Ultra Wide Band Low Noise Amplifier 0.03GHz~3GHz

Features

- Gain: 36dB Typical
- Noise Figure: 1.5dB Typical
- P1dB Output Power: +21dBm Typical
- Supply Voltage: +15V @ 200mA
- 50 Ohm Matched

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.03		1	1		3	GHz
Gain	34	36	39	33	35	39	dB
Gain Flatness		±1.0	±1.5		±1.0	±1.5	dB
Gain Variation Over Temperature(-40ºC~+85ºC)		±0.8			±0.8		dB
Noise Figure		1.5	2.0		1.7	2.5	dB
Input VSWR		1.8			1.5	2.0	: 1
Output VSWR		1.8			1.5	2.0	: 1
Output 1dB Compression Point (P1dB)	20	21		20	21		dBm
Saturated Output Power (Psat)		23			23		dBm
Output Third Order Intercept (OIP3)		33			33		dBm
Supply Current (Vcc=+15V)		200	250		200	250	mA
Isolation S12		-60			-60		dB

Weight	16 ounces (Max.)	Impedance	50ohms
Input /Output Connectors	SMA-Female	Material	Aluminum
Finish	Blackening	Package Sealing	Epoxy Sealed (Standard) Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+16.5V
RF Input Power	-5dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
step3	Connect +15V biasing

