RFecho
A Gateway to RFWorld

Wide Band Low Noise Amplifier 1GHz~2GHz

Features

- Gain: 22 dB Typical
- Noise Figure: 2.7dB Typical
- P1dB Output Power: +24dBm full band
- Supply Voltage: +15V @ 250mA
- 50 Ohm Matched Input / Output
- Size: 1.772” x 0.984” x 0.394 ”

Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	1		2	GHz
Gain	20	22	24	dB
Gain Flatness		±0.3	±0.5	dB
Gain Variation Over Temperature (-40℃~+85℃)		±1.0		dB
Noise Figure		2.5	3.5	dB
Input VSWR		1.5	1.8	: 1
Output VSWR		1.5	1.8	: 1
Output 1dB Compression Point (P1dB)	24	26		dBm
Saturated Output Power (Psat)		27		dBm
Output Third Order Intercept (OIP3)		35		dBm
Isolation S12		-43		dB
Supply Current (Vcc=+15V)		280	350	mA

Weight	1.1Max. 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	+16V
RF Input Power (RFIN)	+10dBm

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

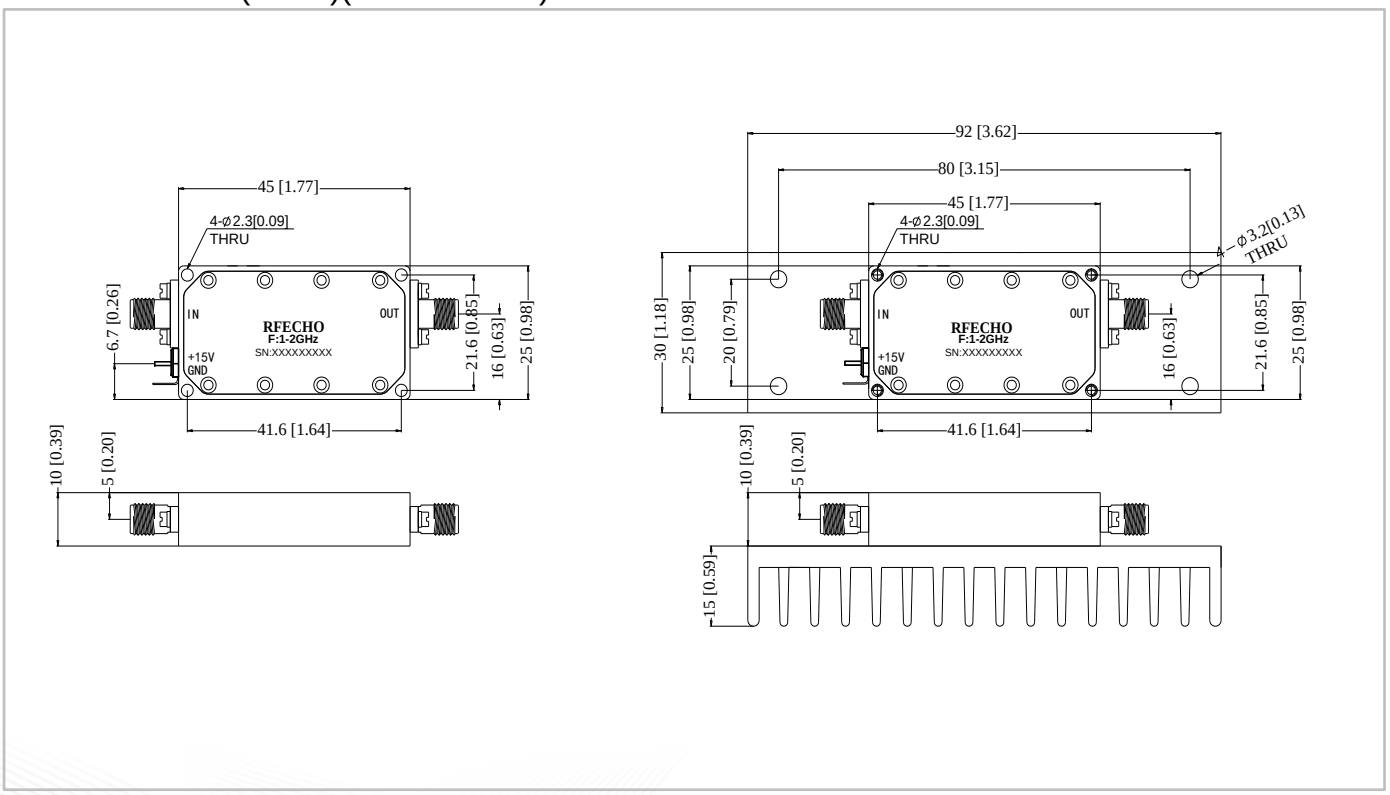
Environmental Specifications

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

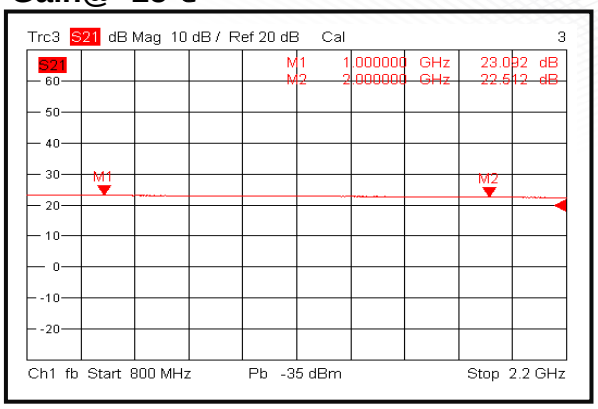
Outline Drawing:

All Dimensions in mm (inches)
Tolerances±0.1(0.004)(Excl heatsink)

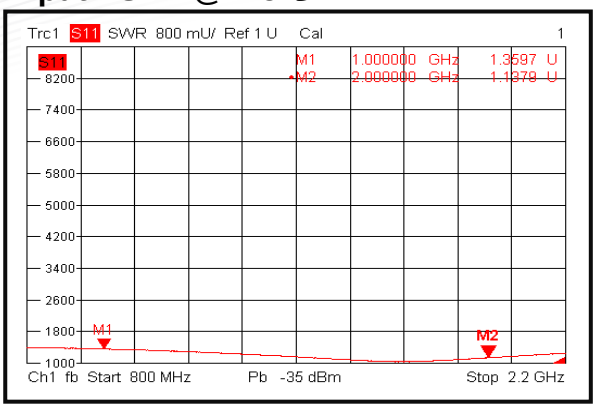
Heat Sink required during operation(Sold Separately)



