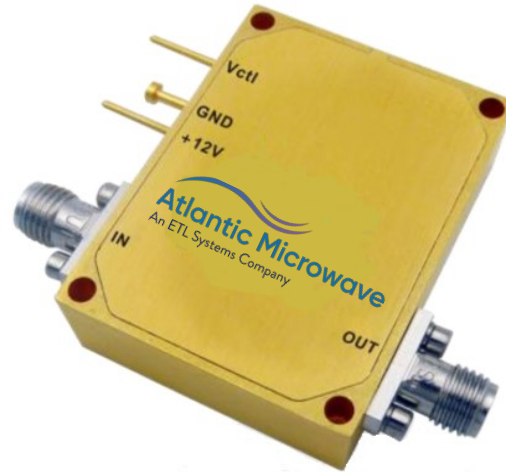


# Low Noise Amplifier

## Wide Band Variable Gain

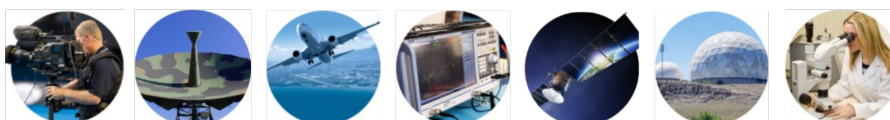
### 1-23GHz

- Radar Systems
- Communication Systems
- Receiver Systems



RF Parameters										
	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ	Max	Unit
Frequency Range	1		2	2		20	20		23	GHz
Gain	32	36	40	28	33	37	26	32	36	dB
Gain Adjustable Range		30			30			30		dB
Gain Flatness		±2.0			±2.0	±3.0		±1.0	±2.0	dB
Gain Variation Over Temperature (-45C~+85C)		±5.0			±1.0			±2.0		dB
Noise Figure		3.5	5.0		2.5	4.5		5.0		dB
Input VSWR		3.0			2.0	3.2		2.0	3.0	:1
Output VSWR		2.5			1.8	2.8		2.0	2.5	:1
Output Power for 1 dB Compression (P1dB)	20	22		18	20		15	17		dBm
Saturated Output Power (P <sub>sat</sub> )		23			22			19		dBm
OIP3		30			28			26		dBm
Isolation S12		-75			-65			-60		dB
Supply Current (V <sub>cc</sub> =+12V, V <sub>ctl</sub> =-1 to +2V))		180	350		180	350		180	350	mA

Physical Specifications			
Weight	40g	Impedance	50 ohms
Input / Output Connectors	SMA Female	Material	Aluminium
Finish	Gold Plated	Package Sealing	Epoxy Sealing (Standard)



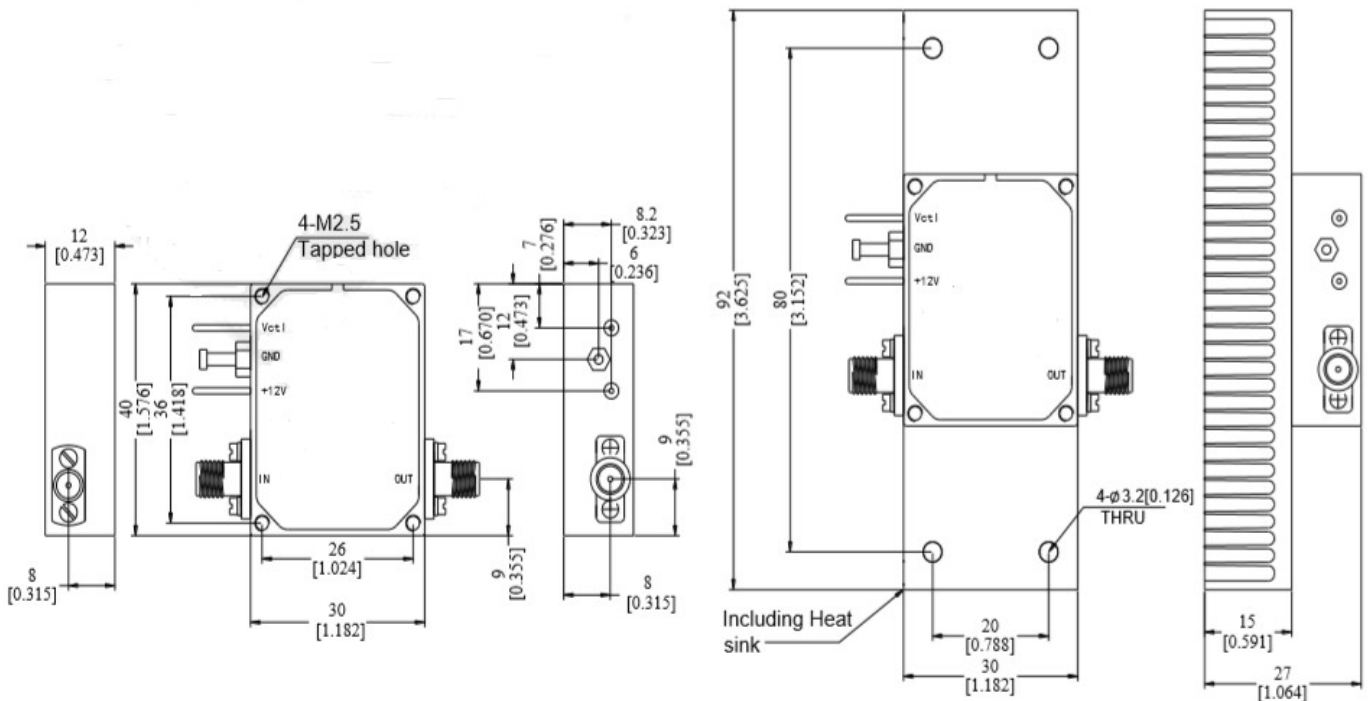
Biasing Up Procedure	
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Step 4	Connect Vctl Control
Step 5	Turn on +12V biasing
Step 6	Turn on Vctl Control

Power Off Procedure	
Step 1	Turn off Vctl Control
Step 2	Turn off +12V biasing
Step 3	Remove RF connection
Step 4	Remove Ground.

Absolute Maximum Ratings	
Operating Voltage	+15V
Vg Control Voltage	-2V to +3V
RF Input Power (25°C, 50Ω)	+40dBm

Environmental	
Operating Temperature	-45°C to +85°C
Storage Temperature	-55°C to +125°C
Altitude	30,000 ft. max
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95% RH at 40°C max.
Shock	20g for 11msc half sine wave, 3 axis both directions

All Dimensions in mm (inches)  
Heat Sink required during operation (Sold Separately)



Note 1: The specification provided is at nominal bias voltage and at 25°C unless otherwise specified

Note 2: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 3: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