Power OFF Procedure

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

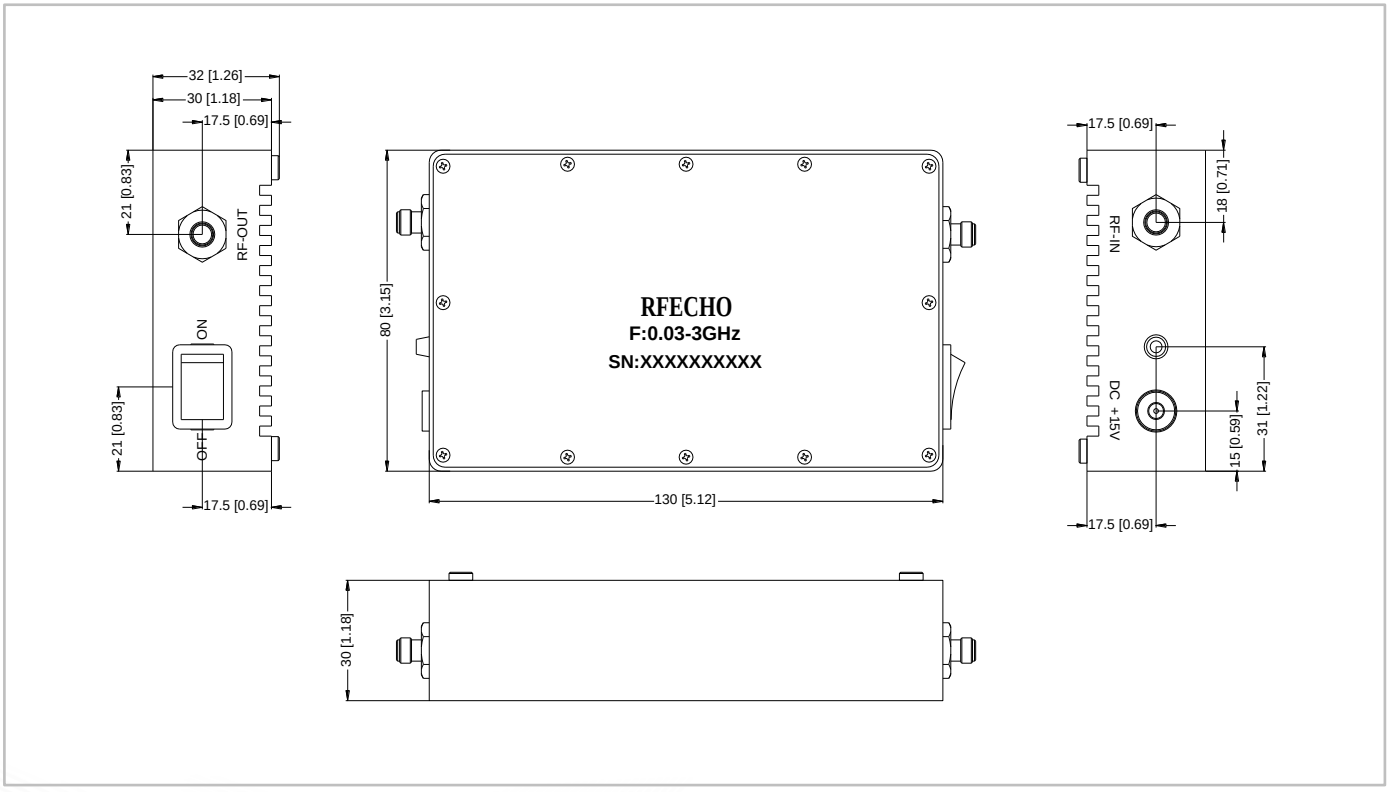
Environmental Specifications

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

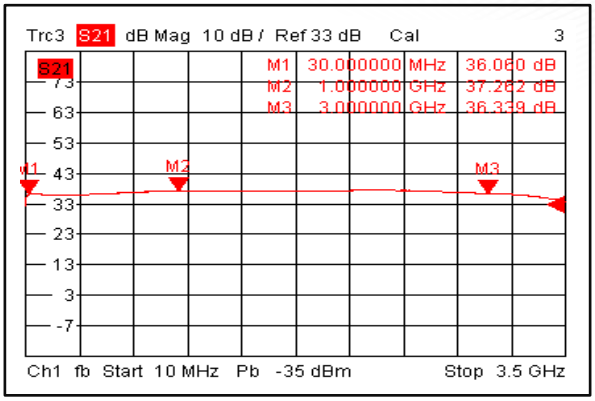
Outline Drawing:

All Dimensions in mm (inches)
Housing Tolerances ±0.5(0.02)

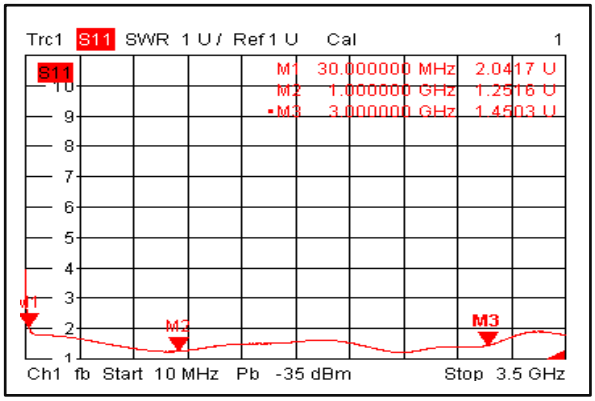
Heat Sink required during operation(Sold Separately)



