RFecho
A Gateway to RFWorld

Wide Band Low Noise Amplifier 0.5GHz~12GHz

Features

- Gain: 32dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +15dBm Typical

Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	2		10	0.5		12	GHz
Gain	30	32	36	29	32	36	dB
Gain Flatness		±1.5	±2.5		±2.0	±3.0	dB
Gain Variation Over Temperature (-40℃~+85℃)		±1.0			±1.0		dB
Noise Figure		2.5	3.5		2.5	3.5	dB
Input VSWR		2.5			2.5		:1
Output VSWR		2.5			2.5		:1
Output 1dB Compression Point (P1dB)	13	15		12	15		dBm
Saturated Output Power (Psat)		17			17		dBm
Output Third Order Intercept (OIP3)		27			27		dBm
Isolation S12		-50			-50		dB
Supply Current (Vcc=+12V)		120	200		120	200	mA

Weight	0.65 Max. ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Optional)

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Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power	-17dB m

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

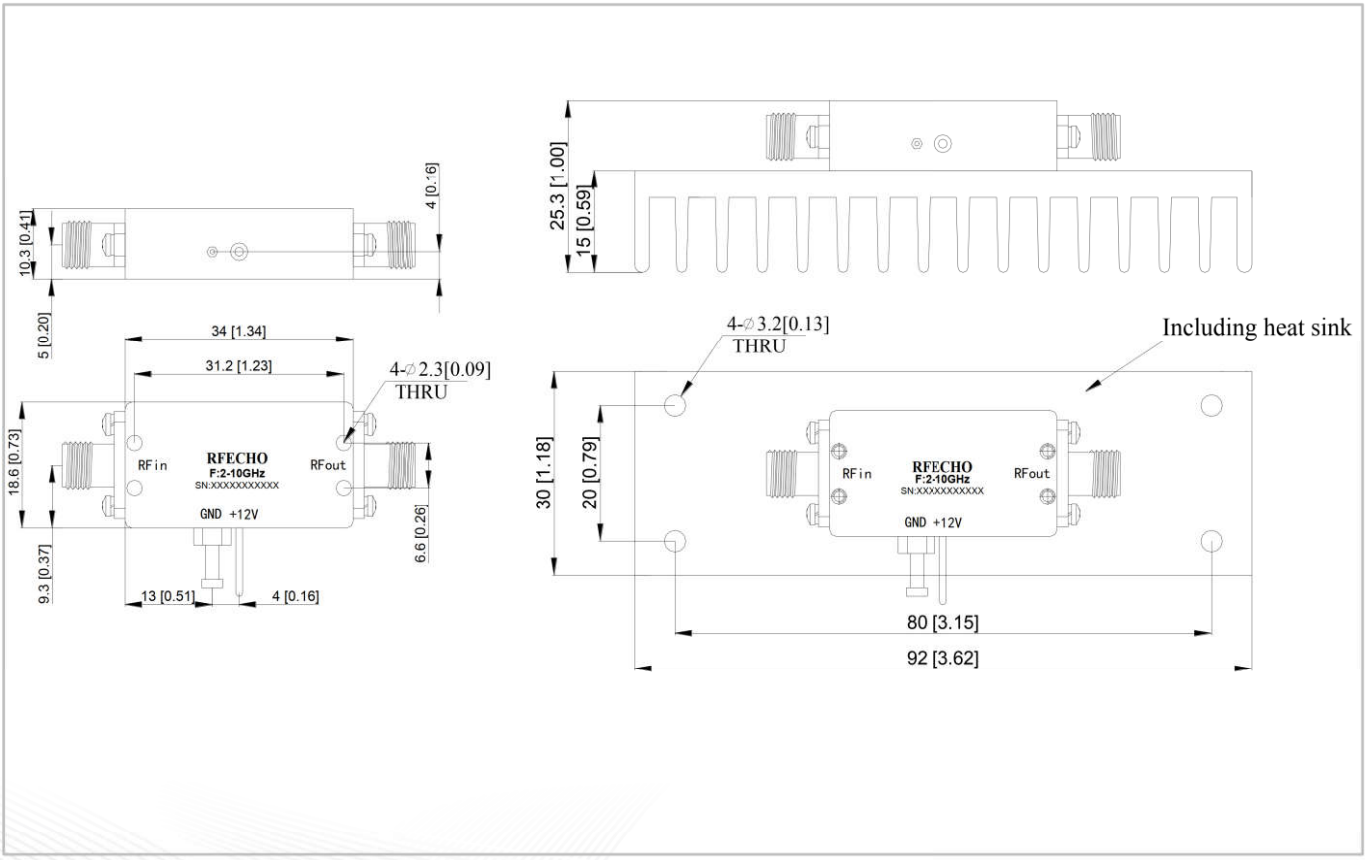
Environmental Specifications

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

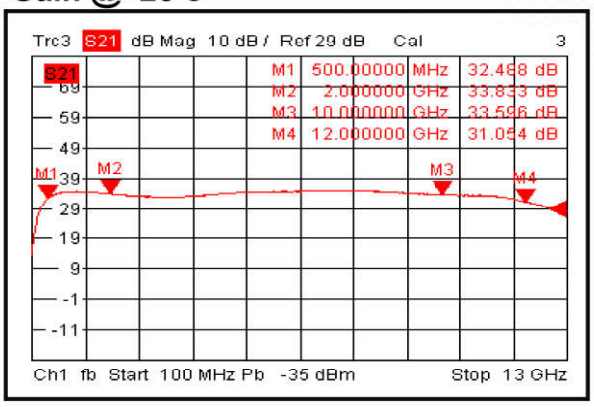
Outline Drawing:

All Dimensions in mm [inches]

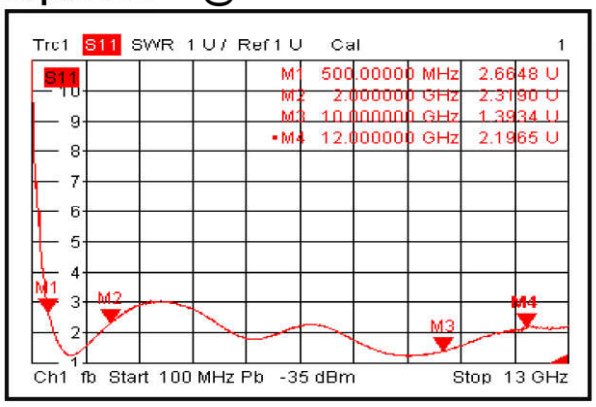
Heat Sink required during operation (Sold Separately)



