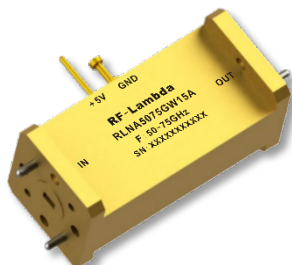


WR15 Waveguide Low Noise Amplifier 50GHz ~ 75GHz



Note: The photo is for illustration purposes only.
Please refer to the outline drawing.

Features

- Gain: 25dB Typical
- Noise Figure: 6dB Typical
- P1dB Output Power: +20dBm Typical
- Supply Voltage: +5V

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Test and Measurement

Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{CC} = +5\text{V}$

Parameter		Min.	Typ.	Max.	Units
Frequency Range		50		75	GHz
Gain			25		dB
Gain Flatness			±3		dB
Gain Variation Over Temperature (-40°C ~ +85°C)			±3		dB
Noise Figure			6		dB
Input VSWR			2		: 1
Output VSWR			2		: 1
Output 1dB Compression Point (P1dB)			20		dBm
Saturated Output Power (Psat)			21		dBm
Output Third Order Intercept (OIP3)			30		dBm
Supply Current (Vcc=+5V)			700		mA
Isolation S12			-60		dB
Weight	Net	4.3 Max.			ounces
	Including Heat Sink	6.5Max.			
Impedance		50			Ohms
Input / Output Connectors		WR15			
Finish		Gold Plated			
Material		Aluminum/Copper			
Package Sealing		Epoxy Sealed (Standard)			
		Hermetically Sealed (Optional)			

WR15 Waveguide Low Noise Amplifier 50GHz ~ 75GHz

Absolute Maximum Ratings

Operating Voltage	+6V
RF Input Power	odBm

Biasing Up Procedure

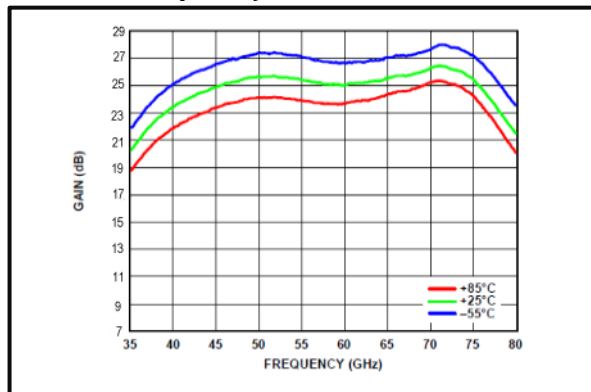
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +5V biasing
Power OFF Procedure	
Step 1	Turn off +5V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications and Test Standards

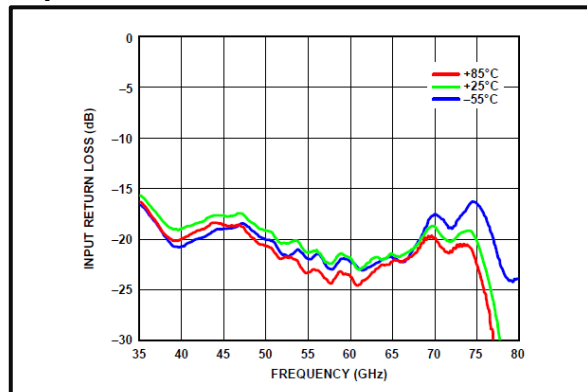
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours
Shock	1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883 (For Hermetically Sealed Units)