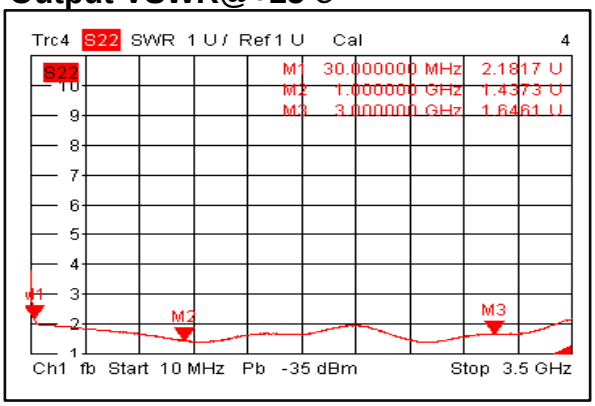
Gain @+25℃



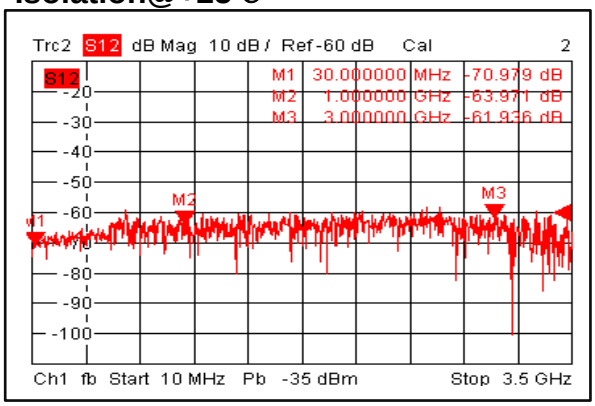
Input VSWR@+25℃



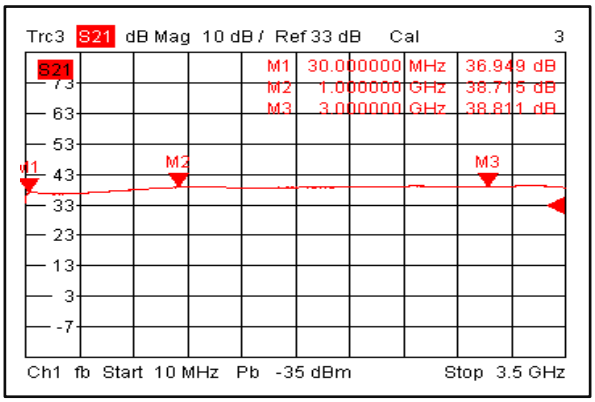
Output VSWR@+25℃



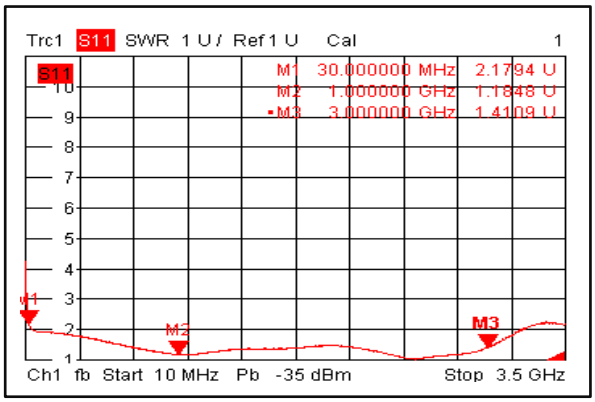
Isolation@+25℃



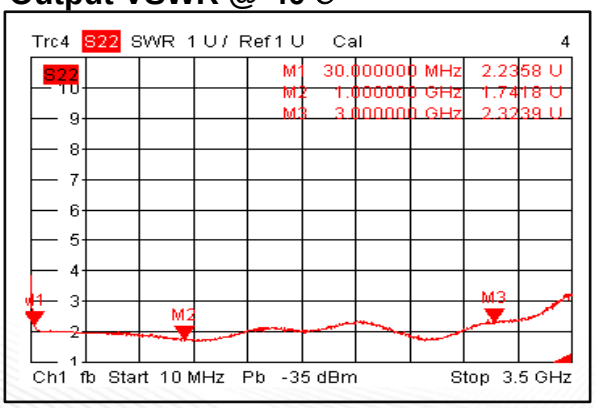
Gain @-40℃



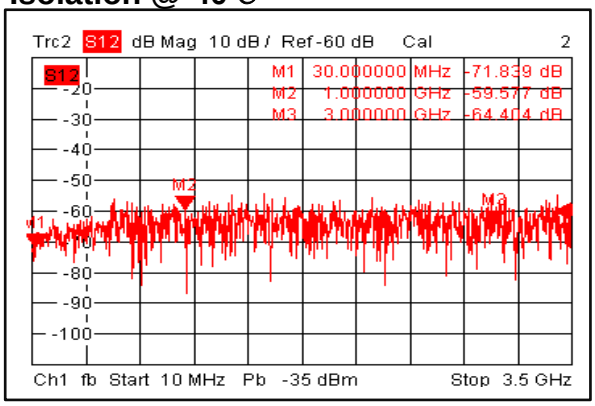
Input VSWR @-40℃



