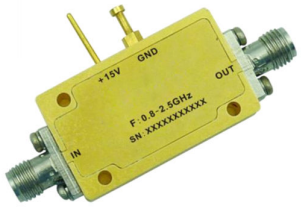
RFecho
A Gateway to RFWorld

Ultra Low Noise Amplifier 0.8GHz~2.5GHz

Features

- Gain: 60 dB Typical
- Noise Figure: 0.8dB Typical
- P1dB Output Power: +19dBm Typical
- Supply Voltage: +15V
- 50 Ohm Matched



Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.8		2.5	GHz
Gain	58	60		dB
Gain Flatness		±1.5	±2.5	dB
Gain Variation Over Temperature(-40 ~ +85)		±1.0		dB
Noise Figure	0.65	0.8	1.0	dB
Input VSWR		1.4	3.5	: 1
Output VSWR		1.8	2.5	: 1
Output 1dB Compression Point (P1dB)	16	19		dBm
Saturated Output Power (Psat)		21		dBm
Output Third Order Intercept (OIP3)		32		dBm
Supply Current (Vcc=+15V)		175	200	mA
Isolation S12		-75		dB

Weight	1.06 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+15.5V
RF Input Power	-40dBm

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.

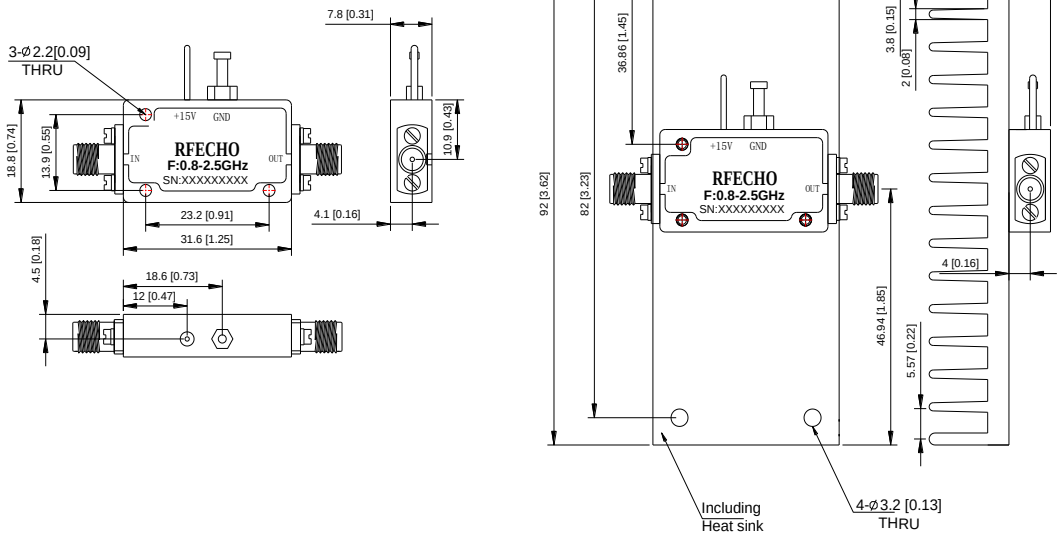
Environmental Specifications

Operational Temperature	-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

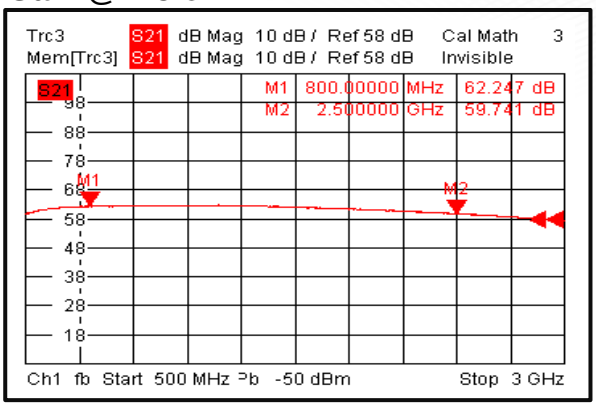
Outline Drawing:

All Dimensions in mm [inches]

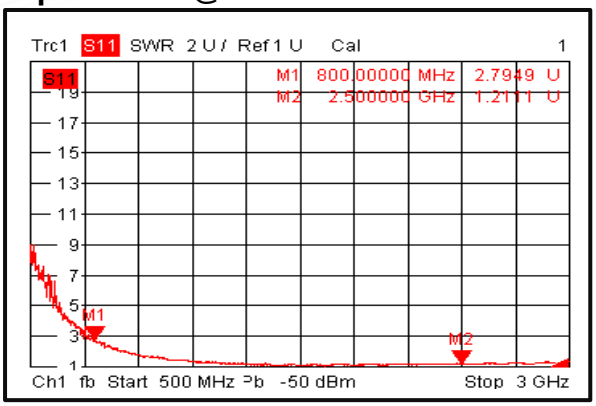
Heat Sink required during operation [Sold Separately]



