Ultra Wide Band AC- Low Noise Amplifier 0.01GHz~20GHz

Features

- High Output Power 23dBm 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	0.01		10	10		20	GHz
Gain	28	30	35	26	28	30	dB
Gain Flatness		±1.5			±1.0		dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±0.6			±0.8		dB
Noise Figure		4.0	5.5		3.0	4.5	dB
Input VSWR		1.5			1.6		dB
Output VSWR		1.8			2.0		dB
Output Power for 1 dB Compression (P1dB)	21	23		19	21		dBm
Saturated Output Power (Psat)		24			22		dBm
Output Third Order Intercept (OIP3)		31			26		dBm
Isolation S12		-65			-60		dB
Supply Current (Idd) (AC=110-220V)		55	75		55	75	mA

Weight	38.8 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Gray Painted		

Absolute Maximum Ratings

Operating Voltage	AC110~220V
RF Input Power(RFIN)	+0dBm

Note: Maximum RF input power is defined to protect the amplifier from damage.
Input power may be increased at the users own risk to achieve the full output power of the amplifier. Please reference gain and power curves and monitor the temperature.

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

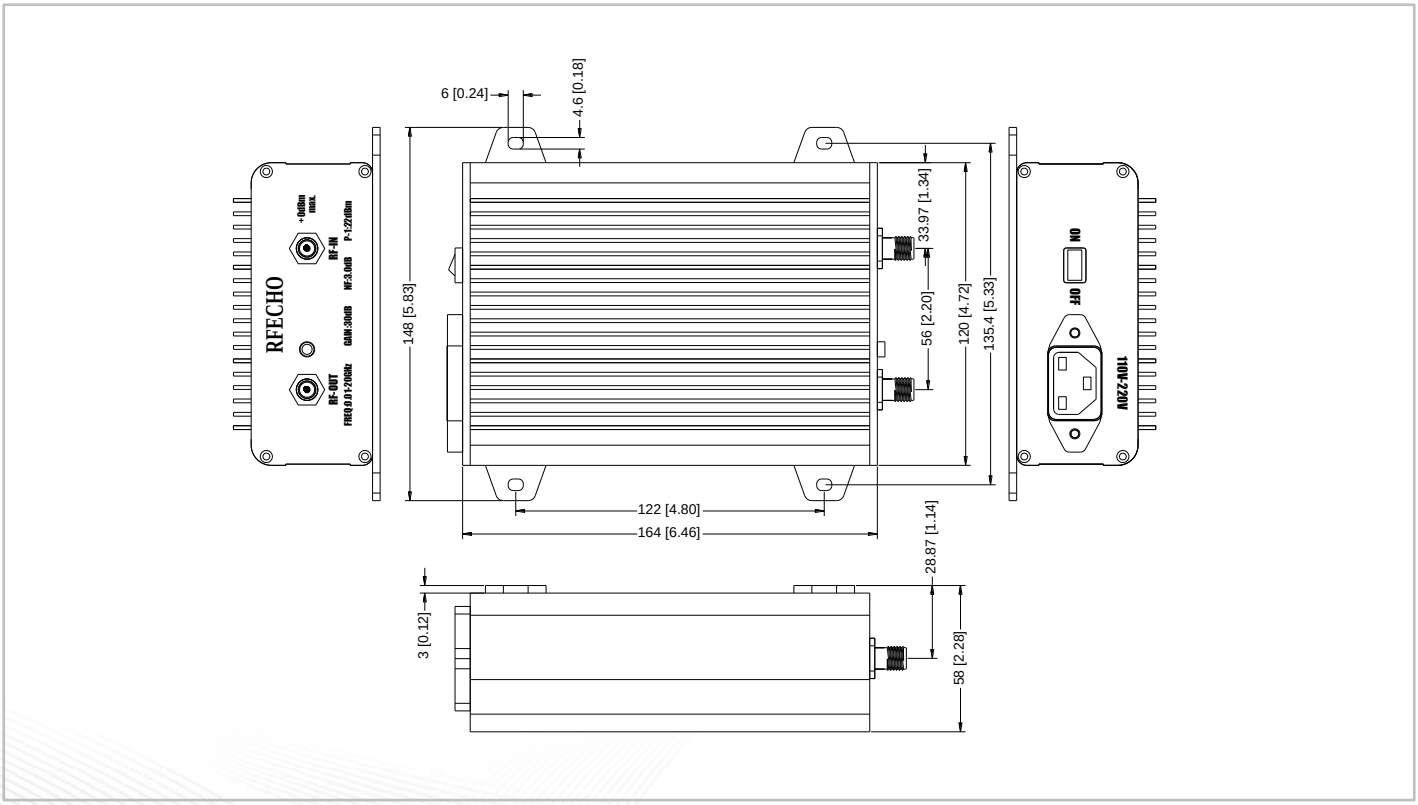
Step 1	Flip switch to “OFF” position
Step 2	Remove AC Plug
Step 3	Remove RF Connection