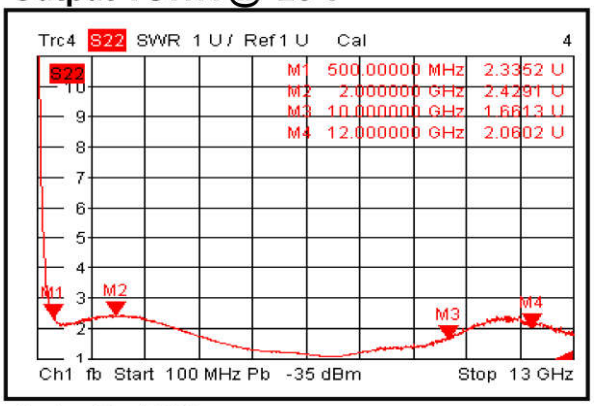
Gain @+25℃



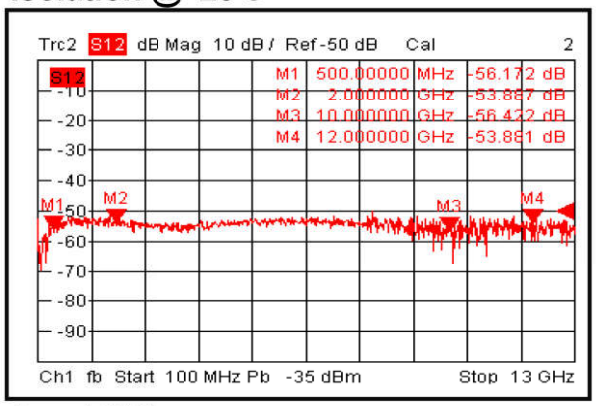
Input VSWR @+25℃



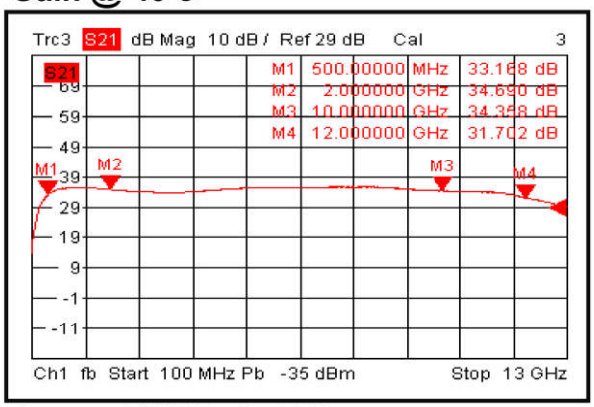
Output VSWR @+25℃



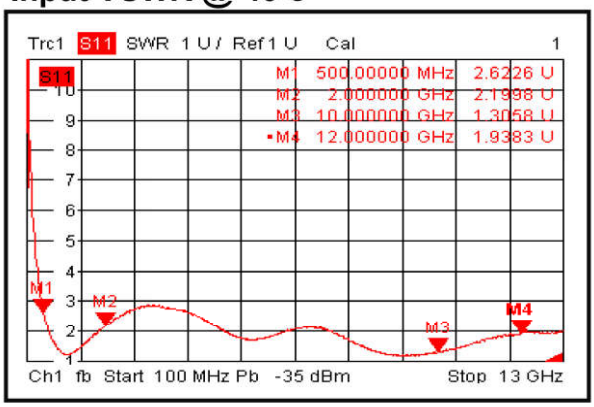
Isolation @+25℃



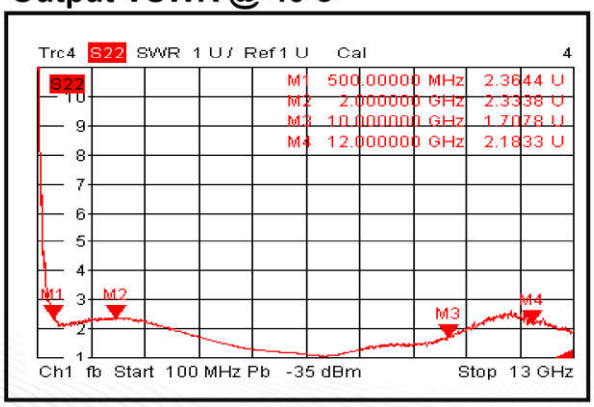
Gain @-40℃