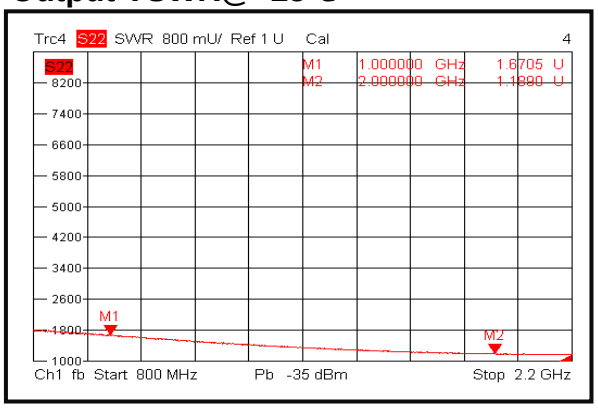
Gain@+25℃



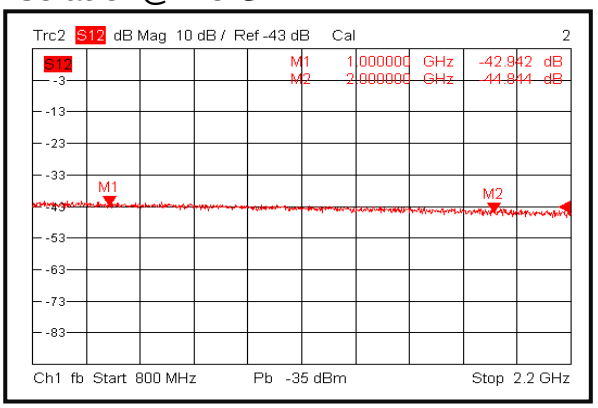
Input VSWR@+25℃



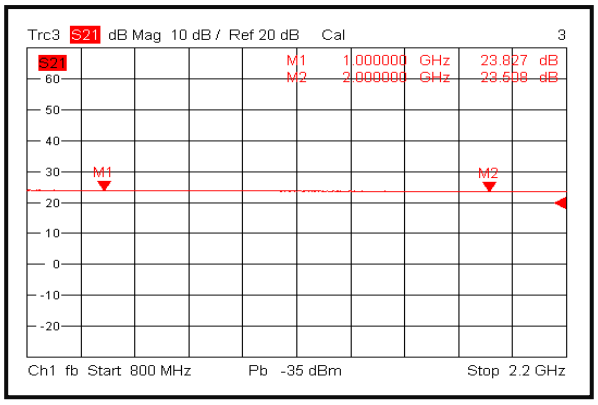
Output VSWR@+25℃



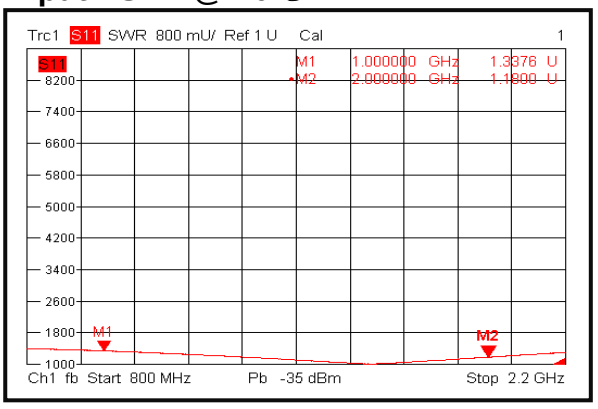
Isolation@+25℃



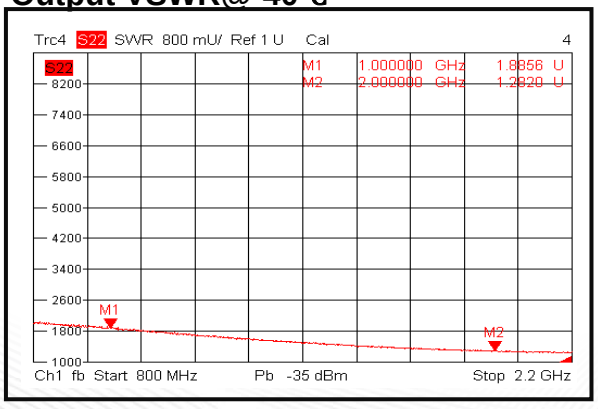
Gain@-40℃



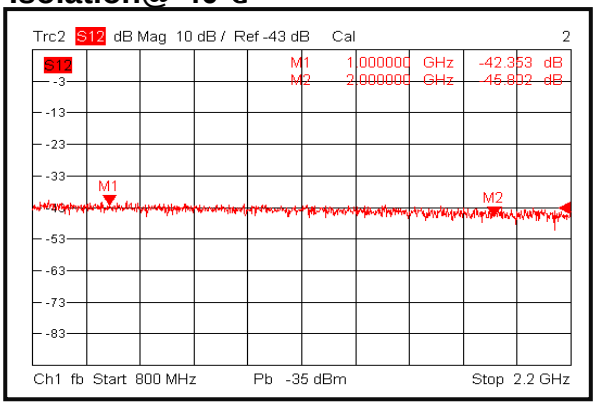
Input VSWR@-40℃



