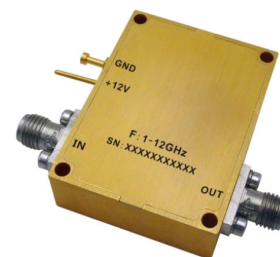




Wide Band Low Noise Amplifier 1GHz~12GHz

Features

- Gain: 34dB Typical
- Noise Figure: 1.5dB Typical
- P1dB Output Power: +23dBm Typical
- Supply Voltage: +12V



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	1		8	8		12	GHz
Gain	32	34		30	33		dB
Gain Flatness		±1.5			±1.5		dB
Gain Variation Over Temperature (-40°C~+85°C)		±1.0			±1.0		dB
Noise Figure		1.5	2.2		2.0	2.8	dB
Input VSWR		1.6	1.8		1.6	2.0	: 1
Output VSWR		1.4	1.8		1.4	1.8	: 1
Output 1dB Compression Point (P1dB)	21	23		21	22		dBm
Saturated Output Power (Psat)		25			24		dBm
Output Third Order Intercept (OIP3)		32			28		dBm
Supply Current (Vcc=+12V)		200	300		200	300	mA
Isolation S12		-60			-60		dB

Weight	1.35 Max. ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Optional)



Absolute Maximum Ratings

Operating Voltage	+15V @ 25°C
RF Input Power (RFIN)	-5dBm @ 25°C

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.

