Wide Band Low Noise Amplifier 0.5GHz~2GHz

Features

- Gain: 21.5dB Typical
- Noise Figure: 1.4dB Typical
- P1dB Output Power: +21dBm Typical
- Supply Voltage: +15V @ 120mA
- 50 Ohm Matched Input / Output
- Size: 0.63” x 0.59” x 0.41”

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.5		2	GHz
Gain	20	21.5		dB
Gain Flatness		±0.5	±1.0	dB
Gain Variation Over Temperature(-45 ~ +85)		±0.5		dB
Noise Figure		1.4	2.0	dB
Input VSWR		1.5	2	: 1
Output VSWR		1.5	2	: 1
Output 1dB Compression Point (P1dB)	18	21		dBm
Saturated Output Power (Psat)		23		dBm
Output Third Order Intercept (IP3)		34.5		dBm
Isolation S12		-27		dB
Supply Current (Idd) (Vcc=+15V)		120	200	mA

Weight	0.35 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finishing	Standard: Gold 40 micron; Nickel 220 micron thickness	Package Sealing	Epoxy Sealing (Standard)
	Option: Gold 80 micron; Nickel 180 micron thickness		Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+15.5V
RF Input Power (RFIN)	+6dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +15V biasing

Power OFF Procedure

Step 1	Turn off +15V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

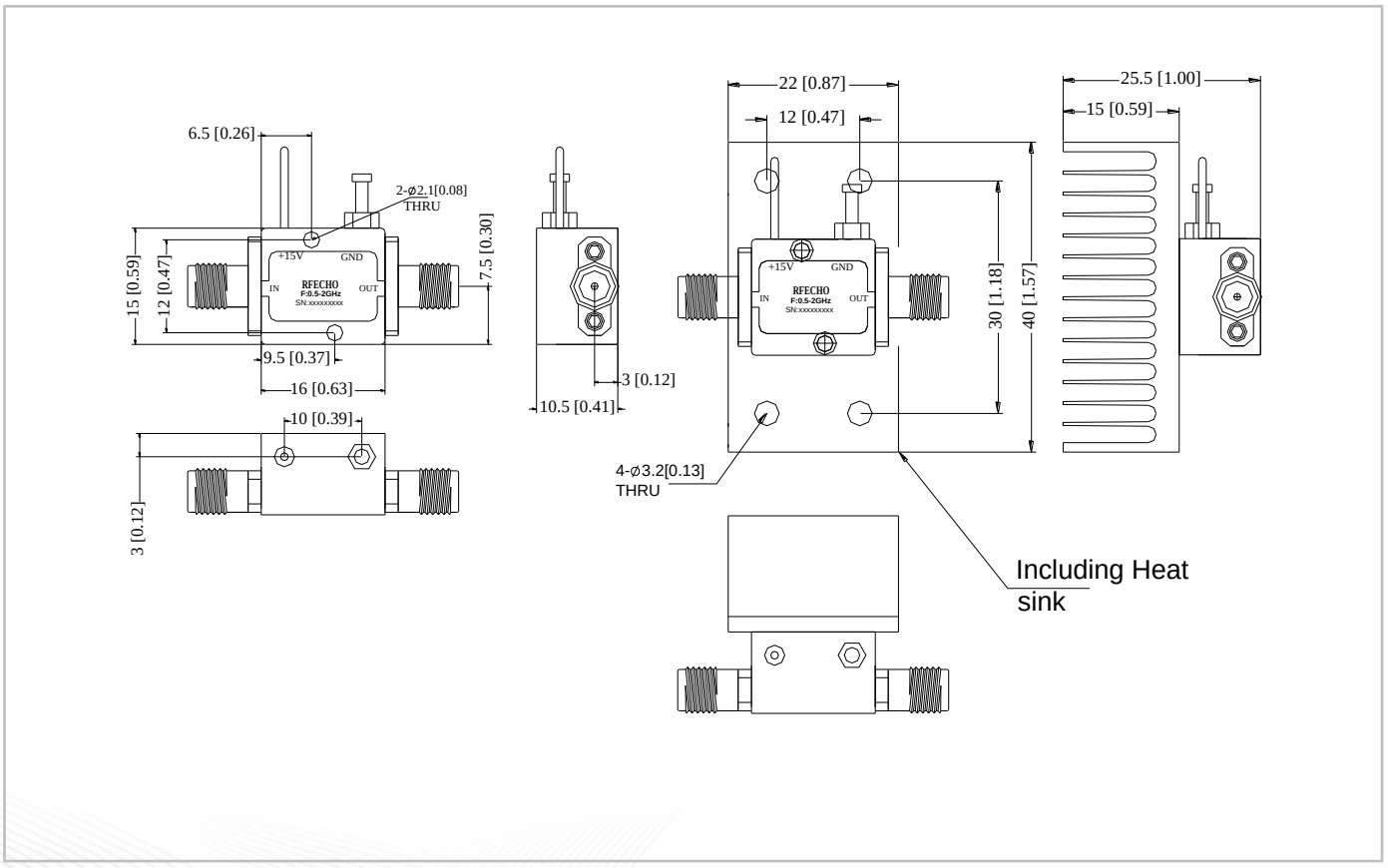
Environmental Specifications

Operational Temperature	-45ºC~+85ºC
Storage Temperature	-55ºC~+125ºC
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 35c, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

