RFecho
A Gateway to RFWorld

Ultra Wide Band Low Noise Amplifier 0.01GHz~15GHz

Features

- Gain: 32 dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +26dBm Typical
- Supply Voltage: +12V @ 320 mA
- 50 Ohm Matched Input / Output

Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.01		6	6		15	15		18	GHz
Gain	29	33	35	30	32	34	28	32	34	dB
Gain Flatness		±2.0	±2.5		±0.5	±1.0		±1.0	±1.5	dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±1.0			±1.5			±1.5		dB
Noise Figure		3.5			2.5	4.0		3.0	4.0	dB
Input VSWR		1.4	1.8		1.4	1.8		1.4	1.8	: 1
Output VSWR		1.6	2.0		1.6	2.0		1.6	2.0	: 1
Output 1dB Compression Point (P1dB)	24	26		22	24		20	23		dBm
Saturated Output Power (Psat)		28			26			25		dBm
Output Third Order Intercept (OIP3)		34			32			31		dBm
Isolation S12		-60			-60			-60		dB
Supply Current (Vcc=+12V)		380	450		380	450		380	450	mA

Weight	1.39 ounces(Max.)	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	copper
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard) Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+15V @25ºC
RF Input Power (RFIN)	+2dBm @25ºC

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

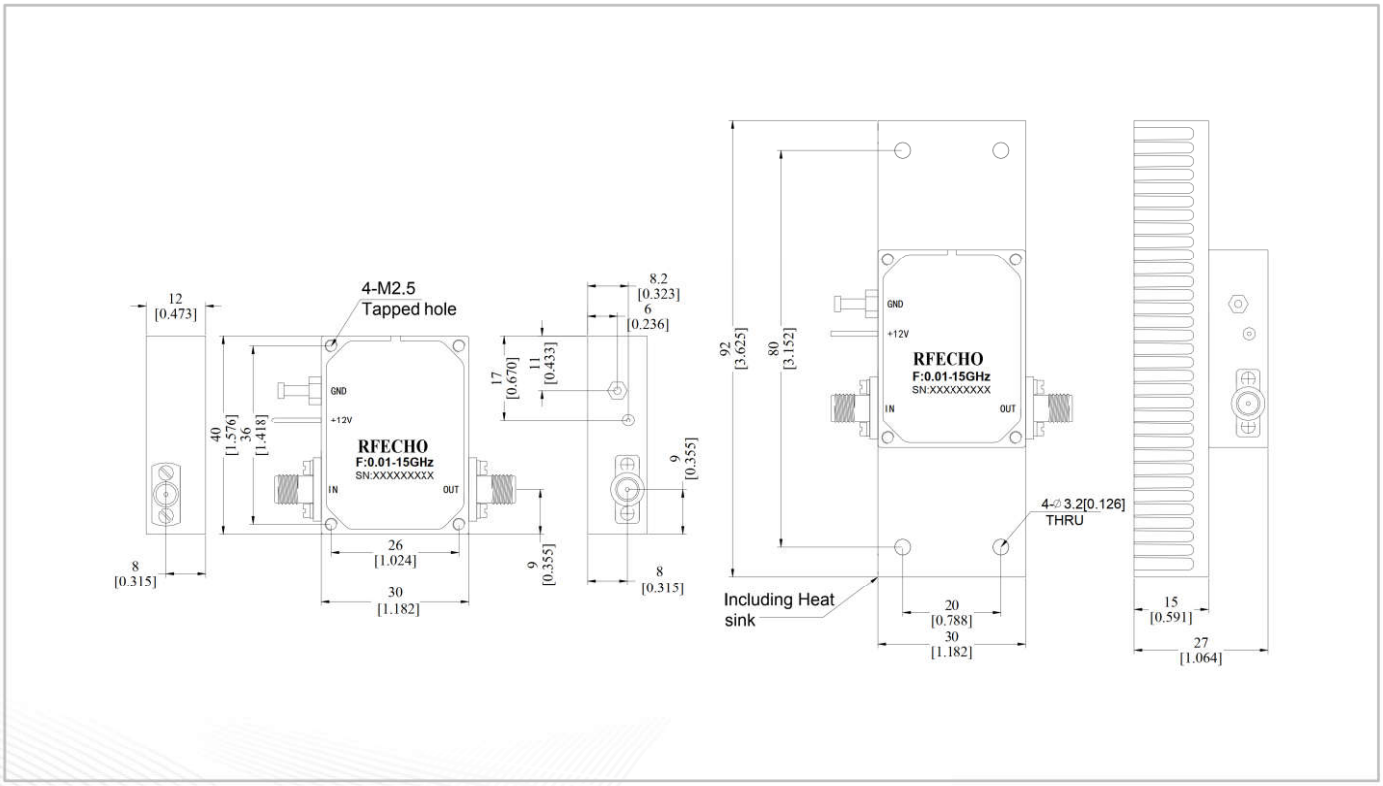
Environmental Specifications

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

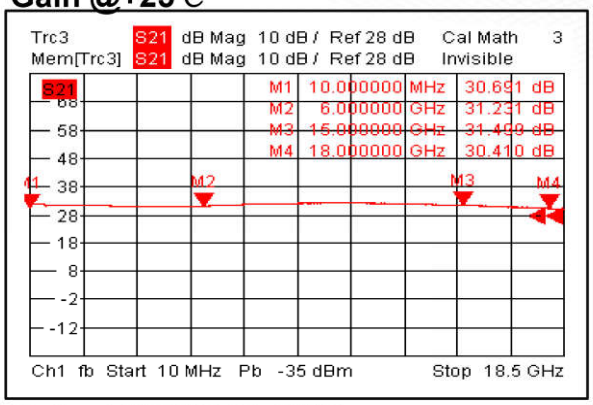
Outline Drawing:

All Dimensions in mm (inches)

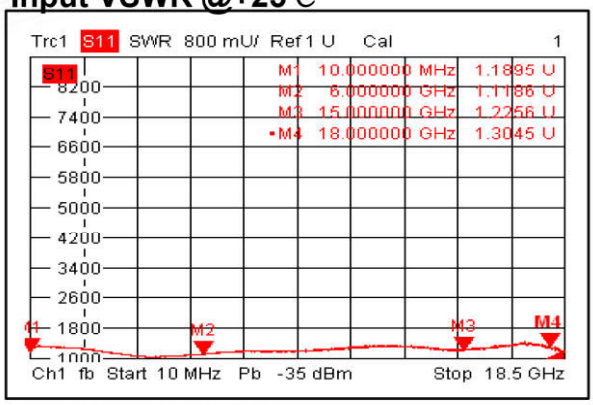
Heat Sink required during operation(Sold Separately)