Environmental Specifications

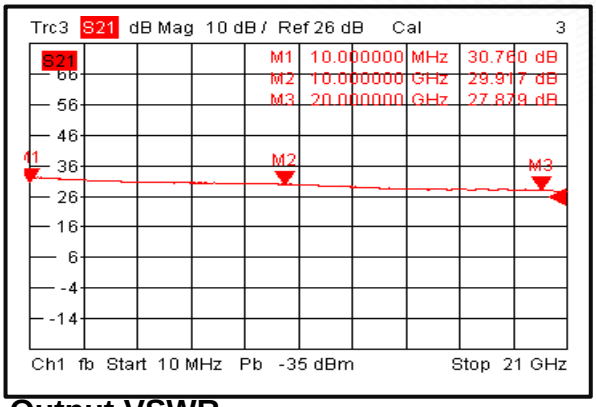
Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

Outline Drawing:

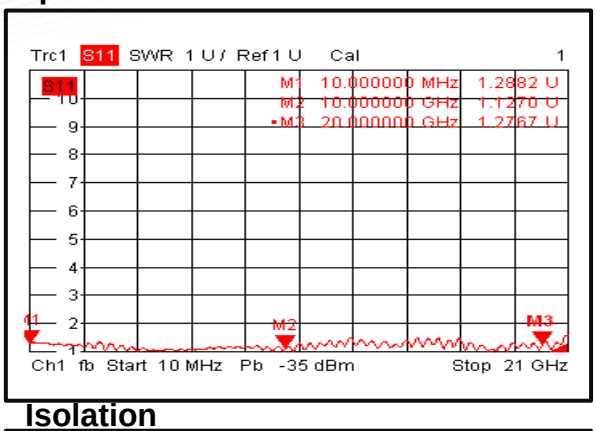
All Dimensions in mm (inches)