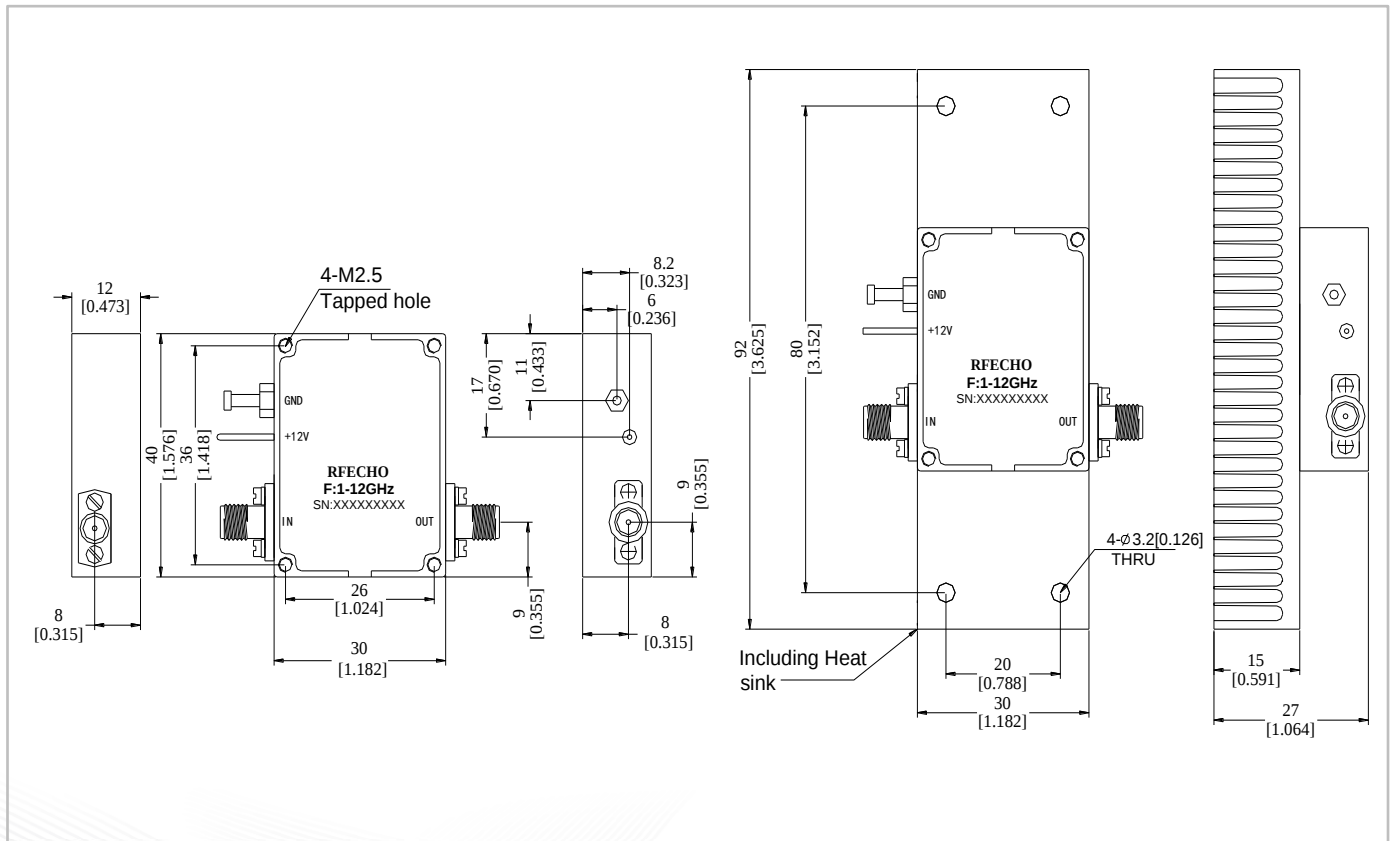
Environmental Specifications

Operational Temperature	-40°C ~ +85°C
Storage Temperature	-50°C ~ +105°C
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 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

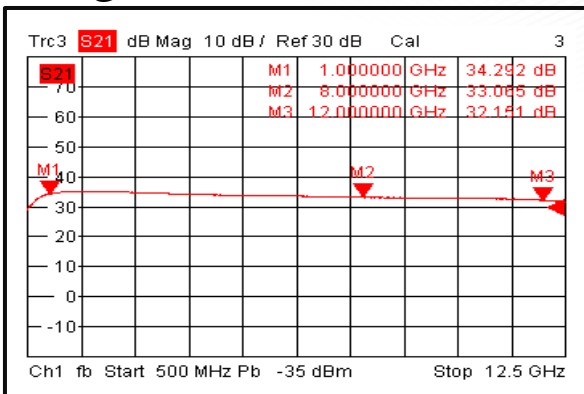
Outline Drawing:

All Dimensions in mm (inches)

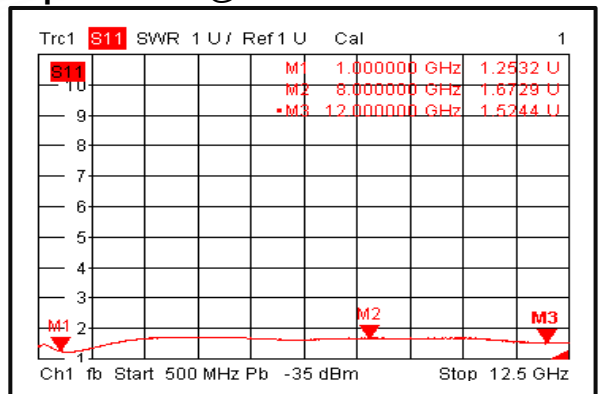
Heat Sink required during operation(Sold Separately)



