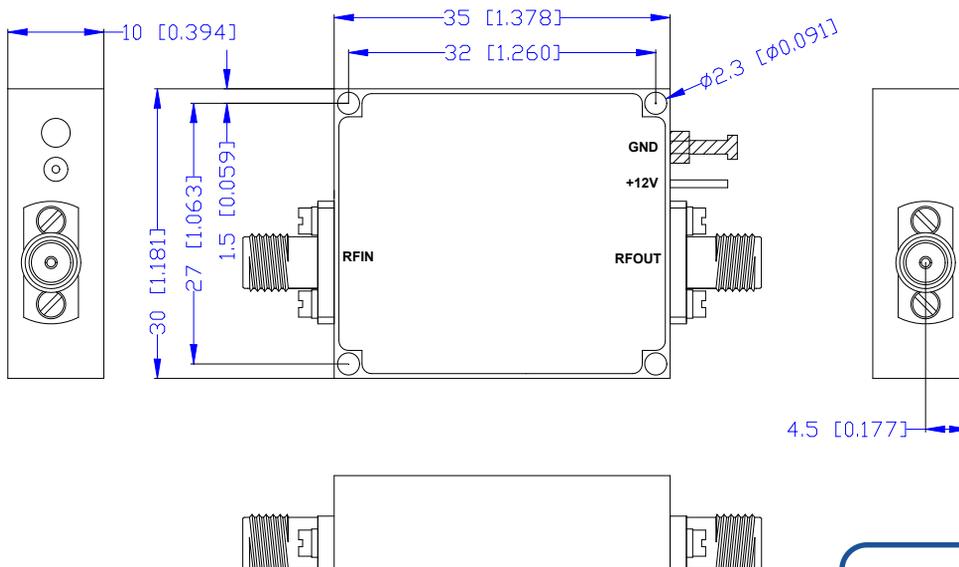
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Material	Aluminium/Gold Painting	
Package Sealing	General Sealing(Standard)	
Size	30*35*10	mm
Weight	30	g

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
TLLA0.5G6G-33-25	Low Noise Amplifier, 0.5-6GHz, Noise Figure:2.5dB, Gain: 35dB,P1dB:20dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.5G6G-33-25-HS	Low Noise Amplifier, 0.5-6GHz, Noise Figure:2.5dB, Gain: 35dB,P1dB:20dBm,+12V DC,With Heatsink	Rev.1.1