Ultra Wide Band Low Noise Amplifier 0.5GHz~6GHz

Features

- Gain: 35dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +25dBm Typical
- Supply Voltage: +12V

Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.5		3	3		6	GHz
Gain	32	35	39	32	35	39	dB
Gain Flatness		±1.0			±1.0		dB
Gain Variation Over Temperature (-40℃~+85℃)		±0.8			±1.0		dB
Noise Figure		2.5	3.0		2.5	3.0	dB
Input VSWR		2.5	3.0		1.8	3.0	: 1
Output VSWR		2	2.8		2.5	3.0	: 1
Output Power for 1 dB Compression (P1dB)	24	26		24	25		dBm
Saturated Output Power (Psat)		27			26		dBm
Output Third Order Intercept (OIP3)		36			35		dBm
Supply Current (Vcc=+12V)		250	360		250	360	mA
Isolation S12		-65			-60		dB

Weight	3.0 Max.ounce	Impedance	50ohms
Input /Output Connectors	SMA-Female	Material	Aluminum
Finish	Nickel Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+13.5V@25℃
RF Input Power	+2dB m@25℃

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing

Power OFF Procedure

Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

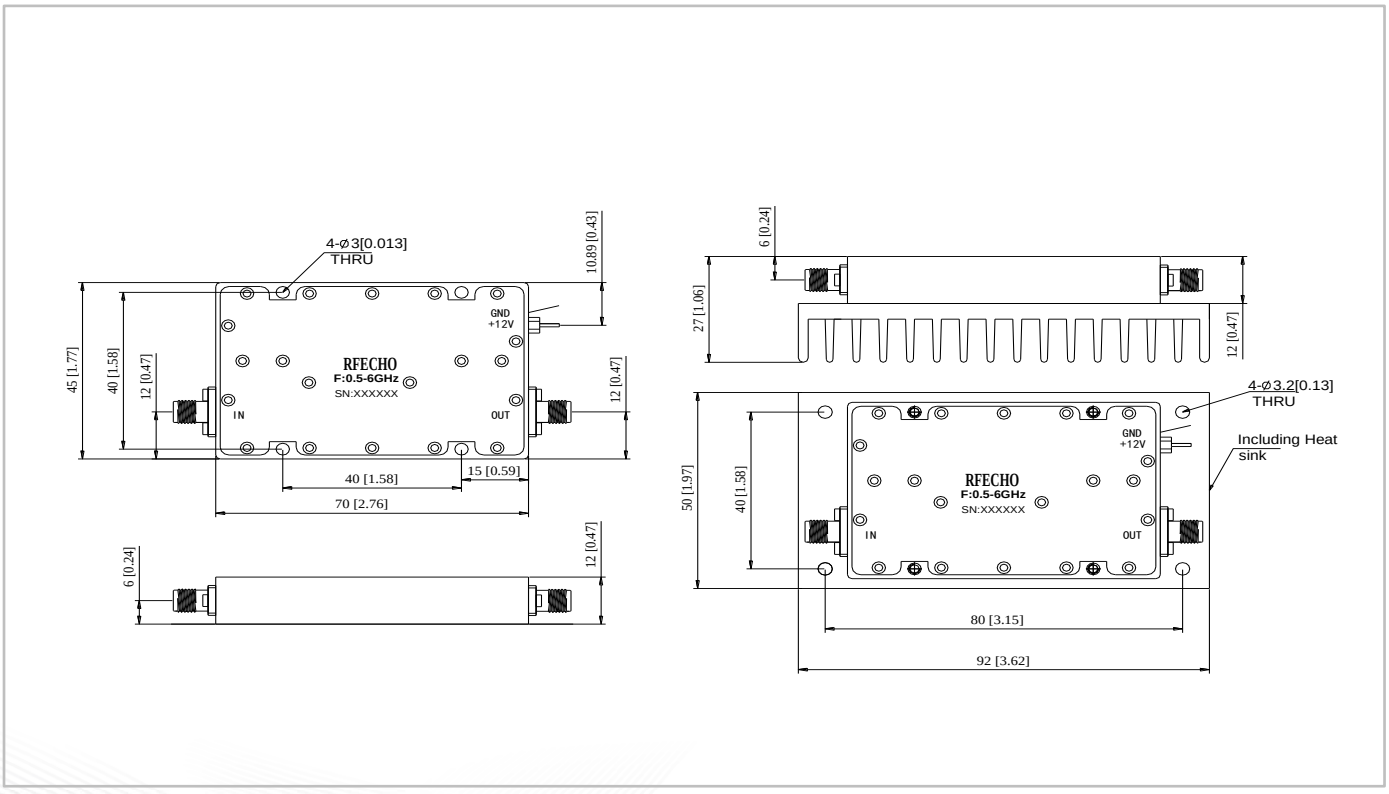
Environmental Specifications

Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

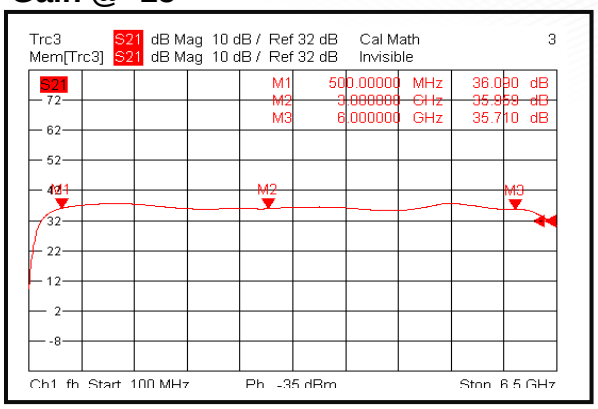
Outline Drawing:

All Dimensions in mm (inches)

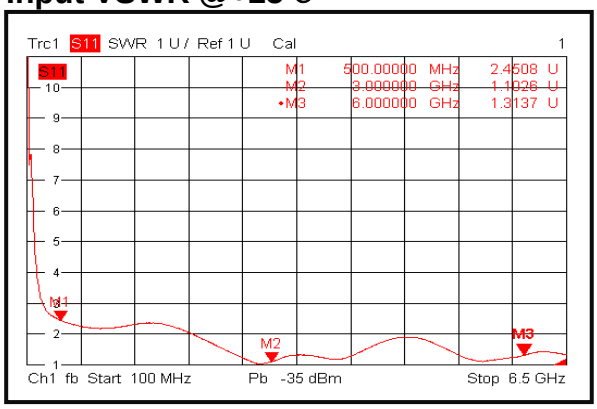
Heat Sink required during operation(Sold Separately)



