

Low Noise Amplifier

WR-6.5/110-170GHz/6.5dB NF/33dB Gain

Model: TMLA-110170-3370-06

TMLA-110170-3370-06 is a D-Band low noise amplifier with a typical small signal gain of 33 dB and a nominal noise figure of 6.5 dB across the frequency range of 110 to 170 GHz. The DC power requirement for the amplifier is +12 VDC /60 mA. The input and output port configuration offers an inline structure with WR-6.5 waveguides and UG-387/U-M anti-cocking flanges.

Features:

- Frequency range: 110-170GHz
- Gain: 33dB Typ
- Noise Figure: 6.5dB Typ
- Unconditional stability

Applications:

- Passive Imaging
- 5G Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	110		170	GHz
Small Signal Gain		33		dB
Noise Figure		6.5		dB
Output P1dB		-3		dBm
Input VSWR		2.7		:1
Output VSWR		2.2		:1
DC Voltage		12		V DC
DC Supply Current		60		mA

Mechanical Specifications:

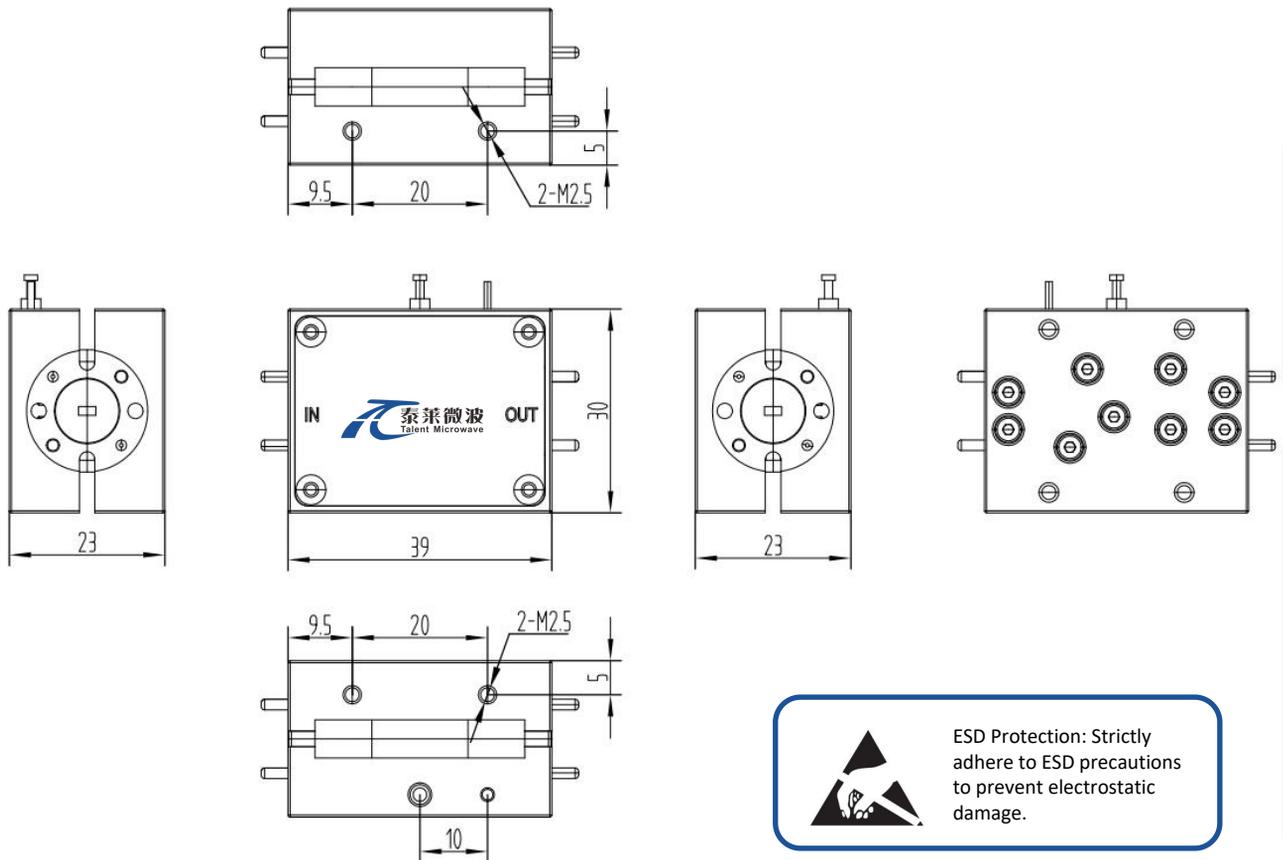
Parameter	Value	Units
Input Connector	WR-6.5/ UG-387/U	
Output Connector	WR-6.5/ UG-387/U	
Power Supply Pin	Solder Pin	
Size	39*30*23	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