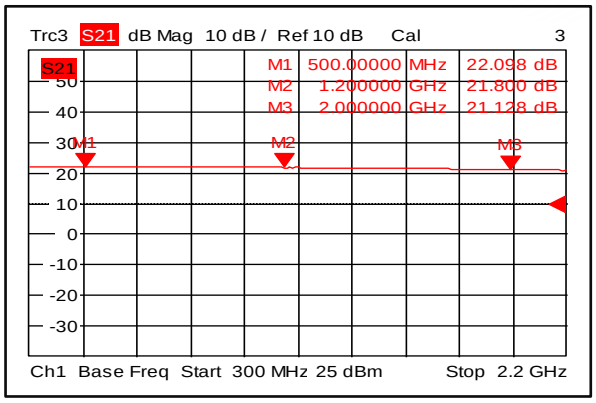
Outline Drawing:

All Dimensions in mm (inches)

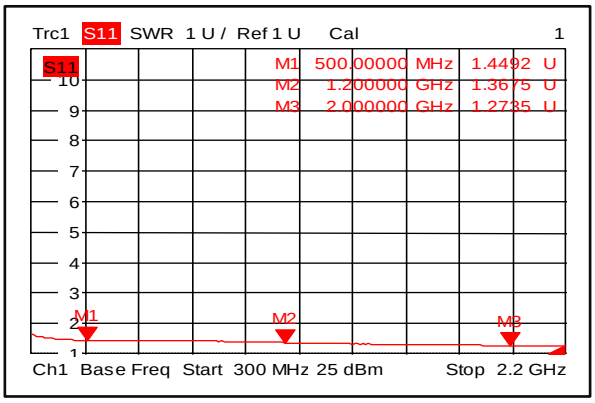
Heat Sink required during operation(Sold Seperately)