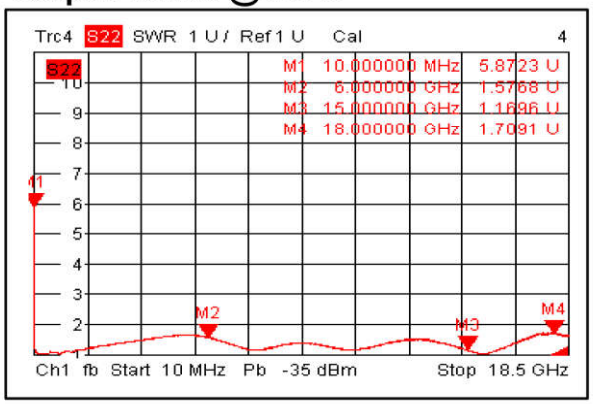
Gain @+25℃



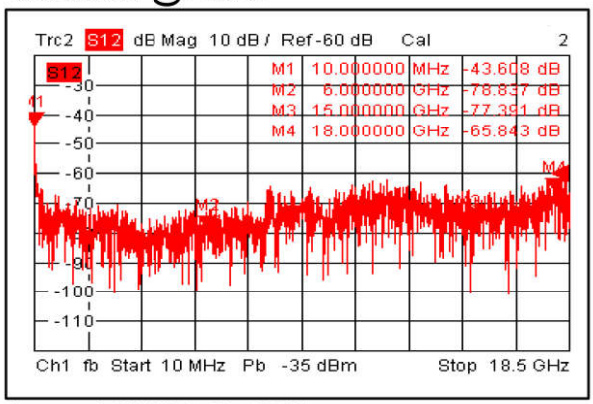
Input VSWR @+25℃



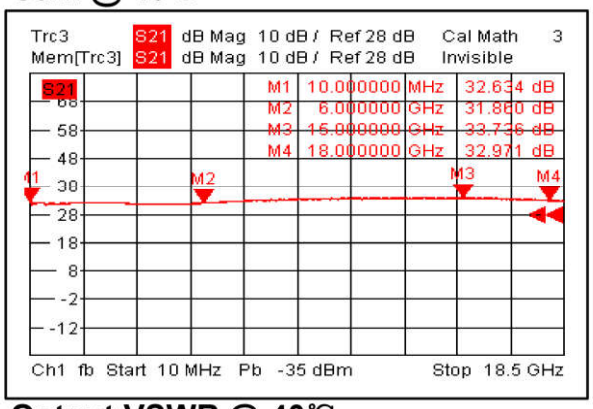
Output VSWR @+25℃



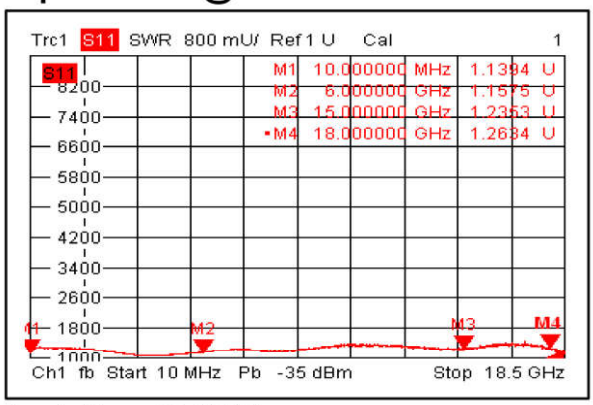
Isolation @+25℃



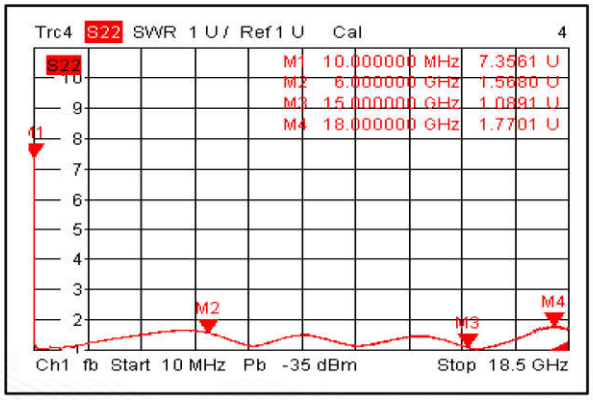
Gain @-40℃



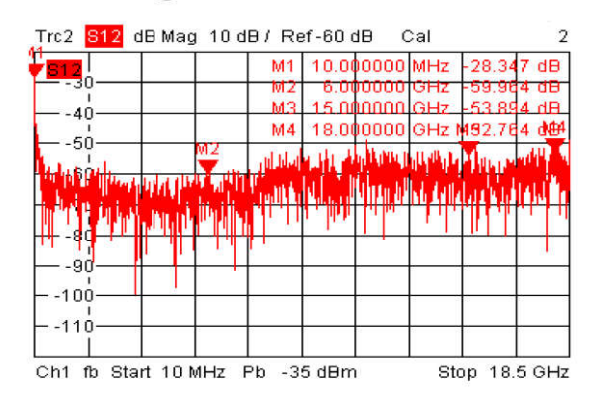
Input VSWR @-40℃



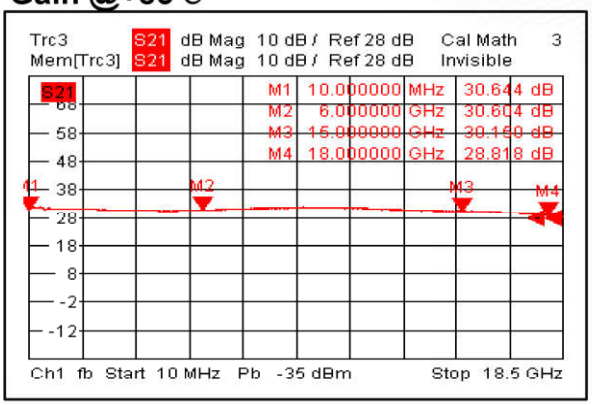
