



Ultra Wide Band AC–Low Noise Amplifier 0.1GHz~4GHz

Features

- High Output Power +21dBm typical.
- High peak to average handling capability.
- High linearity and low noise figure.
- Convenient AC Power Input. (AC 110V/220V)
- Integrated Heat Sink and Fan.

Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1		2	2		4	GHz
Gain	33	34		33	34.5		dB
Gain Flatness		±1.0	±1.5		±1.0	±1.5	dB
Gain Variation Over Temperature (-40°C~+85°C)		±1.0			±1.5		dB
Noise Figure		1.5	2.0		2.0	3.0	dB
Input VSWR		1.8	2.5		1.8	2.2	:1
Output VSWR		1.2	1.8		1.8	2.2	:1
Output Power for 1 dB Compression (P1dB)	20	22		20	22		dBm
Saturated Output Power (Psat)		24			24		dBm
Output Third Order Intercept (OIP3)		34			35		dBm
Isolation S12		-55			-65		dB
Supply Current (+12V)		330	400		330	400	mA

Weight	38.10 ounces	Impedance	50 ohms
Input /Output Connectors	SMA-Female	Material	Aluminum
Finish	Gray Painted		



Absolute Maximum Ratings

Operating Voltage	AC110~220V
RF Input Power(RFIN)	-7dBm

Biasing Up Procedure

Step 1	Connect input and output with 50 Ohm source and load with in band return loss better than 10dB.
Step 2	Connect AC Plug
Step 3	Flip switch to "ON" position

Power OFF Procedure

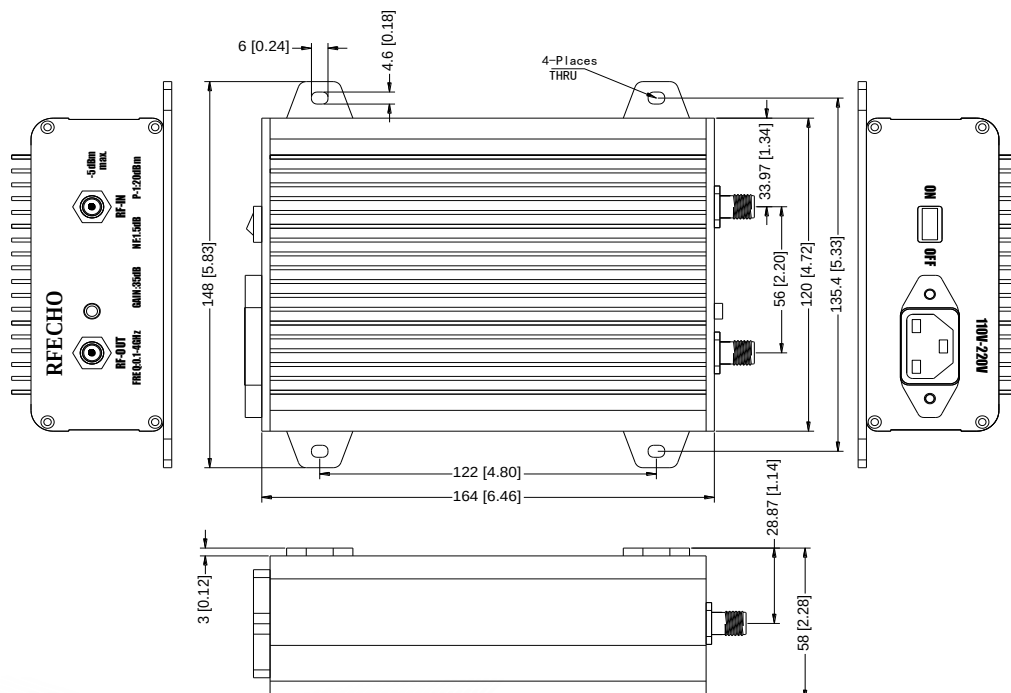
Step 1	Flip switch to "OFF" position
Step 2	Remove AC Plug
Step 3	Remove RF Connection

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

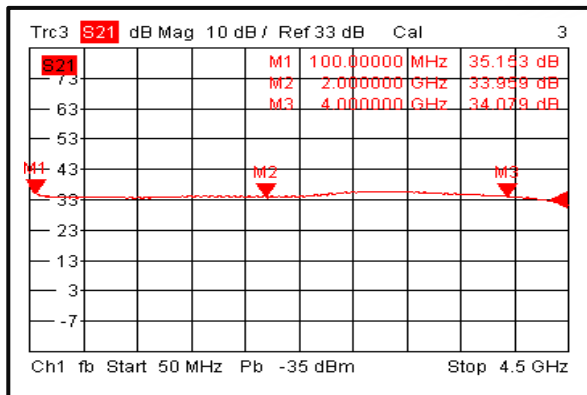
Outline Drawing:

All Dimensions in mm (inches)

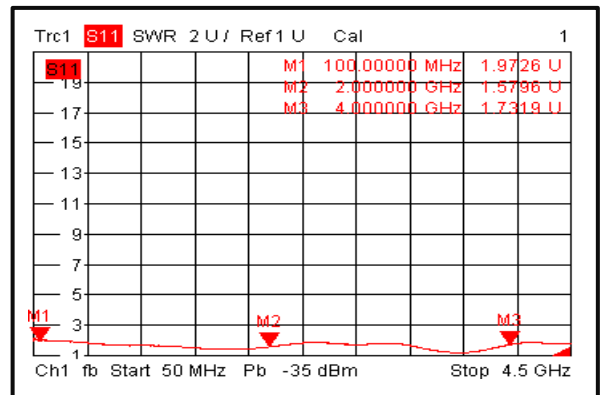




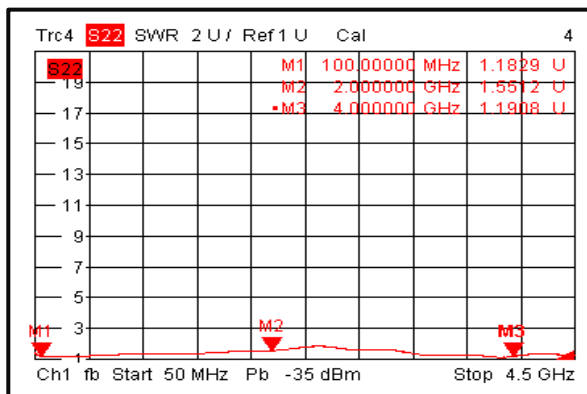
Gain



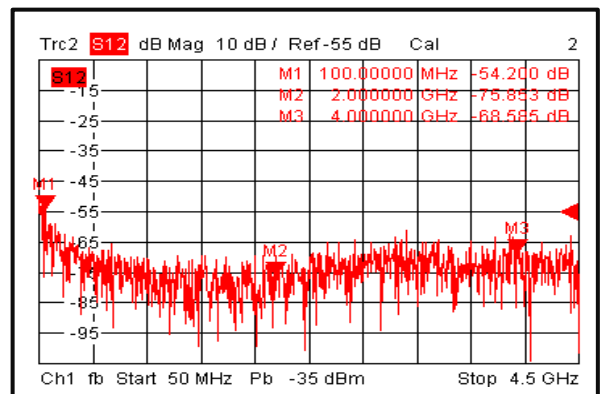
Input VSWR



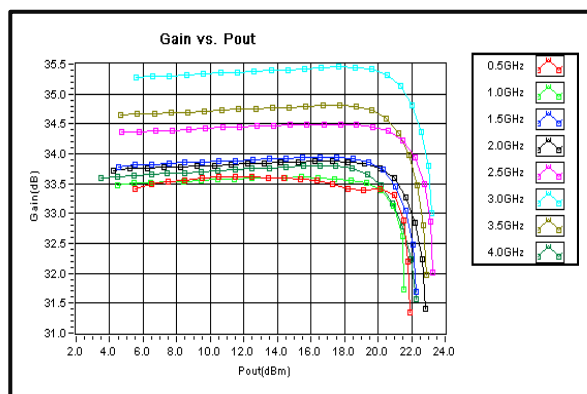
Output VSWR



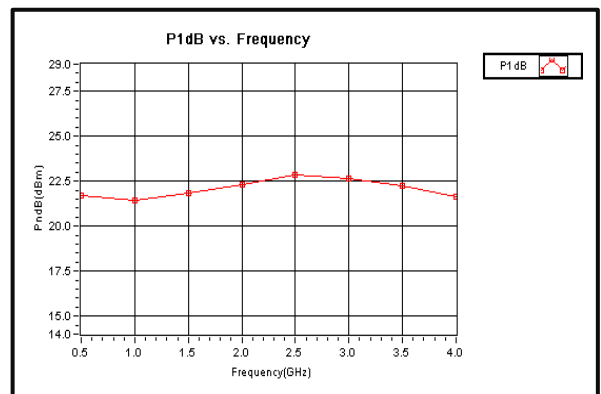
Isolation



Gain vs. Output Power

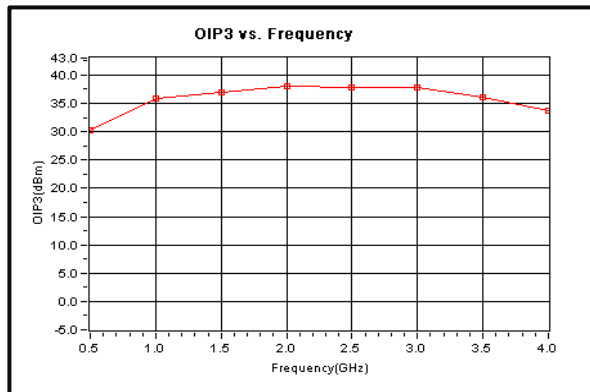