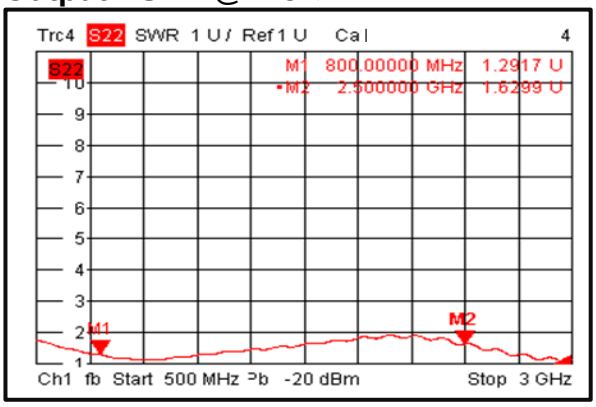
Gain @+25℃



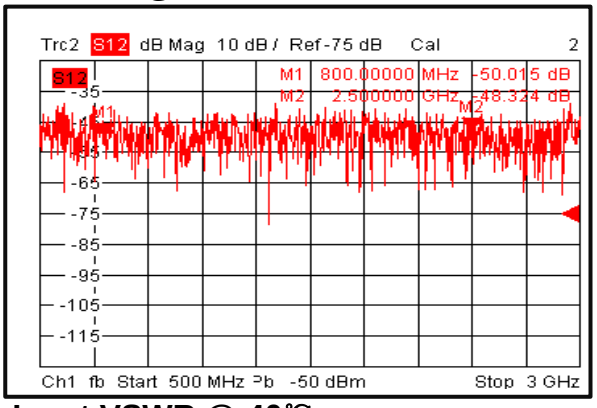
Input VSWR@+25℃



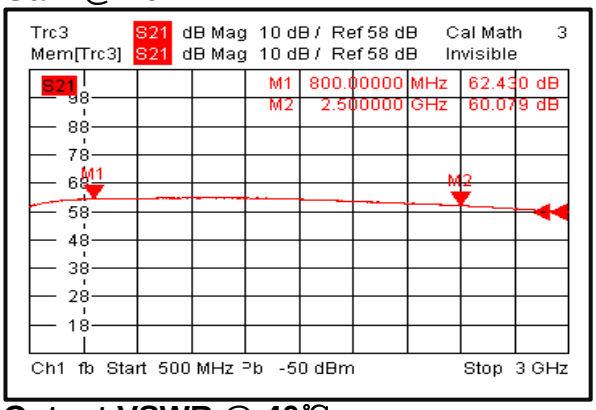
Output VSWR@+25℃



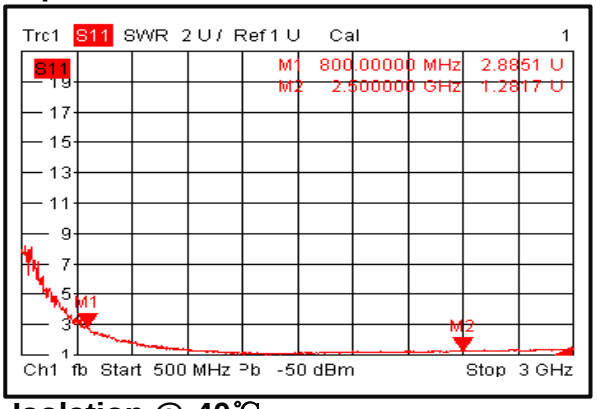
Isolation@+25℃



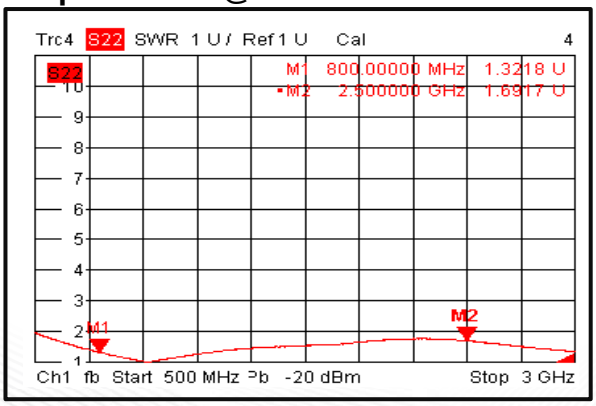
Gain @-40℃



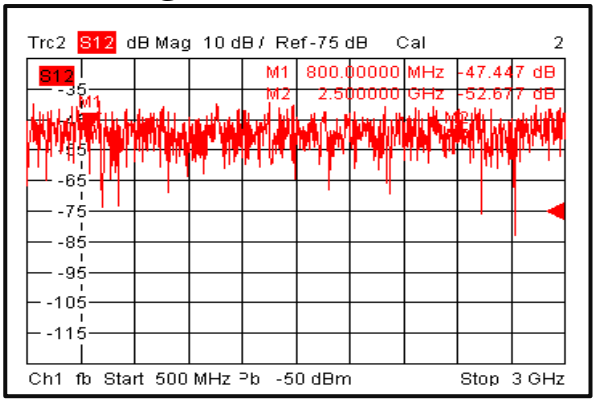
Input VSWR @-40℃



