

**Model: TMLA-090140-4045-08**

**Low Noise Amplifier**  
**90-140GHz, NF:4.5 dB, Gain:40 dB**

**Feature:**

- Ultra Wide Band: 90-140 GHz
- Gain: 40dB Typ
- Noise Figure: 4.5dB Typ
- Unconditional stability

**Electrical Specifications:**

Parameter	Min	Typ	Max	Units
Frequency range	90		140	GHz
Gain		40		dB
Gain Flatness		±2		dB
Noise Figure		4.5		dB
Output P1dB		-2		dBm
Input VSWR		2.2		:1
Output VSWR		2.2		:1
DC Voltage		12		V DC
DC power supply		40		mA

**Mechanical Specifications:**

Parameter	Value	Units
Input Connector	WR-08/ UG-387/U	
Output Connector	WR-08/ UG-387/U	
Power Supply Pin	Solder Pin	
Size	39*30*23	mm

**Absolute Maximum Ratings:**

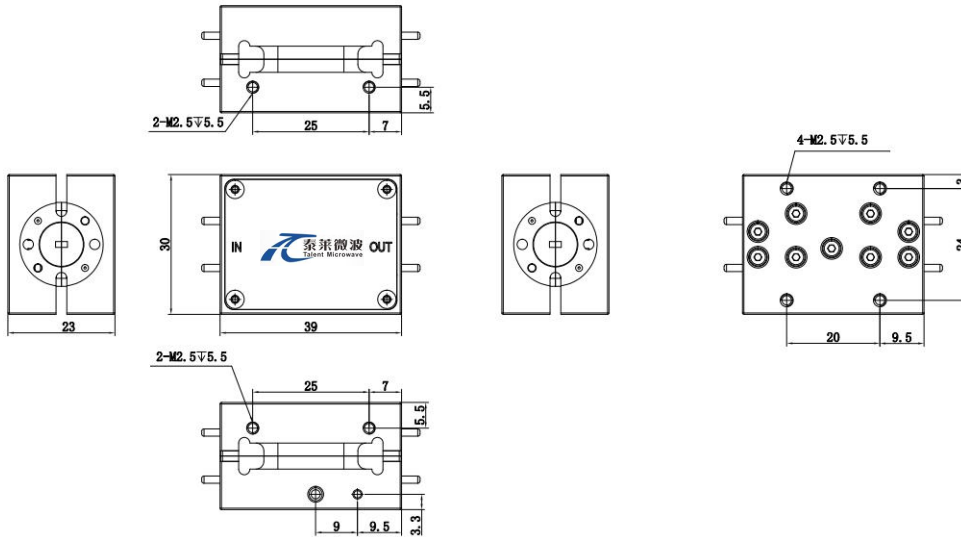
Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



**Available 220V System  
Benchtop Amplifier**

**Outline Drawing:**

Unit: mm



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

**Environmental Conditions:**

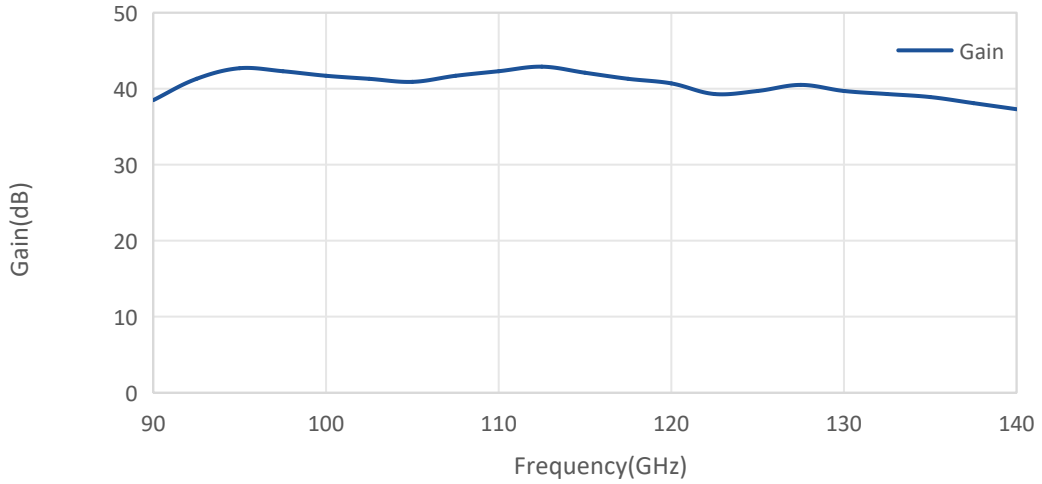
Parameter	Min	Typ	Max	Units
Operating Temperature	-55		+85	°C
Non-operating Temperature	-45		+125	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