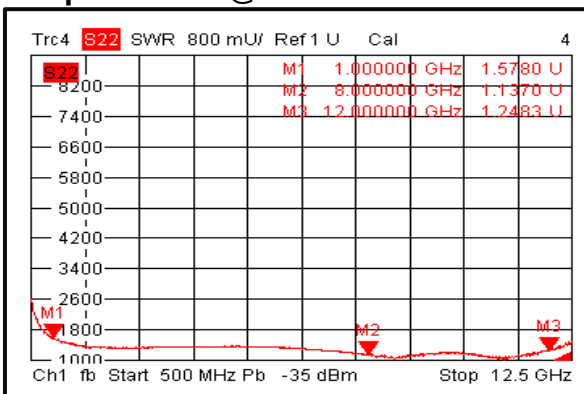
Gain @ +25°C



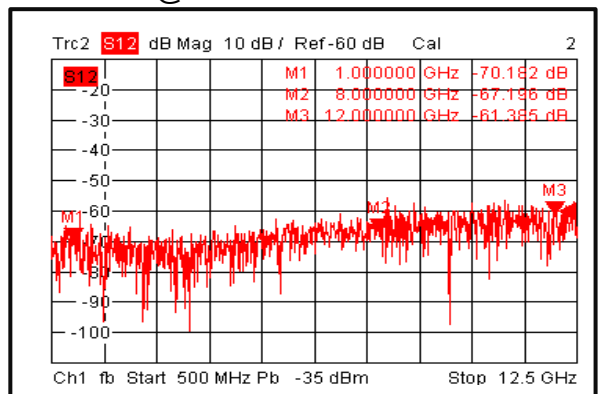
Input VSWR @ +25°C



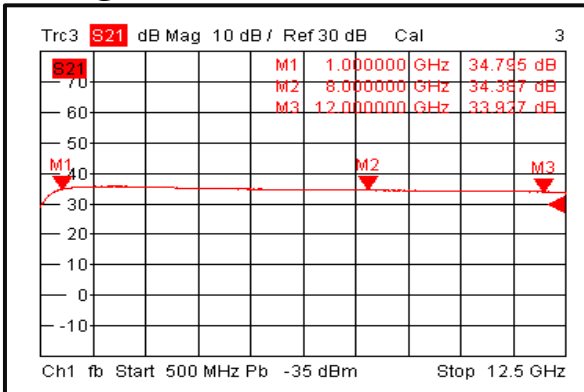
Output VSWR @ +25°C



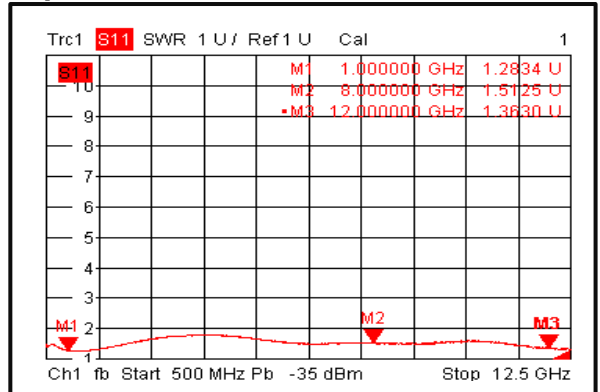
Isolation @ +25°C



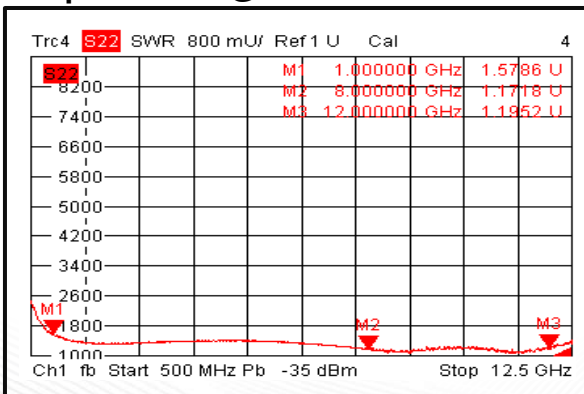
Gain @ -40°C



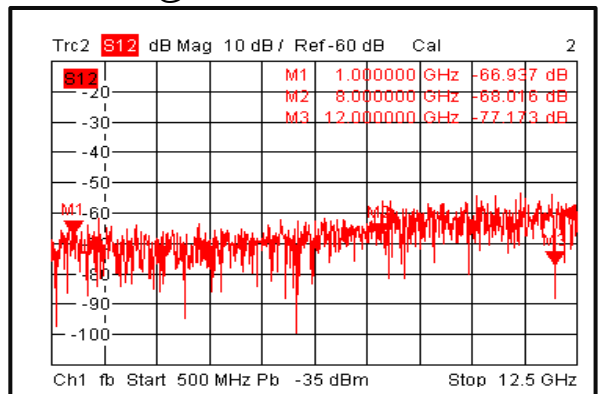
Input VSWR @ -40°C



Output VSWR @ -40°C