Typical Performance Plots

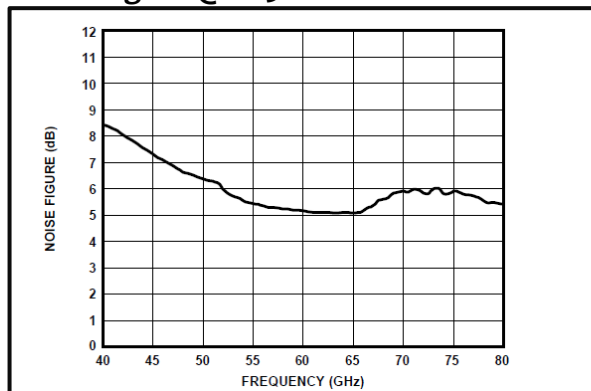
Gain vs. Frequency



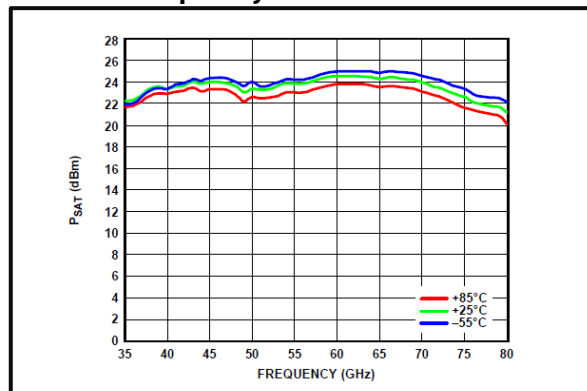
Input Return Loss



Noise Figure @ +25°C

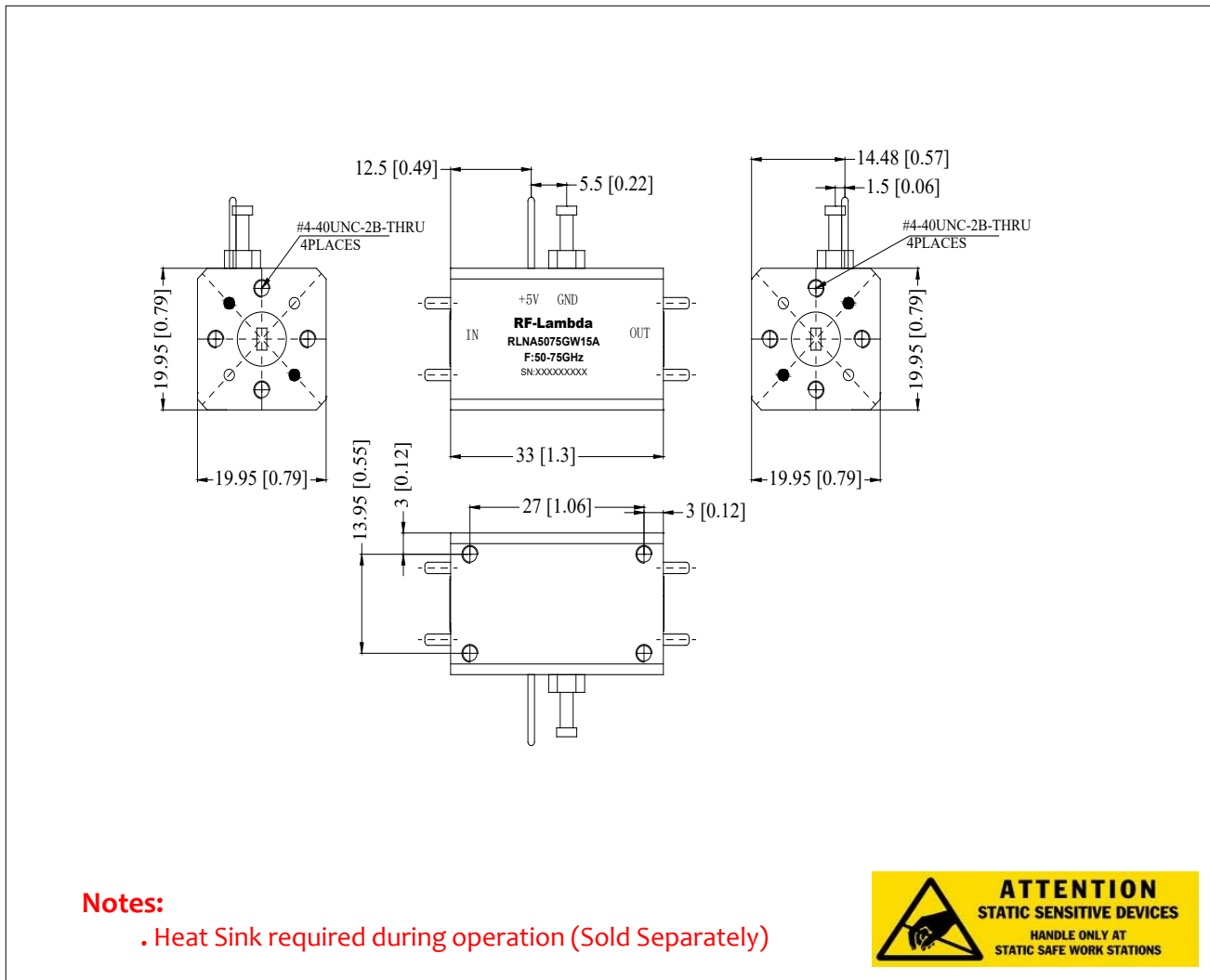


Psat vs. Frequency



Outline Drawing:

All Dimensions in mm [inches]



Ordering Information

Part No.	Description
RLNA5075GW15A	50-75GHz WR15 Waveguide Low Noise Amplifier

Important Notice

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