

LT-LA-075110-3542-10  
Low Noise Amplifier  
WR-10/75-110GHz/4.2dB NF/35dB Gain  
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LT-LA-075110-3542-10 is a W-Band low noise amplifier with a typical small signal gain of 35 dB and a nominal noise figure of 4.2 dB across the frequency range of 75 to 110 GHz. The DC power requirement for the amplifier is +12 VDC /90 mA. The input and output port configuration offers an inline structure with WR-10 waveguides and UG-387/U-M anti-cocking flanges.

### Features:

- Frequency range:75-110 GHz
- Gain: 35dB Typ
- Noise Figure: 4.2 dB Typ
- Unconditional stability

### Applications:

- Passive Imaging
- 5G Systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	75		110	GHz
Gain		35		dB
Gain Flatness		±3		dB
Noise Figure		4.2		dB
Output P1dB		9		dBm
Input VSWR		2		:1
Output VSWR		2.5		:1
DC Voltage		12		V DC
DC power supply		90		mA

### Mechanical Specifications:

Parameter	Value	Units
Input Connector	WR-10/ UG-387/U	
Output Connector	WR-10/ UG-387/U	
Power Supply Pin	Solder Pin	
Size	39*30*23	mm

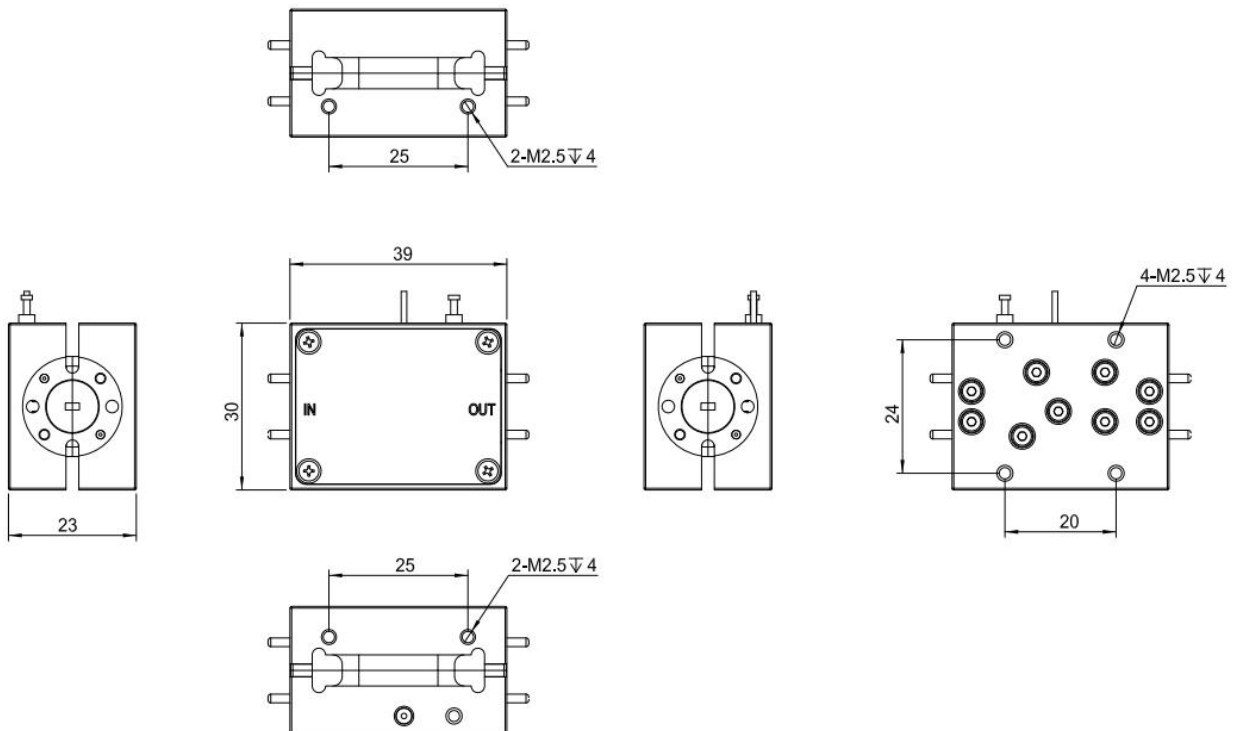
### Absolute Maximum Ratings:

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

### Outline Drawing:

Unit:mm

### Regulatory Compliance:

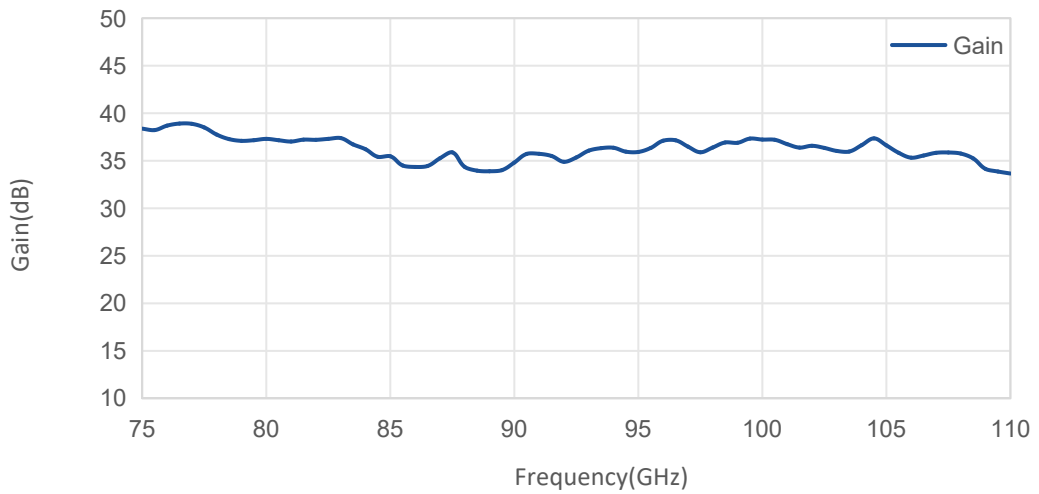


**Environmental Conditions:**

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			
hock(non operating)	20G for 11msc half sin wave,3 axis both directions			