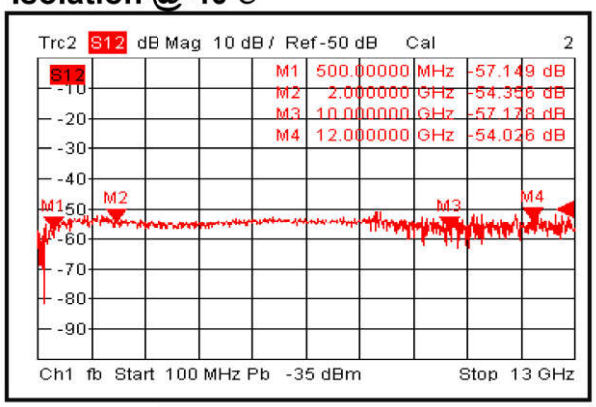
Input VSWR @-40℃



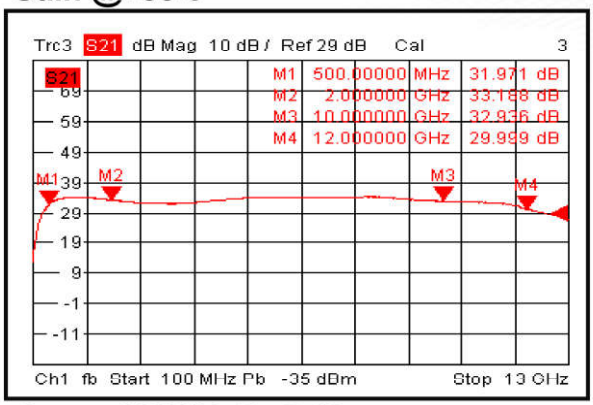
Output VSWR @-40℃



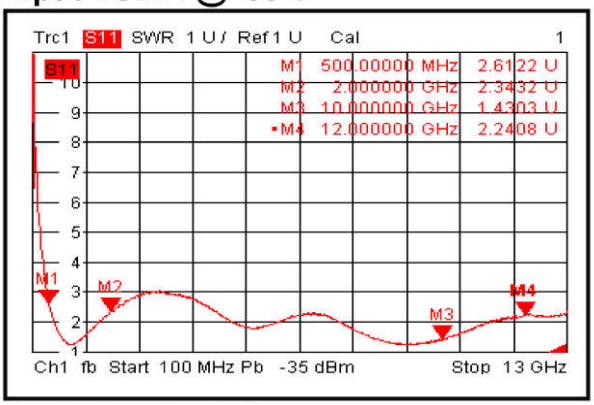
Isolation @-40℃



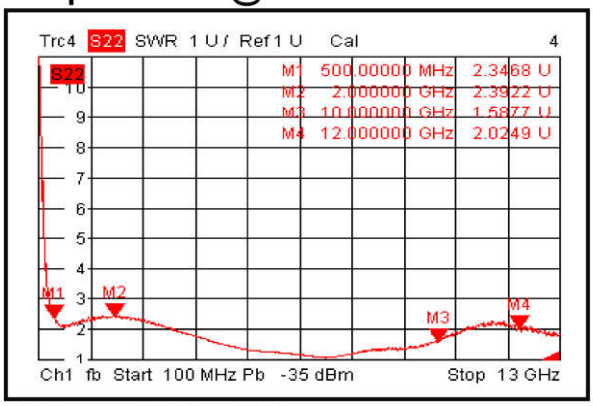
Gain @+85℃



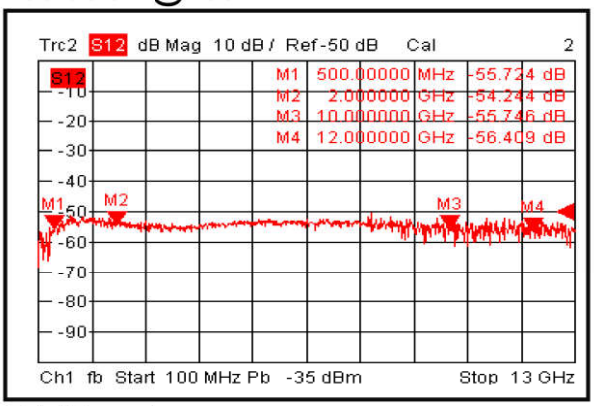
Input VSWR @+85℃