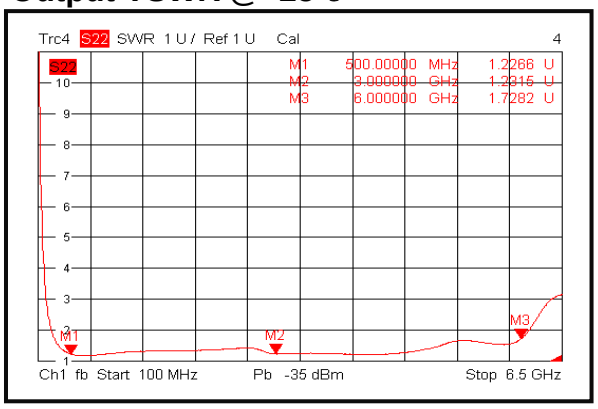
Gain @+25



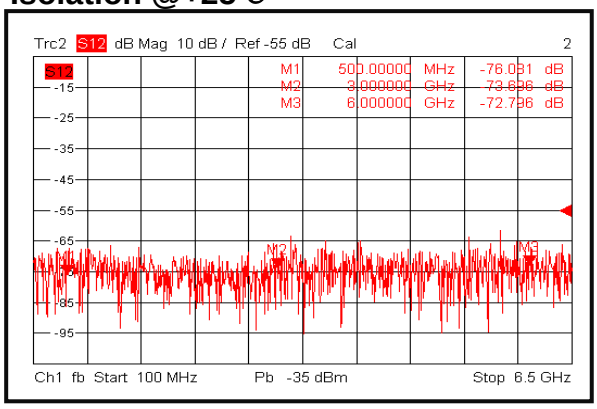
Input VSWR @+25℃



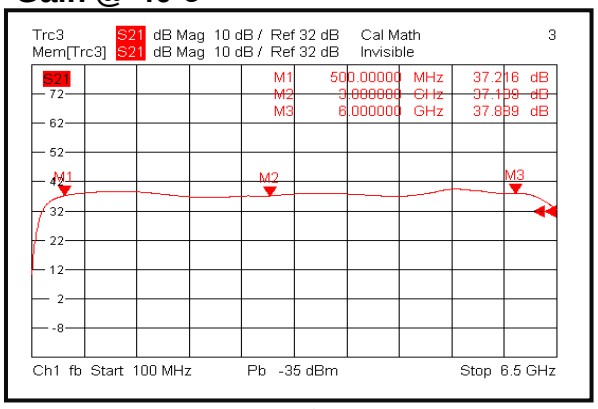
Output VSWR @+25℃



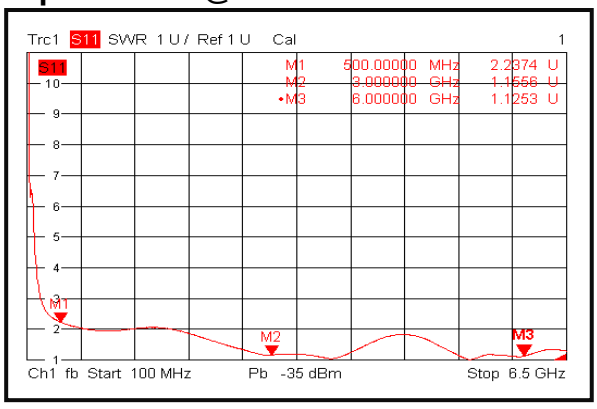
Isolation @+25℃



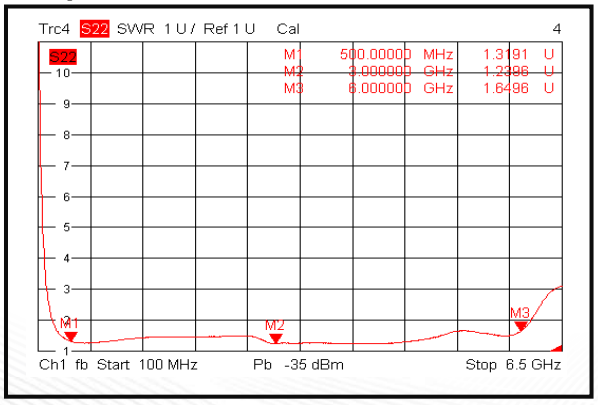
Gain @-40℃



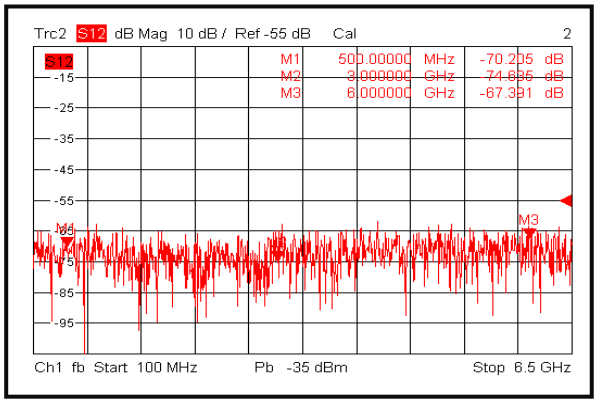
Input VSWR @-40℃