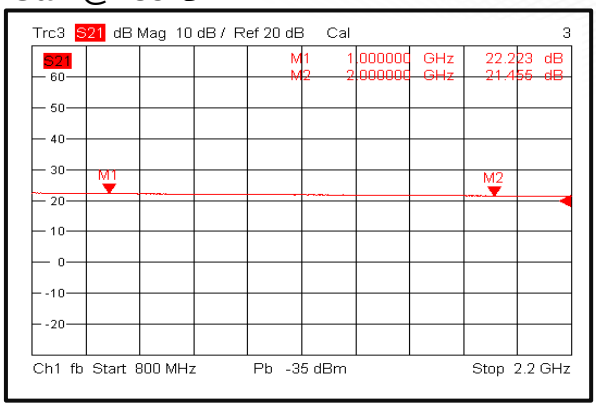
Output VSWR@-40℃



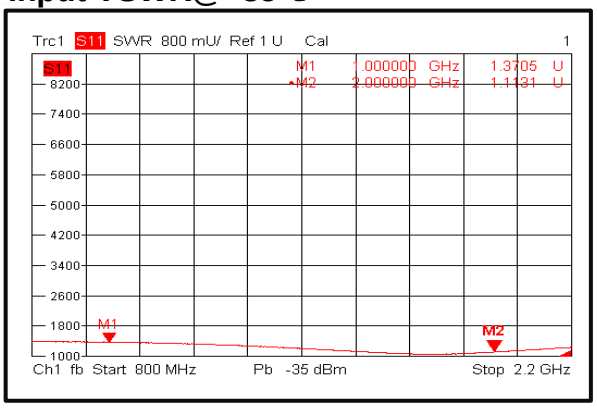
Isolation@-40℃



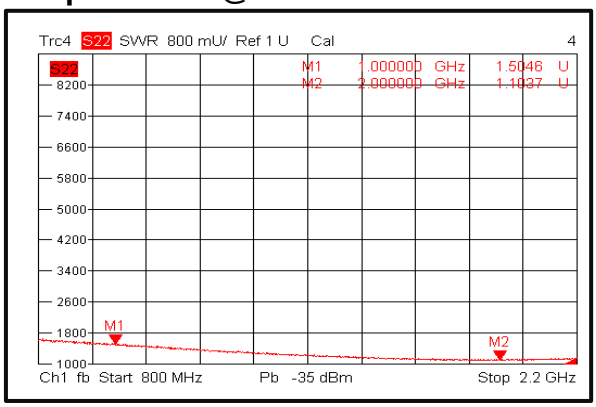
Gain@+85℃



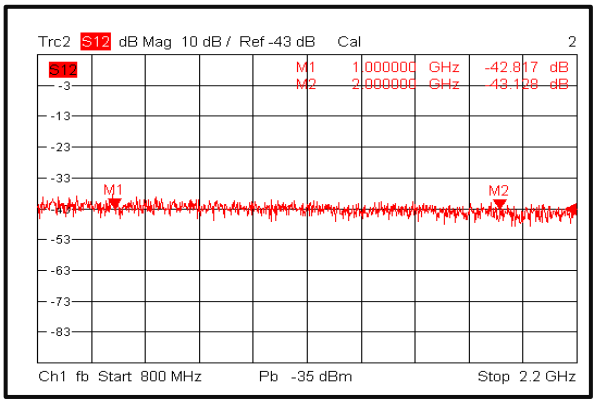
Input VSWR@+85℃



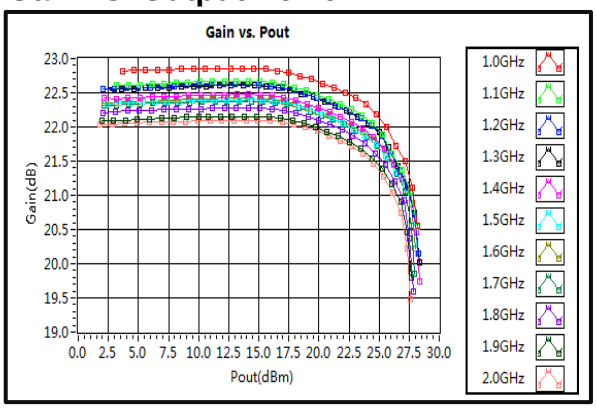
Output VSWR@+85℃



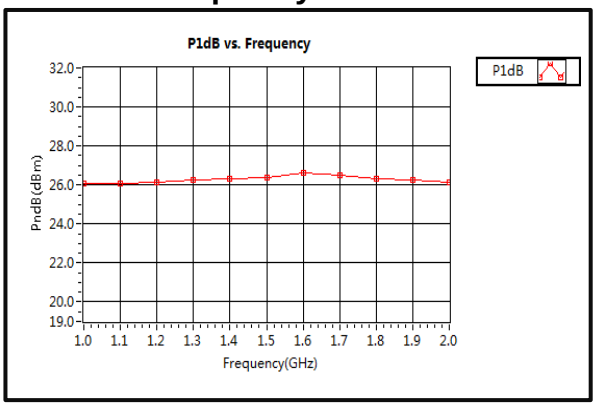
Isolation@+85℃



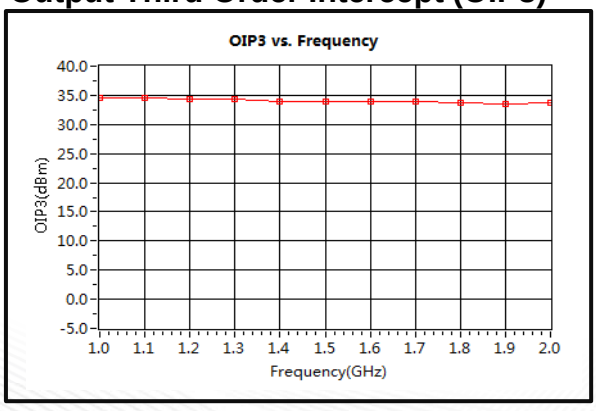
