

Low Noise Amplifier

WR-15/50-75GHz/3.0dB NF/38dB Gain

Model: TMLA-050075-3840-15

TMLA-050075-3840-15 is a V-Band low noise amplifier with a typical small signal gain of 38 dB and a nominal noise figure of 3.0 dB across the frequency range of 50 to 75 GHz. The DC power requirement for the amplifier is +12 VDC /150 mA. The input and output port configuration offers an inline structure with WR-15 waveguides and UG-385/U-M anti-cocking flanges.

Features:

- Frequency range:50-75GHz
- Gain: 38dB Typ
- Noise Figure: 3.0dB Typ
- Unconditional stability

Applications:

- Passive Imaging
- 5G Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	50		75	GHz
Gain		38		dB
Noise Figure		3		dB
Output P1dB		19		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		12		V DC
DC power supply		150		mA

Mechanical Specifications:

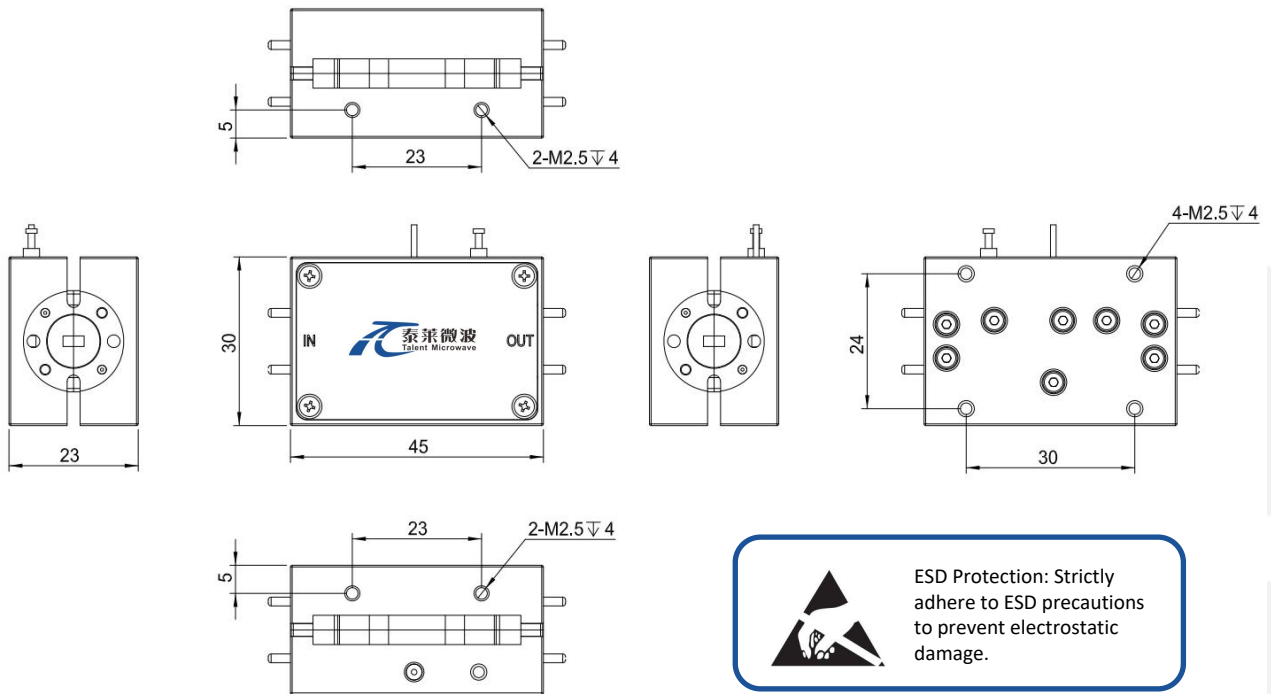
Parameter	Value	Units
Input Connector	WR-15/ UG-385/U	
Output Connector	WR-15/ UG-385/U	
Power Supply Pin	Solder Pin	
Size	45*30*23	mm

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; Tolerance:±0.1mm



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

Environmental Conditions:

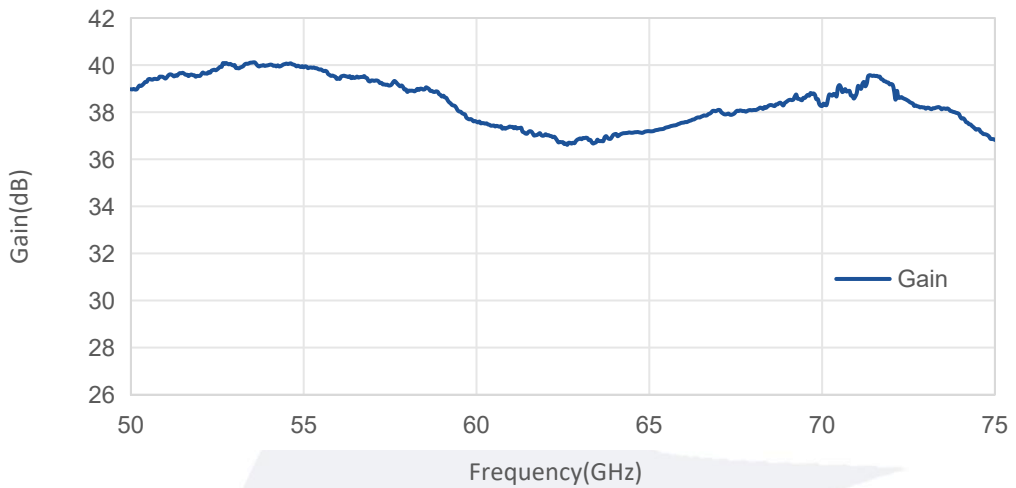
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