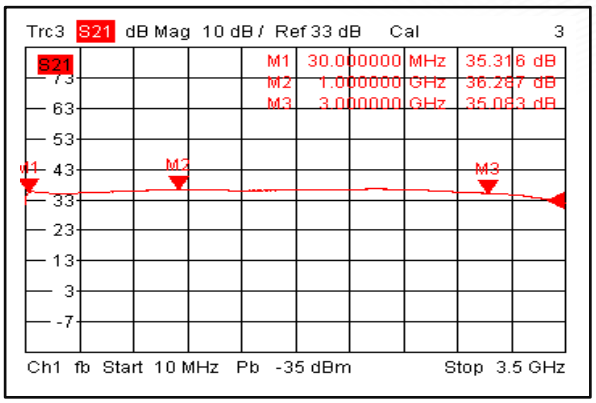
Output VSWR @-40℃



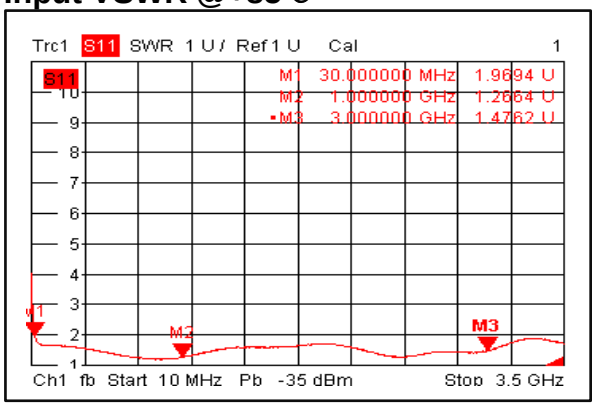
Isolation @-40℃



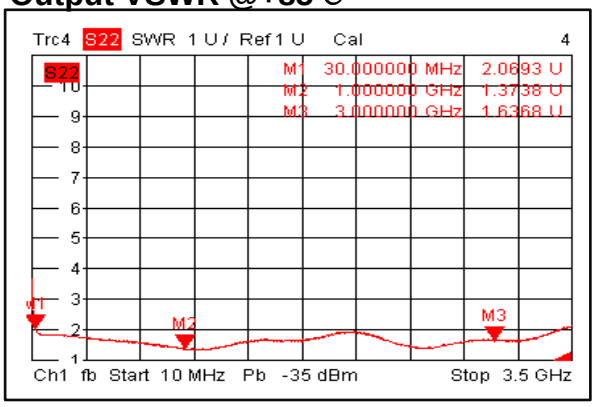
Gain @+85℃



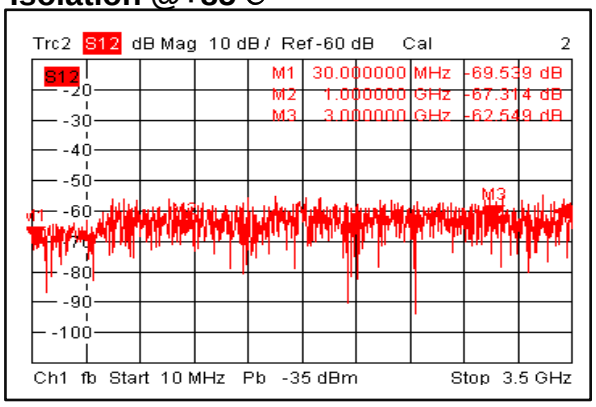
Input VSWR @+85℃



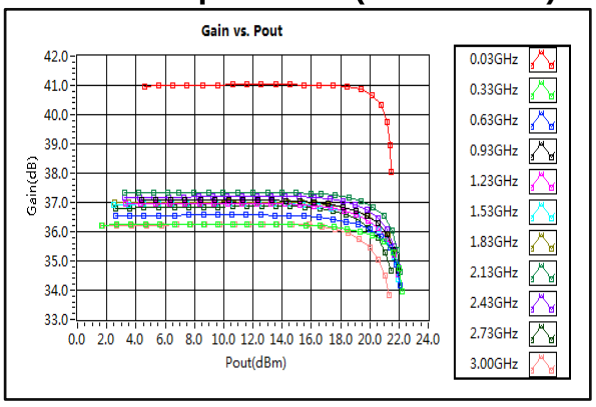
Output VSWR @+85℃



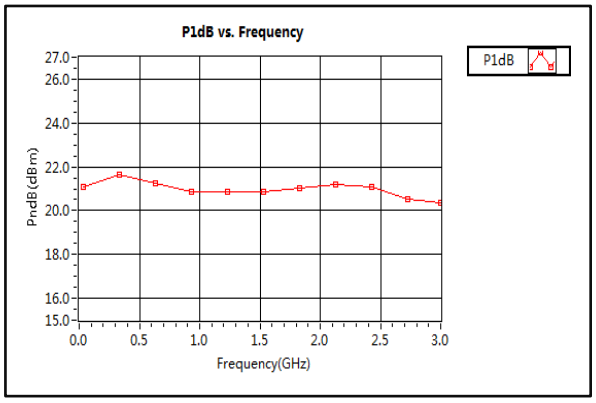
Isolation @+85℃