P1dB vs. Frequency

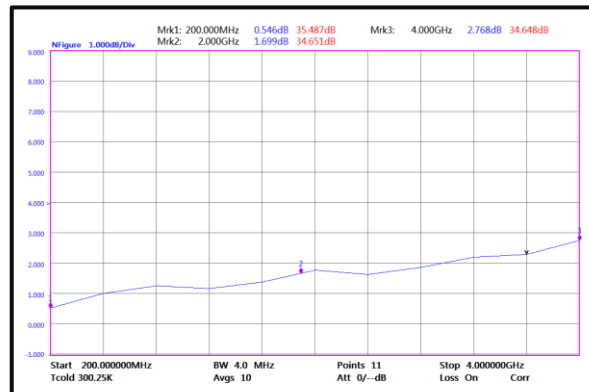




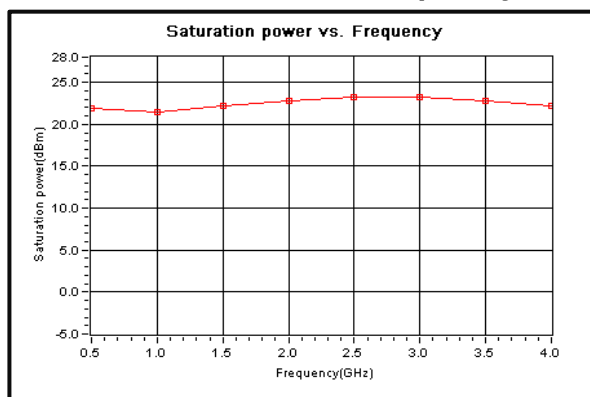
Output Third Order Intercept (OIP3)



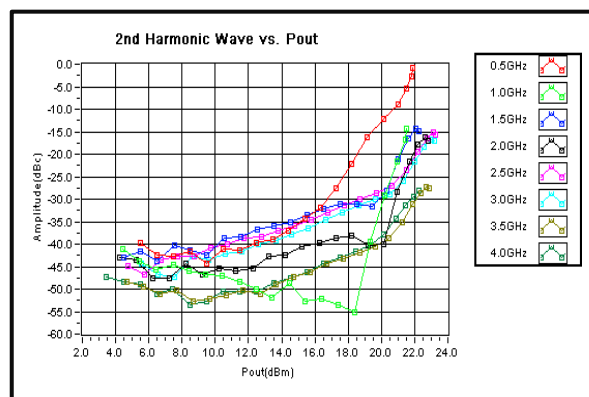
Noise Figure



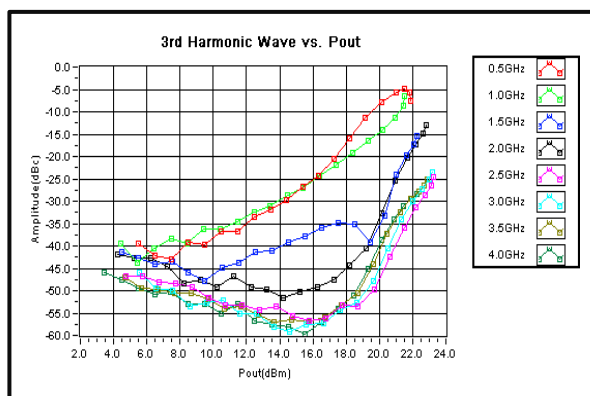
Saturation Power vs. Frequency



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