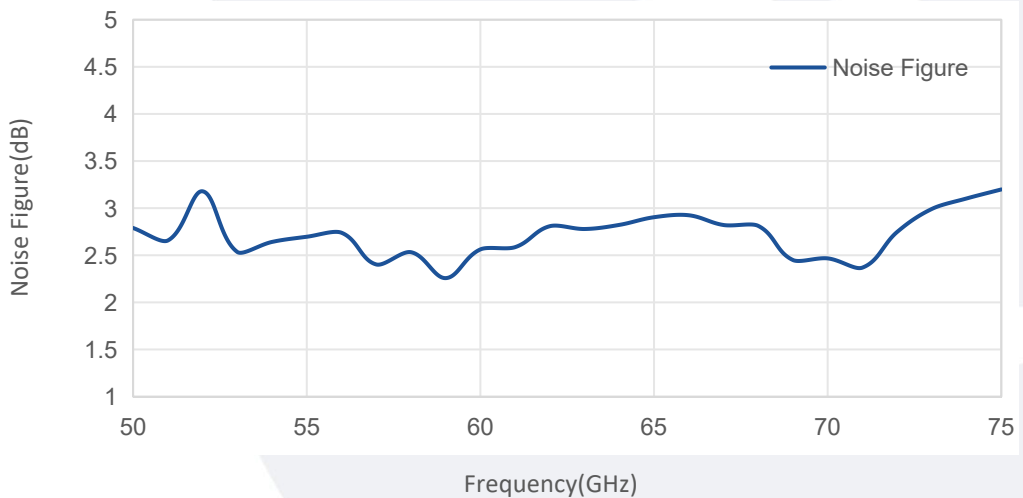
Base Number	Description	Revision
TMLA-050075-3840-15	Low Noise Amplifier, 50-75GHz, Noise Figure: 3.0dB, Gain: 38dB, +12V DC, WR-15	Rev.1.1

Typical Performance Data:

Gain vs Frequency



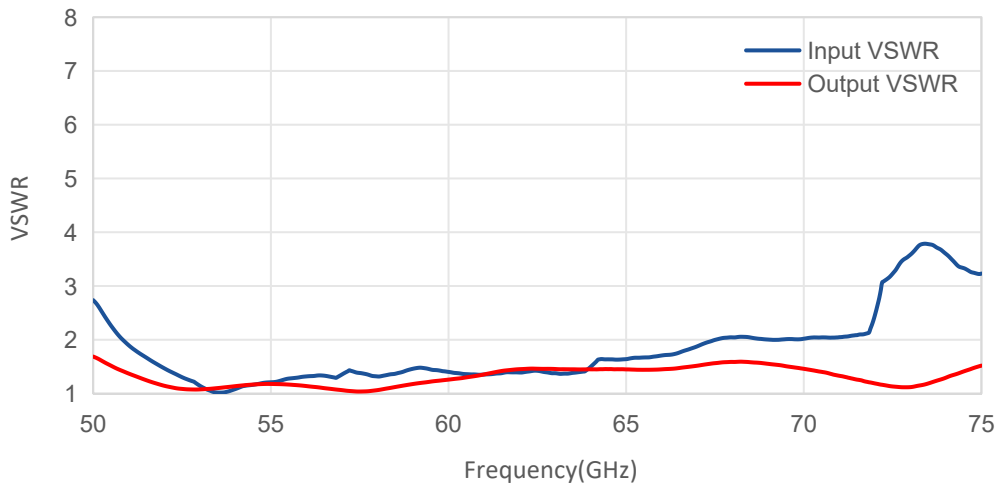
Noise Figure vs Frequency



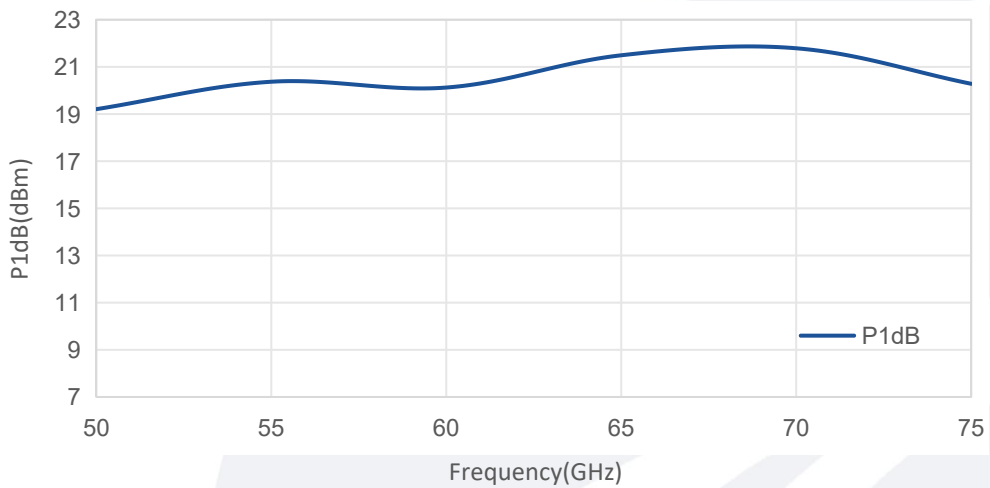
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

VSWR vs Frequency



P1dB vs Frequency



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