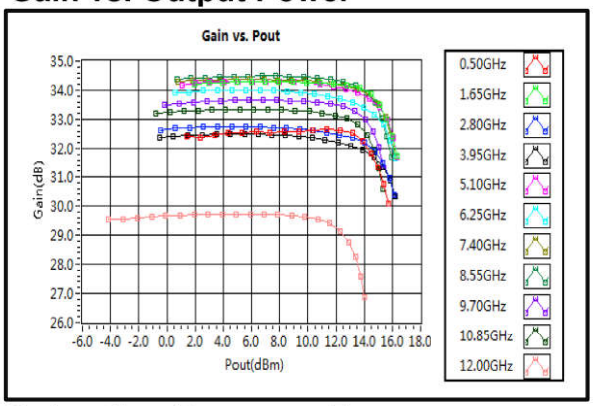
Output VSWR @+85℃



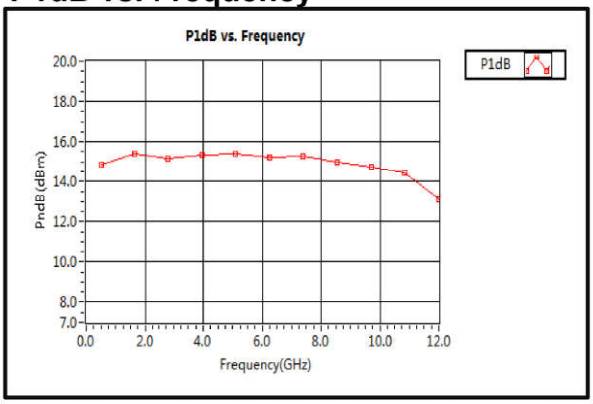
Isolation @+85℃



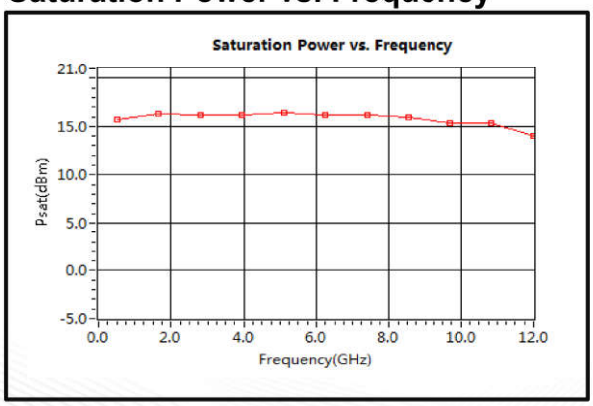
Gain vs. Output Power



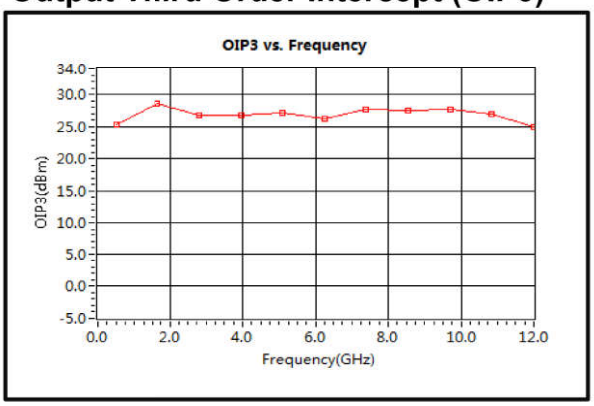
P1dB vs. Frequency



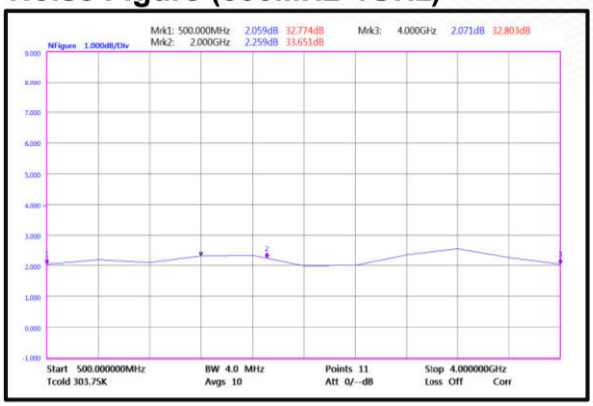