**Typical Performance Data:**

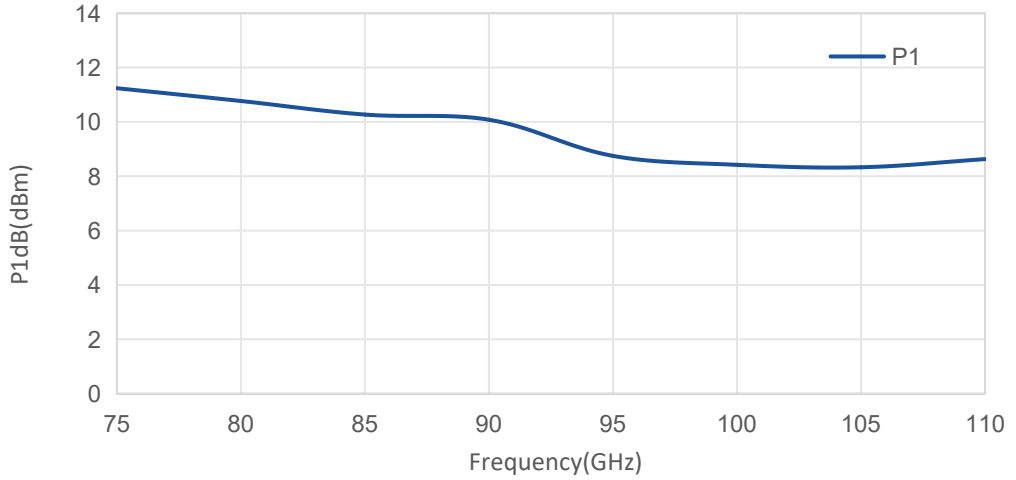
**Gain vs Frequency**



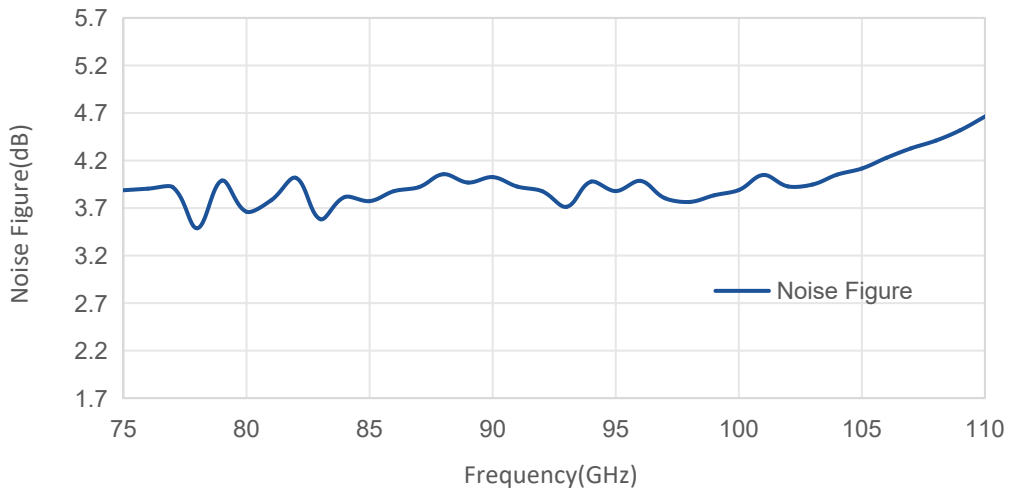
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

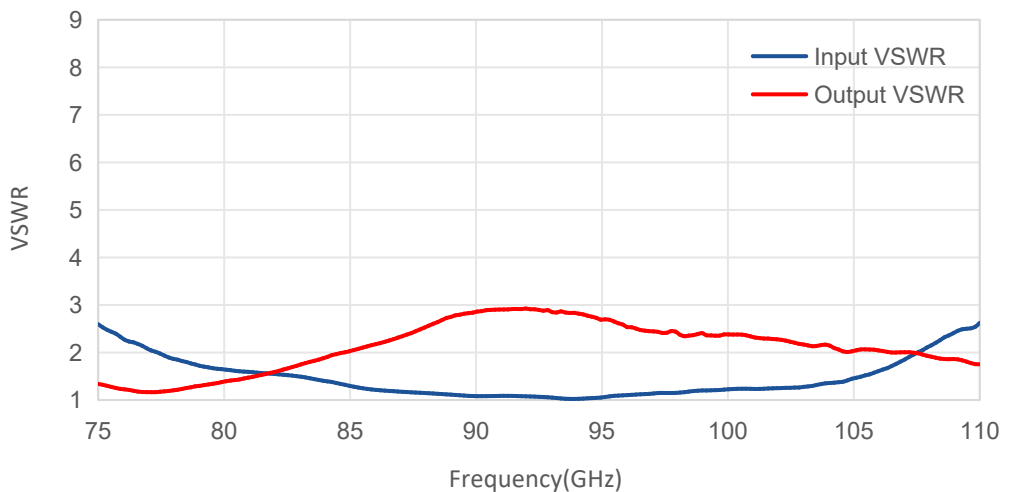
### P1dB vs Frequency



### Noise Figure vs Frequency



### VSWR vs Frequency



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