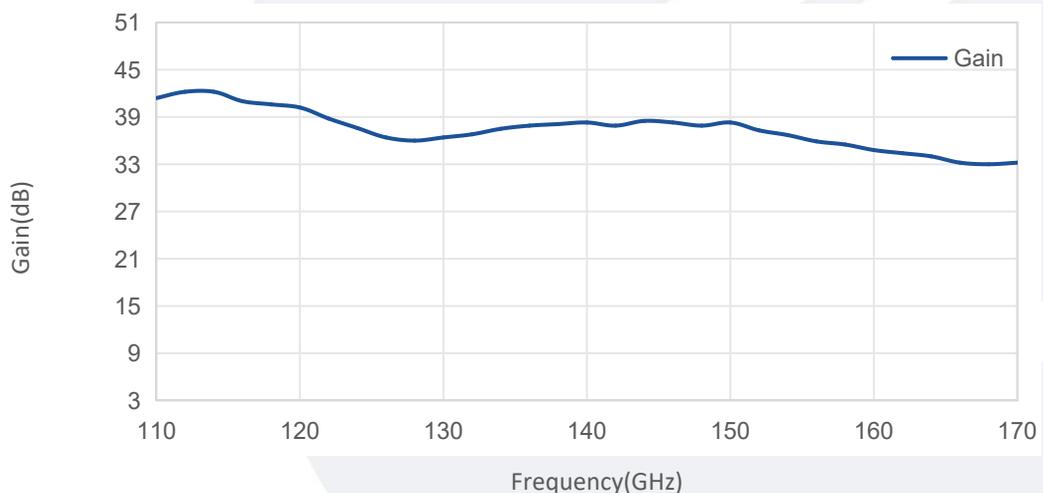
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TMLA-110170-3370-06	Low Noise Amplifier,110-170GHz, Noise Figure:6.5dB, Gain:33dB,+12V DC,WR-6.5	Rev.1.1

Typical Performance Data:

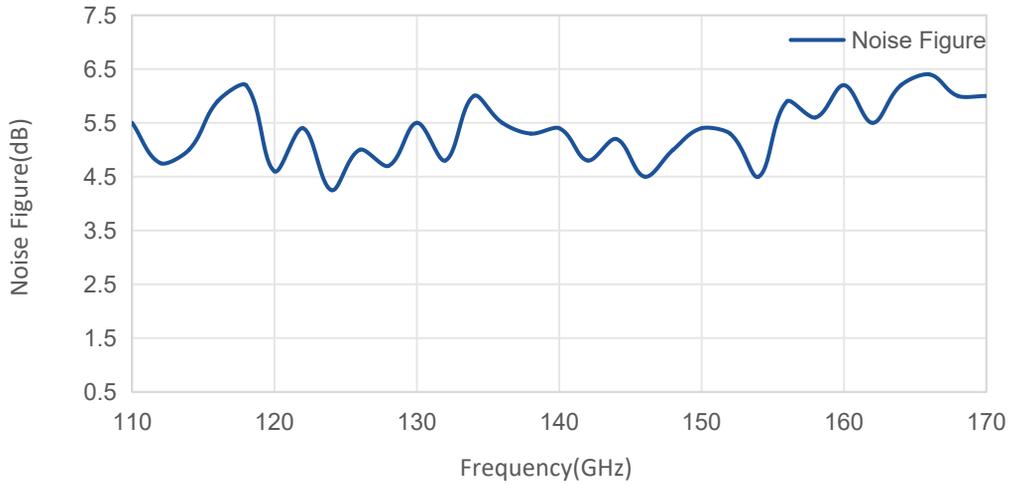
Gain vs Frequency



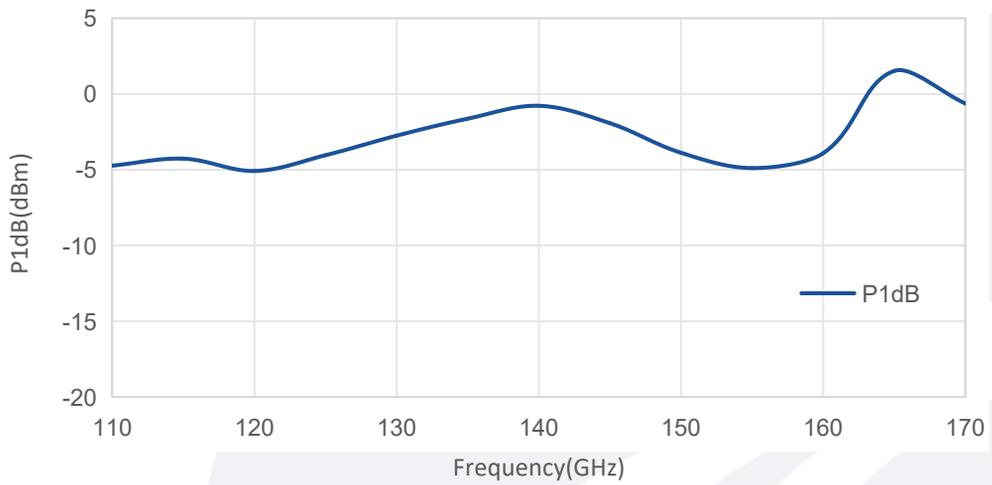
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Noise Figure vs Frequency



P1dB vs Frequency



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