Output VSWR @-40℃



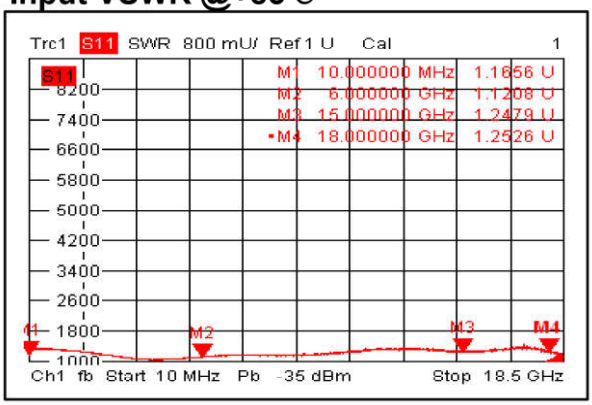
Isolation @-40℃



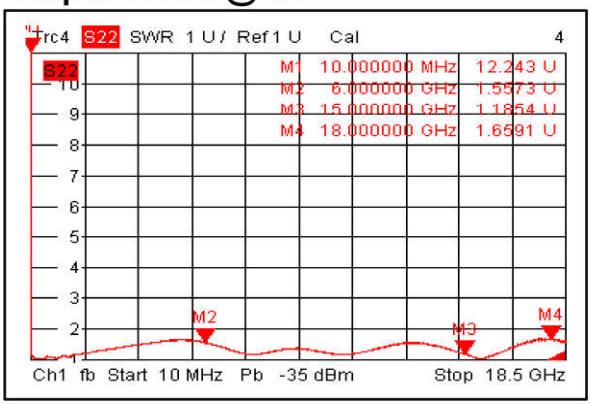
Gain @+85℃



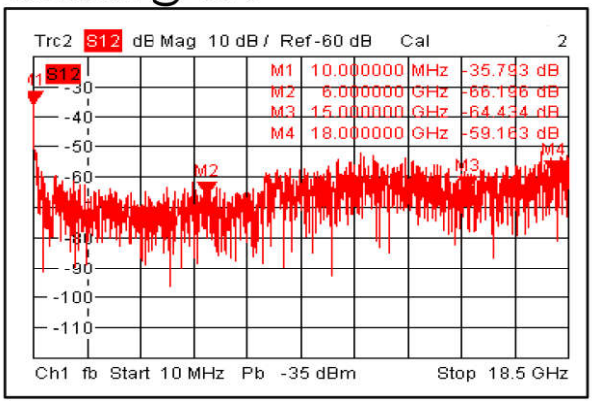
Input VSWR @+85℃



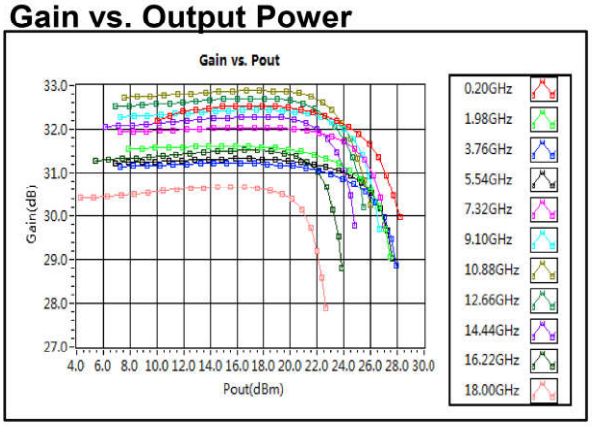
Output VSWR @+85℃



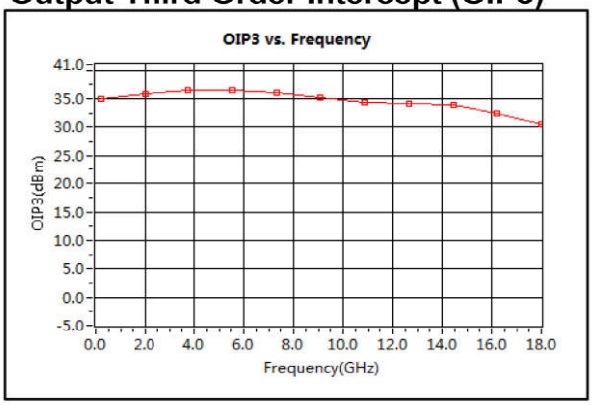
Isolation @+85℃



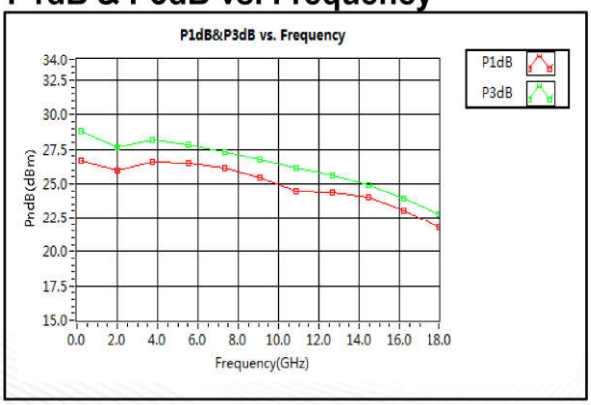
Gain vs. Output Power