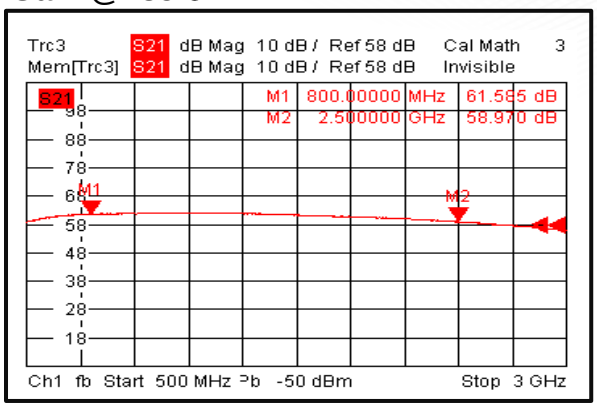
Output VSWR @-40℃



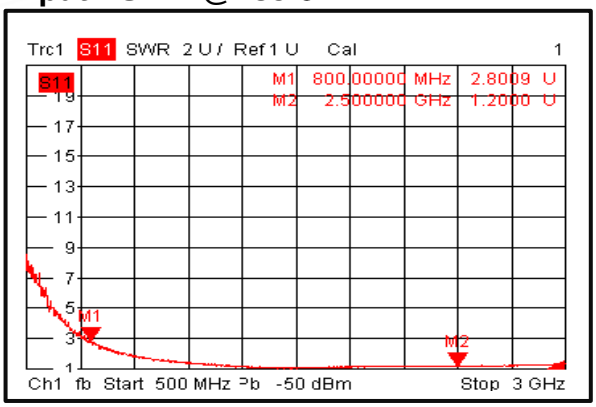
Isolation @-40℃



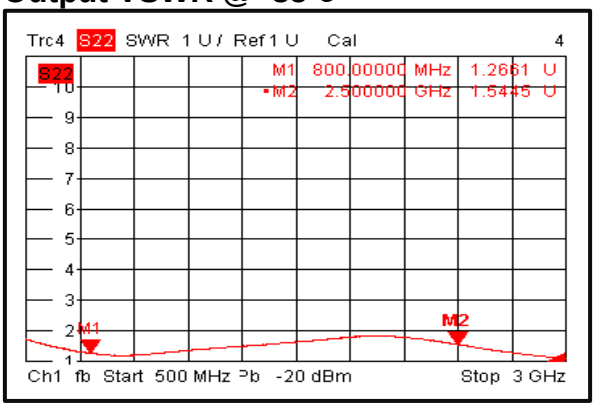
Gain @+85℃



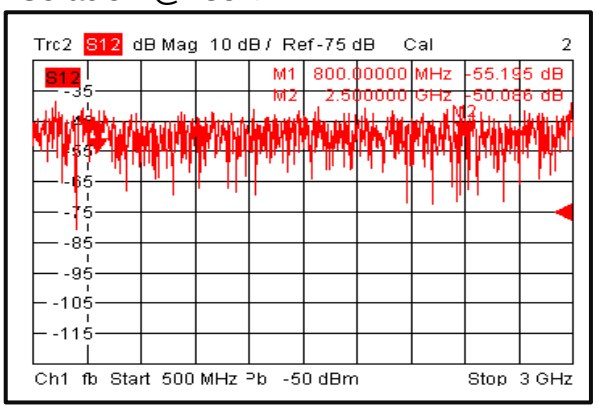
Input VSWR @+85℃



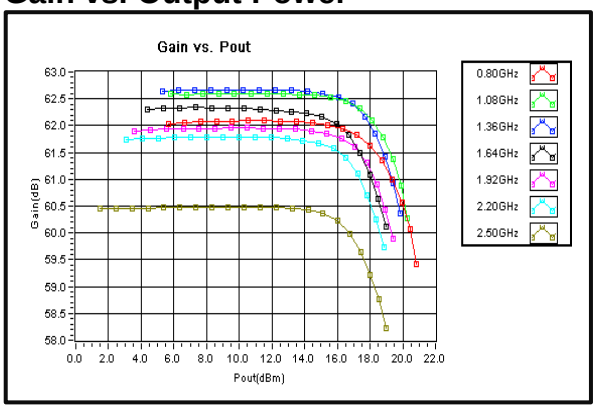
Output VSWR @+85℃



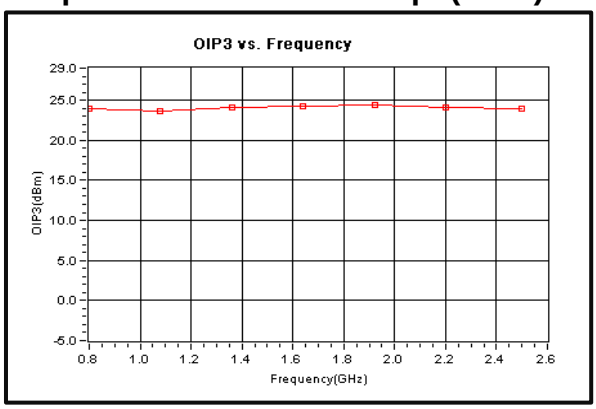