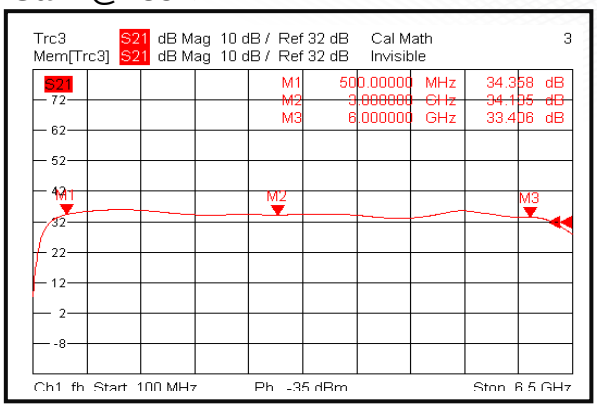
Output VSWR @-40℃



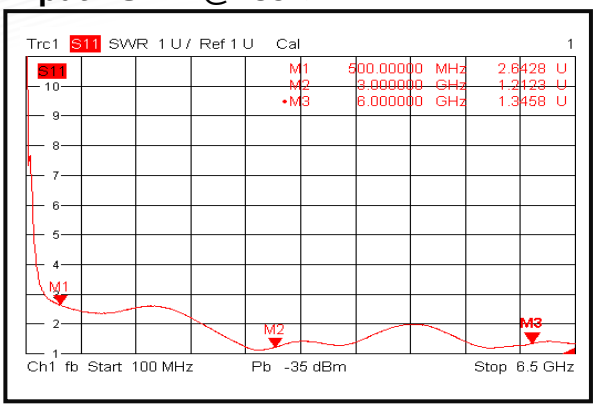
Isolation @-40℃



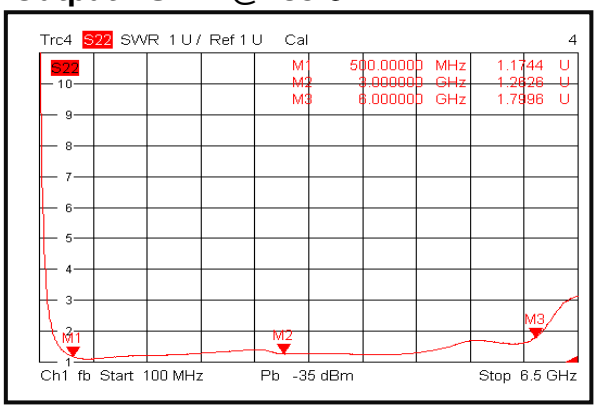
Gain @+85℃



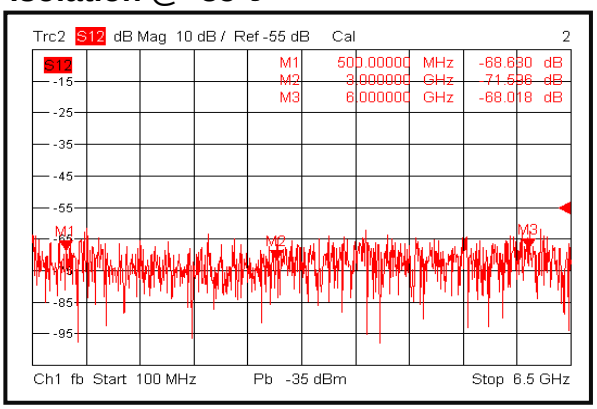
Input VSWR @+85℃



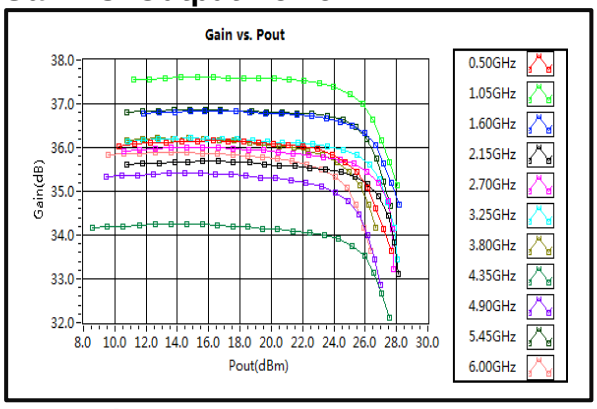
Output VSWR @+85℃



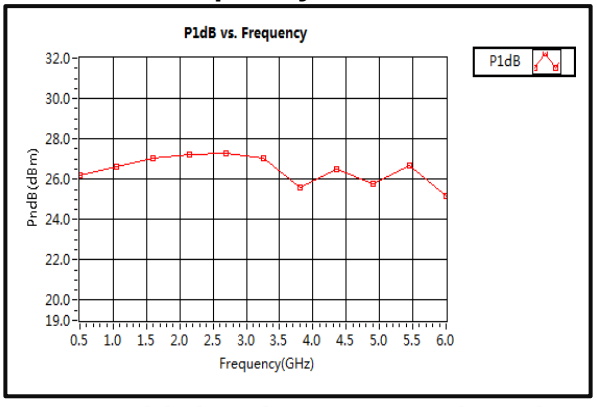
Isolation @+85℃



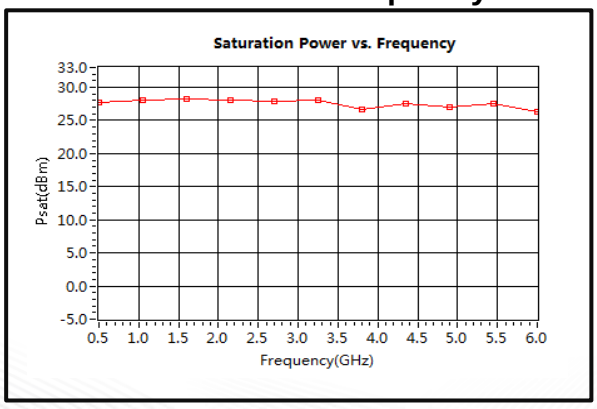