Gain vs. Output Power



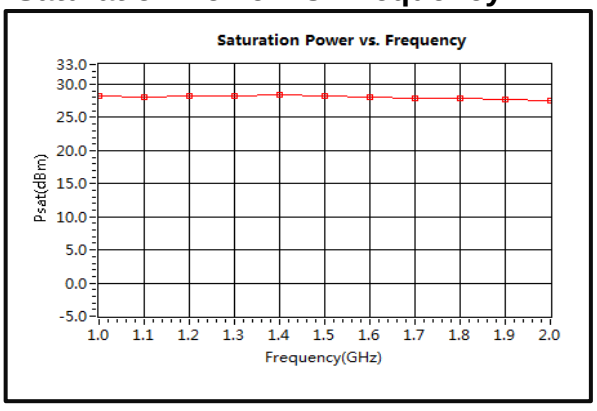
P1dB vs. Frequency



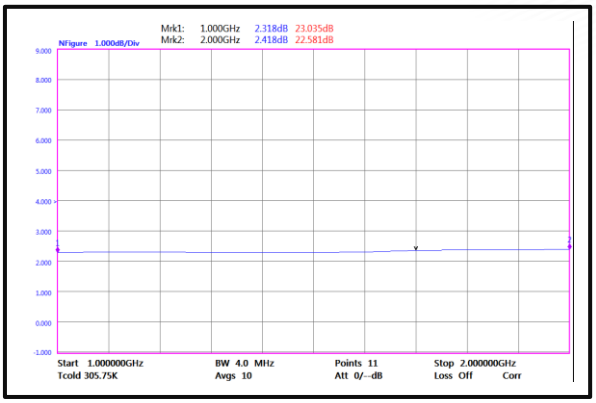
Output Third Order Intercept (OIP3)



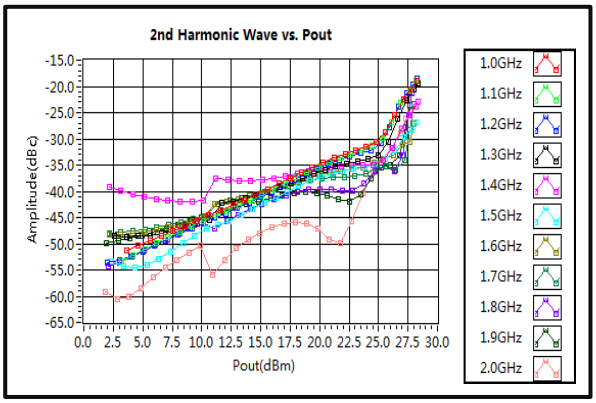
Saturation Power vs. Frequency



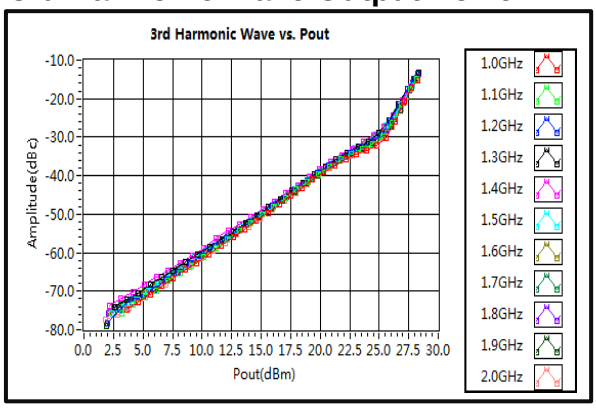
Noise Figure



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power