Isolation @+85℃



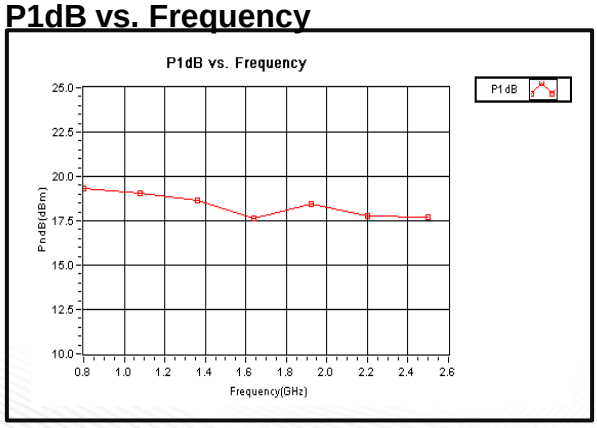
Gain vs. Output Power



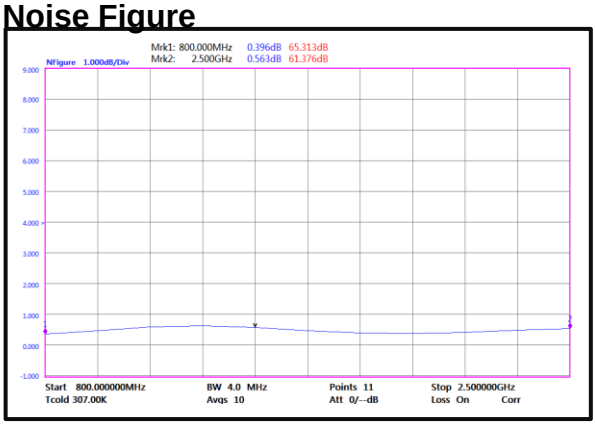
Output Third Order Intercept (OIP3)



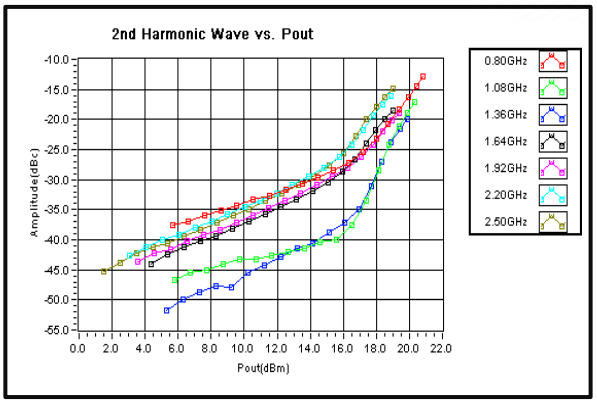
P1dB vs. Frequency



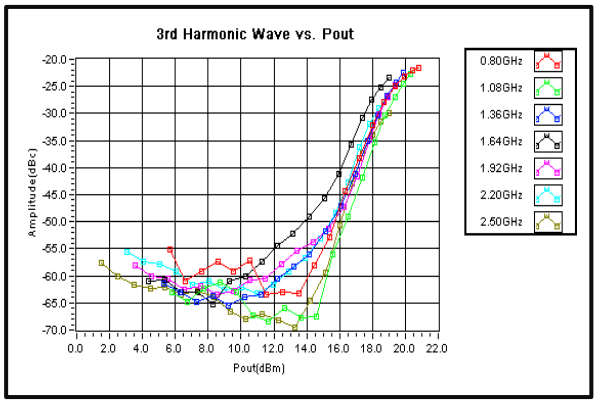
Noise Figure



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power