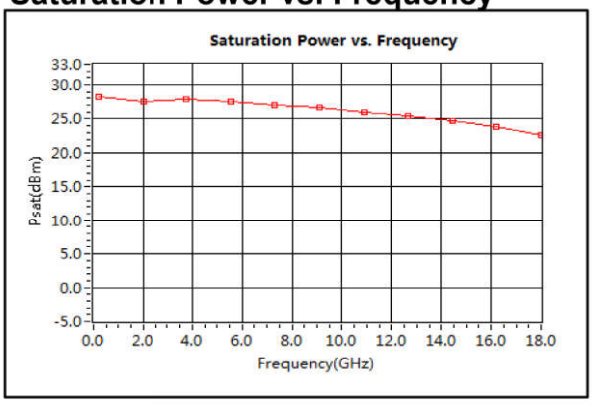
Output Third Order Intercept (OIP3)



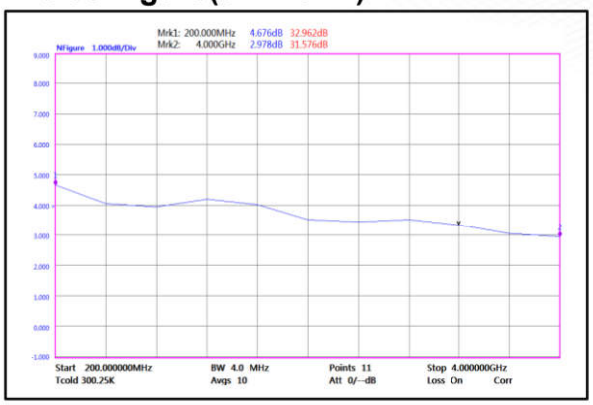
P1dB & P3dB vs. Frequency



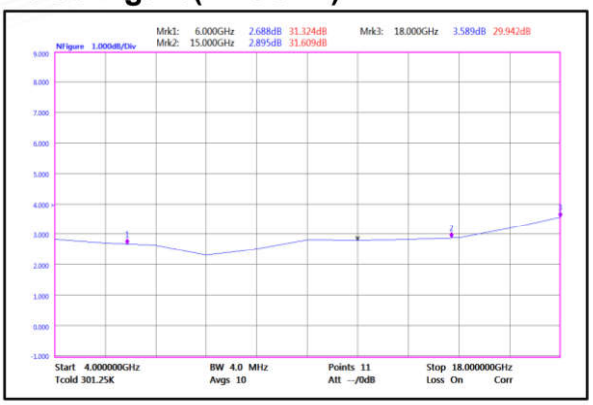
Saturation Power vs. Frequency



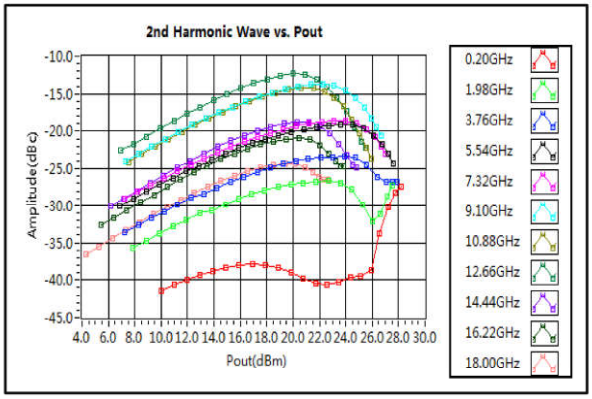
Noise Figure(0.2-4GHz)



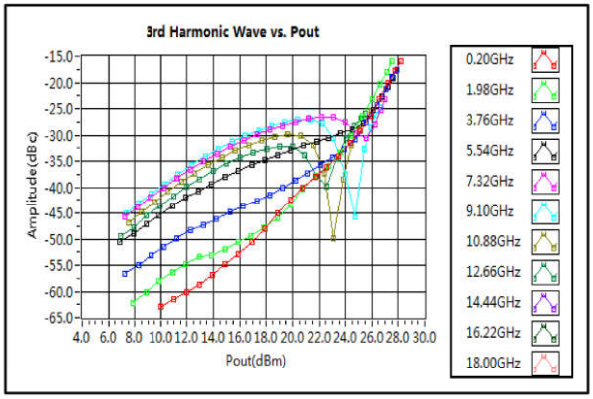
Noise Figure(4-18GHz)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power