Gain vs. Output Power



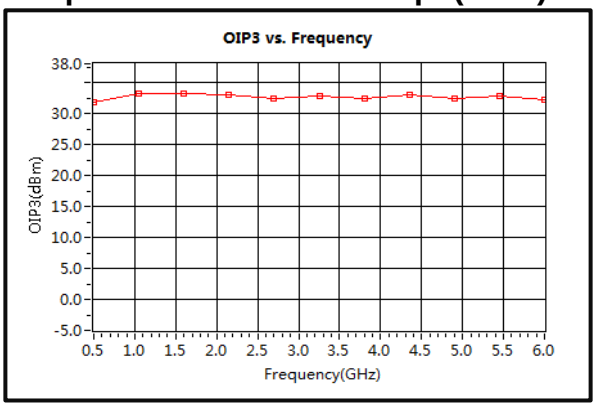
P1dB vs. Frequency



Saturation Power vs. Frequency



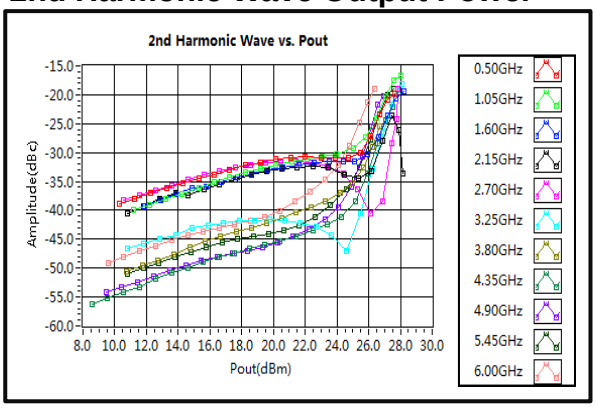
Output Third Order Intercept (OIP3)



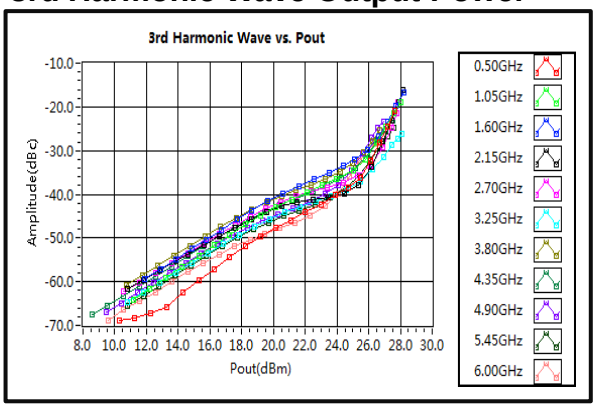
Noise Figure(500MHz-4GHz)

Noise Figure(4GHz-6GHz)

2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power