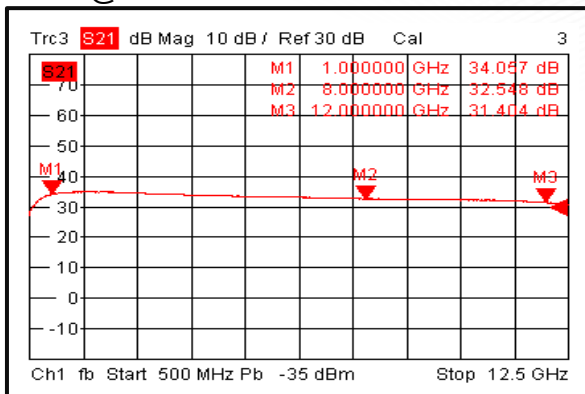


Isolation @ -40°C

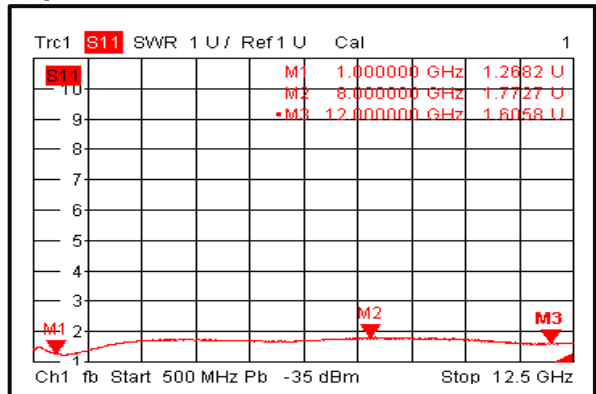




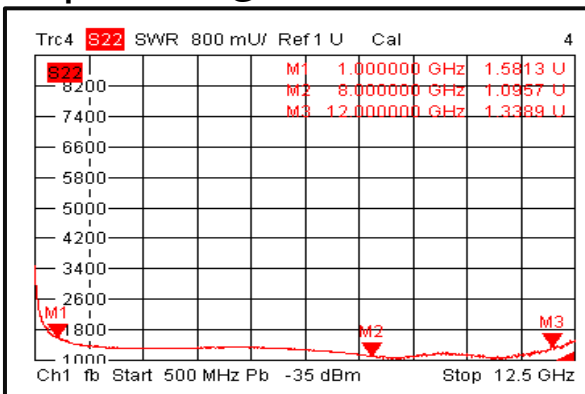
Gain @ +85°C



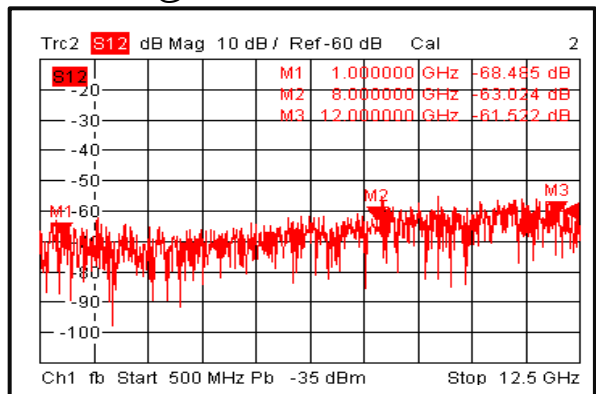
Input VSWR @ +85°C



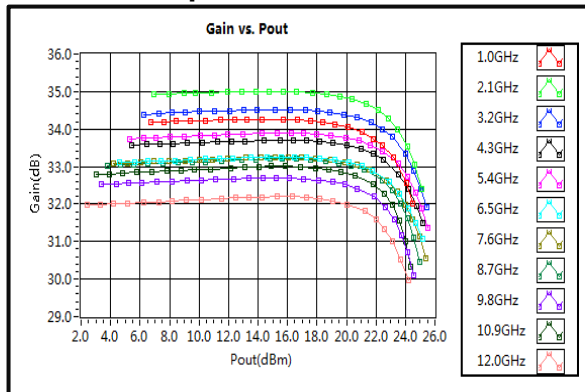
Output VSWR @ +85°C



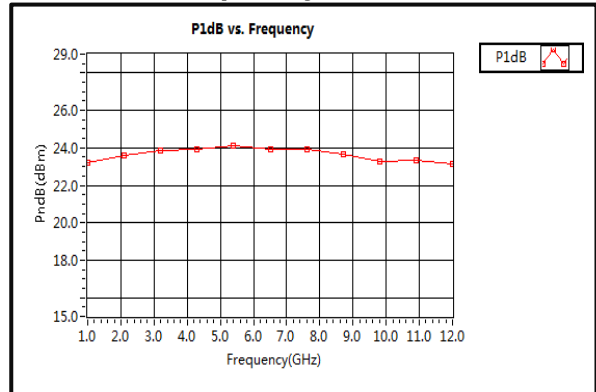
Isolation @ +85°C



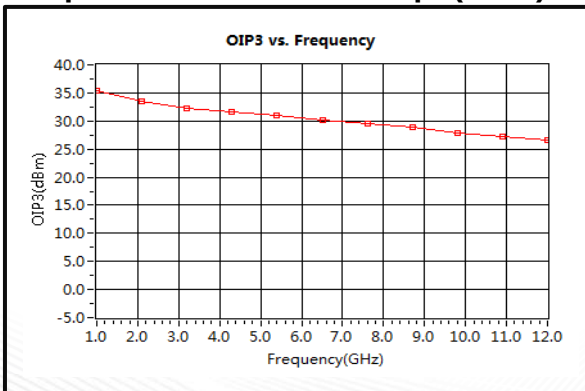
Gain vs. Output Power