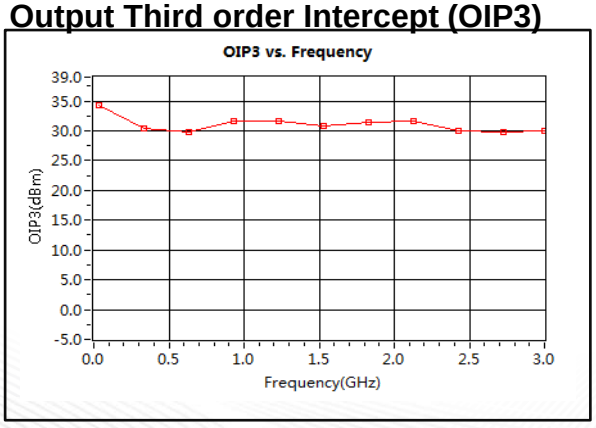
Gain vs. Output Power(0.01-0.2GHz)



P1dB vs. Frequency

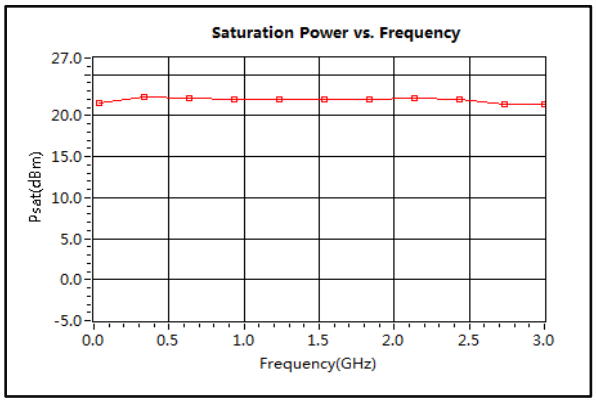


Output Third order Intercept (OIP3)

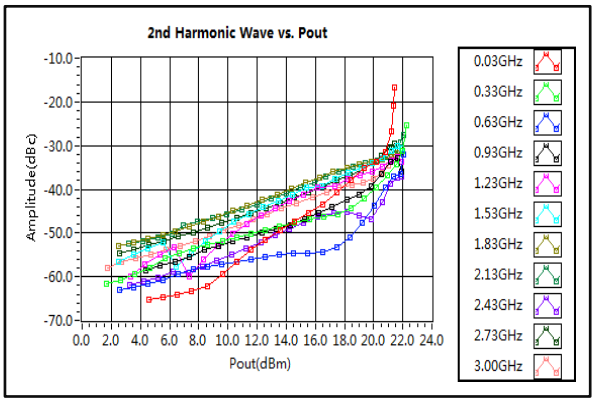


Noise Figure

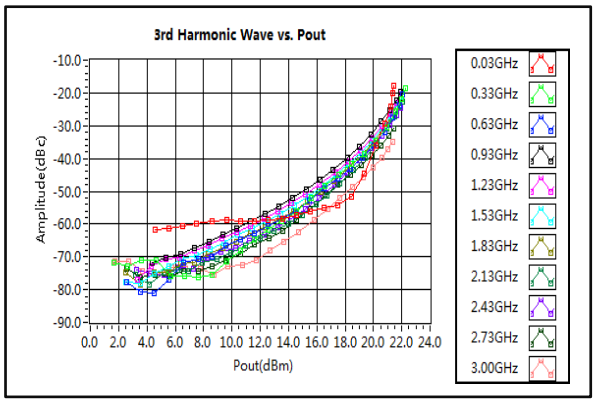
Saturation Power vs. Frequency



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power