**Ordering Information:**

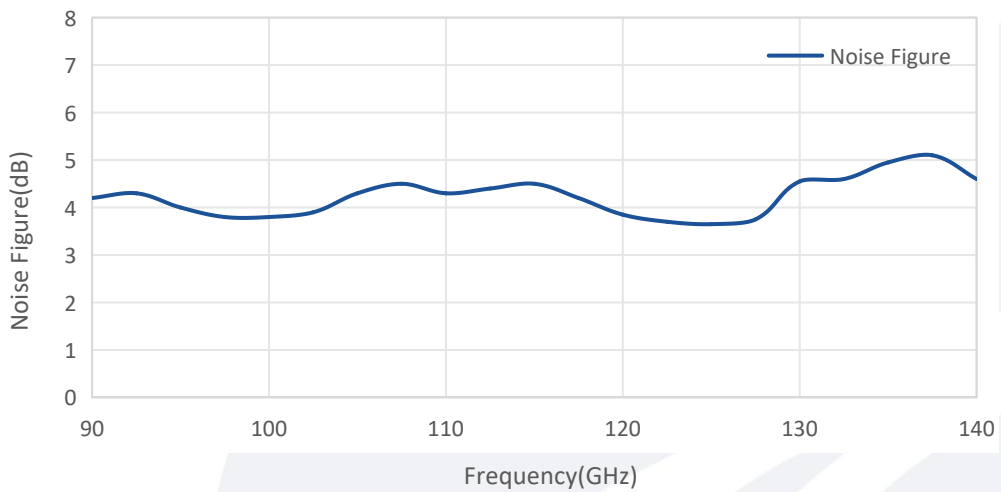
Part Number	Description	Revision
TMLA-090140-4045-08	Low Noise Amplifier 90-140GHz, Noise Figure:4.5dB, Gain:40dB,+12V DC,WR-08	Rev.1.1

Typical Performance Data:

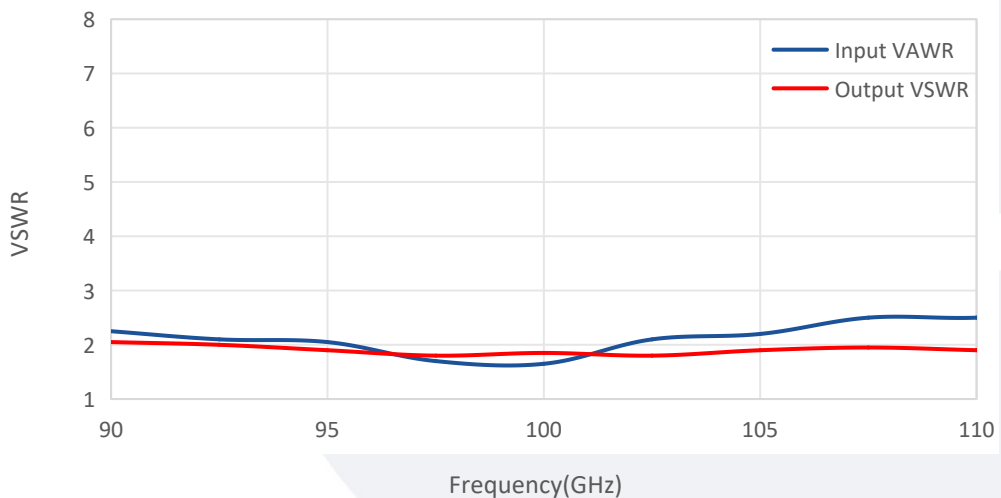
Gain vs Frequency



Noise Figure vs Frequency



VSWR 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.