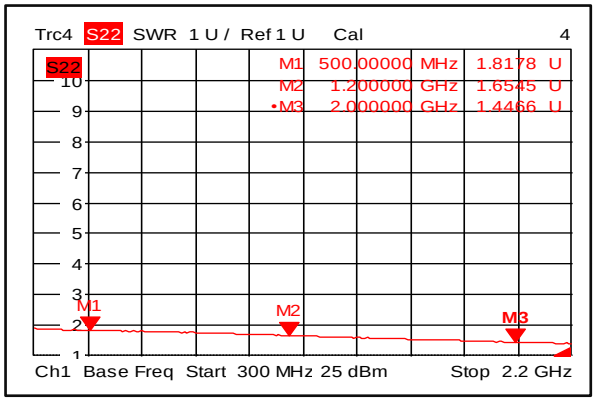
Gain



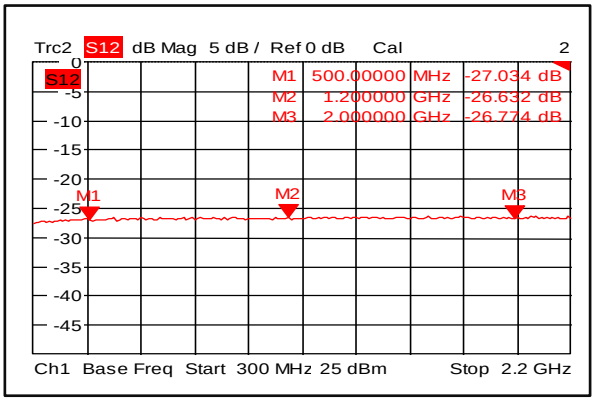
Input VSWR



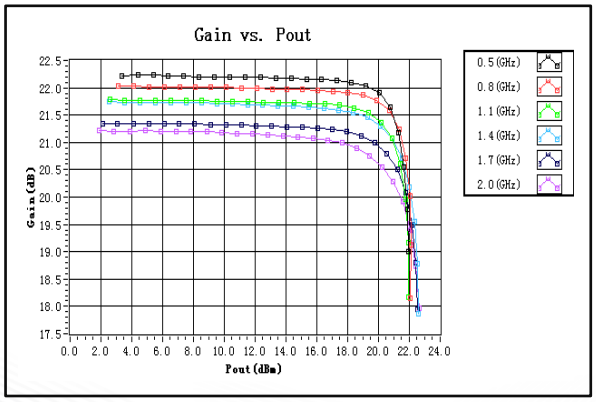
Output VSWR



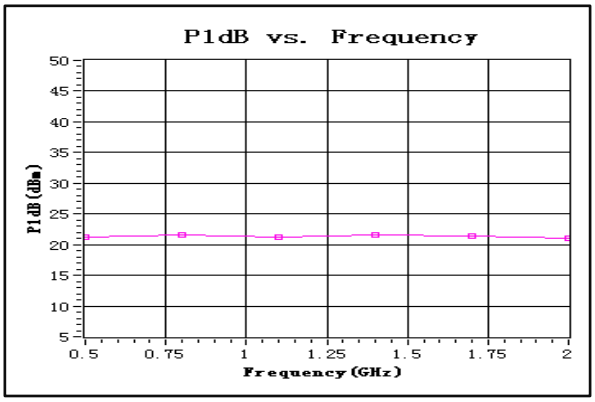
Isolation



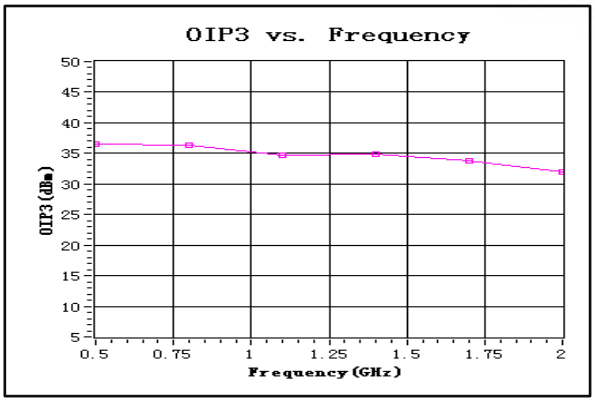
Gain vs. Output Power



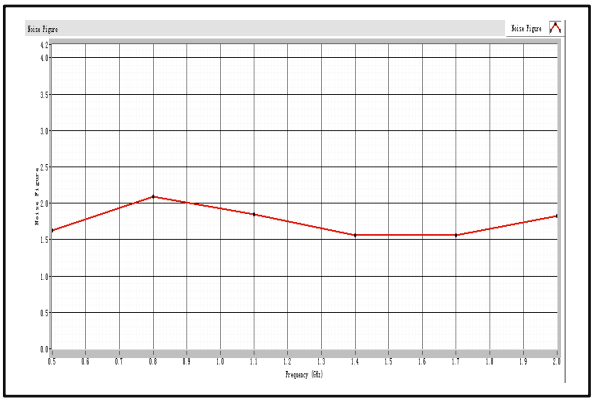
P1dB vs. Frequency



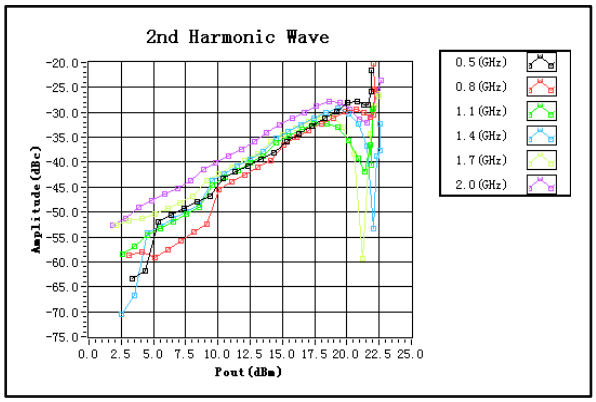
Output Third Order Intercept (IP3)



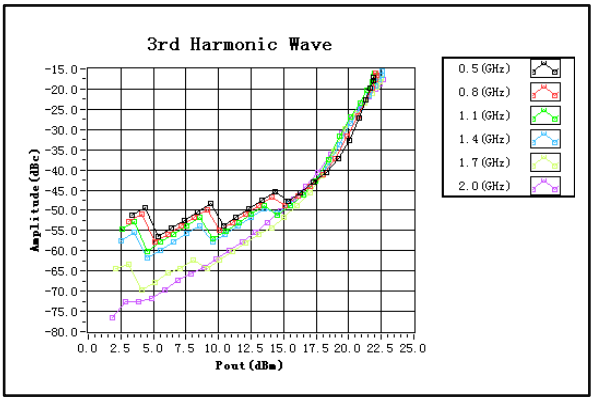
Noise Figure



2nd Harmonic wave output Power



3rd Harmonic wave output Power



4th Harmonic wave output Power