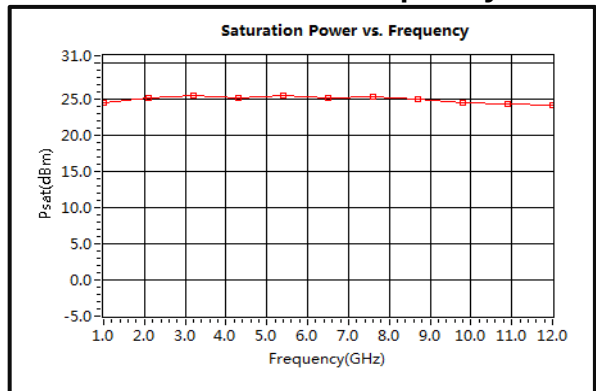
P1dB vs. Frequency



Output Third Order Intercept (OIP3)

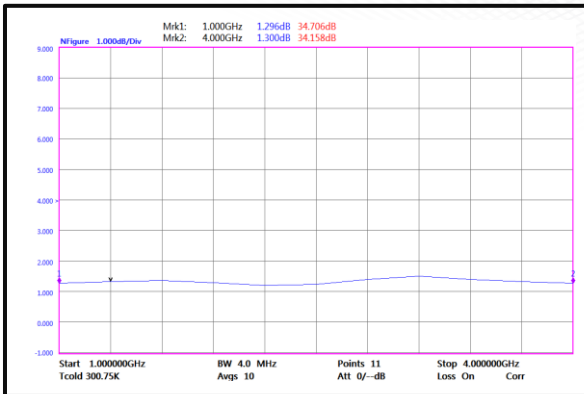


Saturation Power vs. Frequency

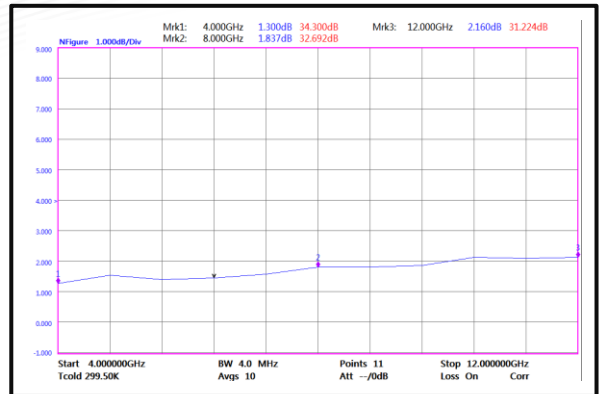




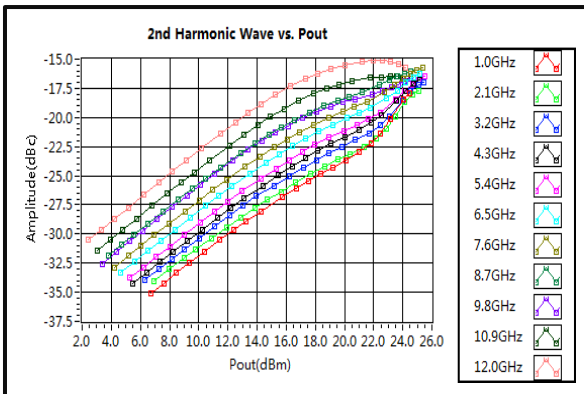
Noise Figure(1-4GHz)



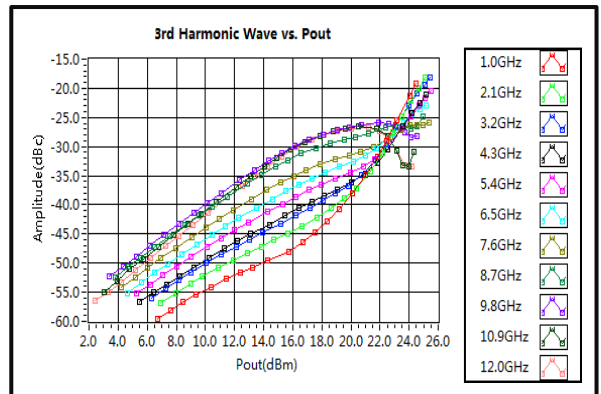
Noise Figure(4-12GHz)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