Saturation Power vs. Frequency



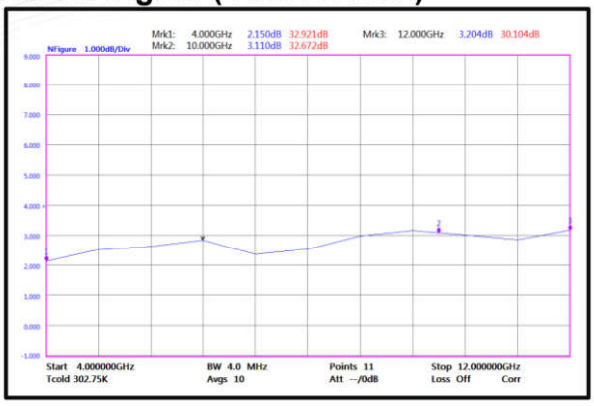
Output Third Order Intercept (OIP3)



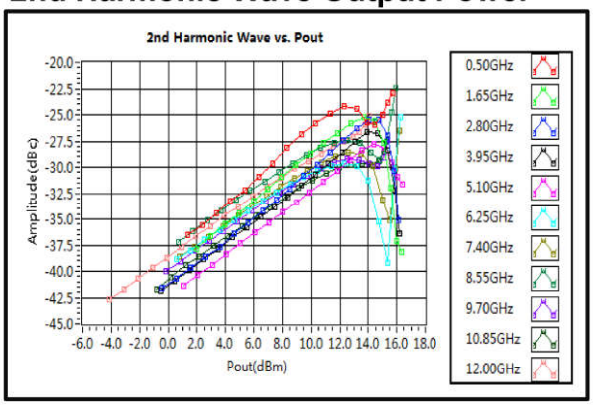
Noise Figure (500MHz-4GHz)



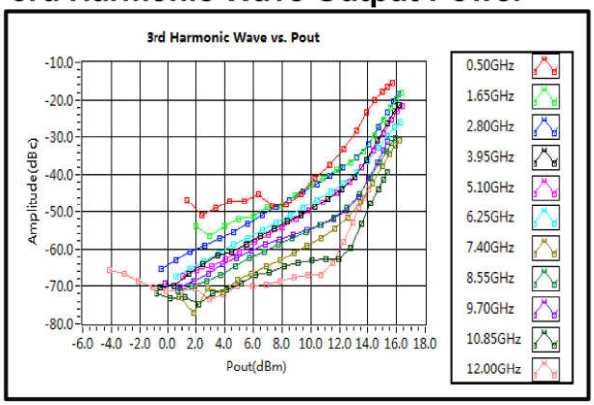
Noise Figure (4GHz-12GHz)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power