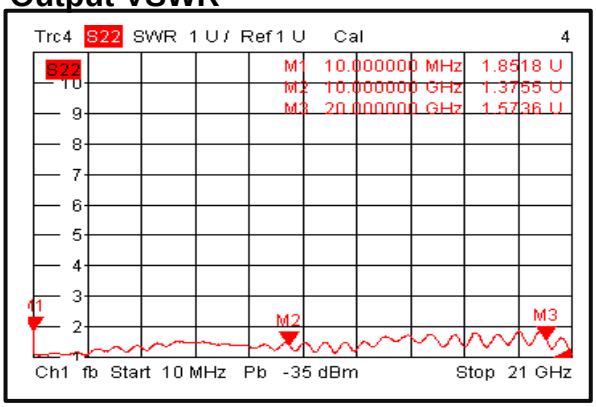
Gain



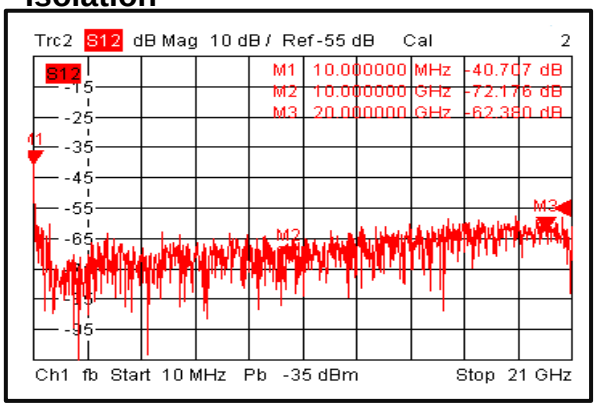
Input VSWR



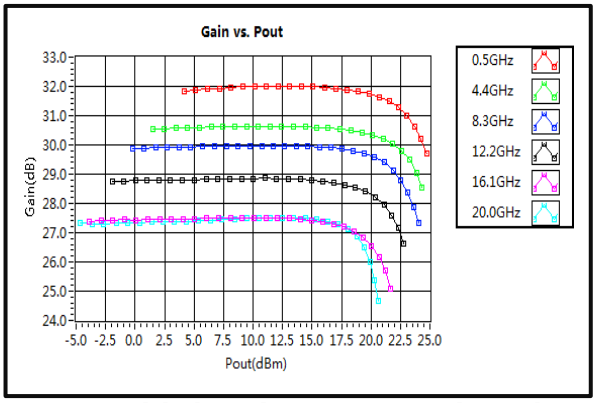
Output VSWR



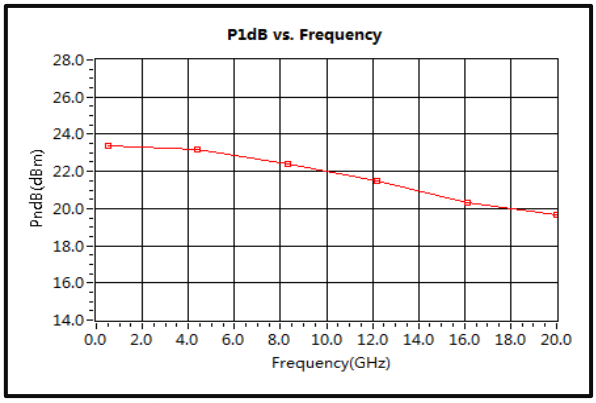
Isolation



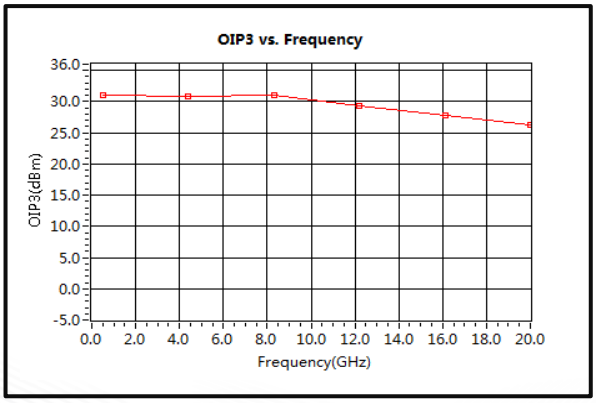
Gain vs. Output Power



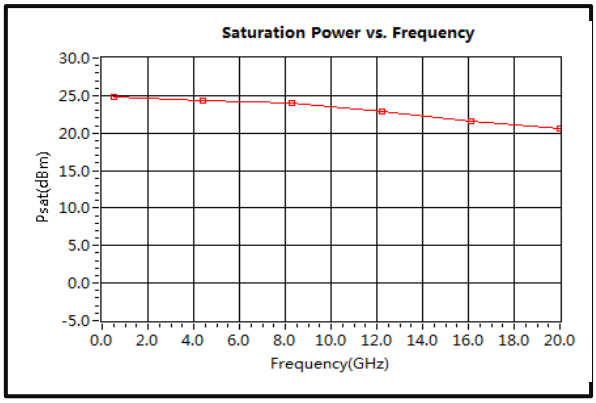
P1dB vs. Frequency



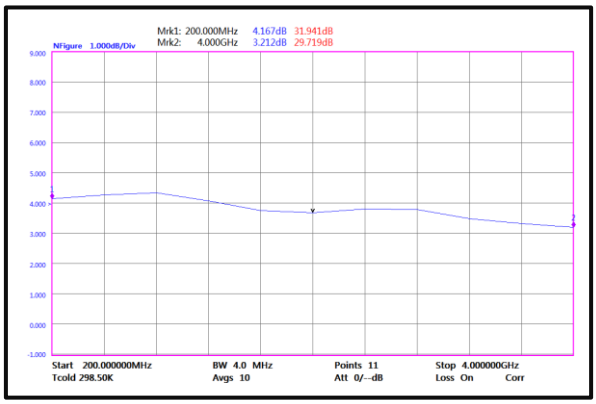
Output Third Order Intercept (OIP3)



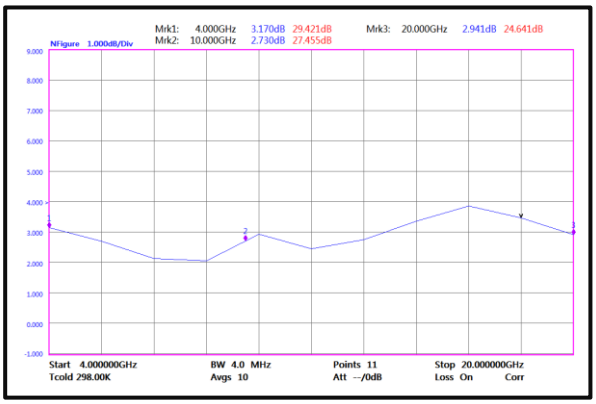
Saturated Power vs. Frequency



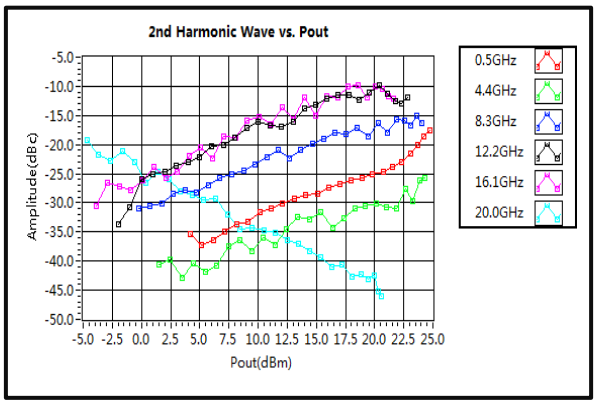
Noise Figure(0.2-4GHz)



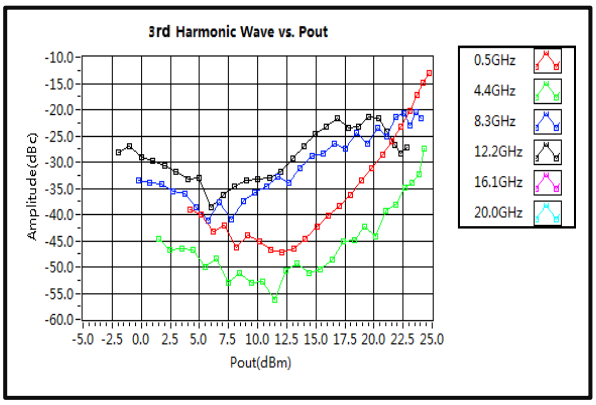
Noise Figure(4-20GHz)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave output Power