Wide Band AC–Low Noise Amplifier 0.1GHz~18GHz

Features

- High Output Power 16dBm 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

- Microwave Radio and VSAT.
- Telecom Infrastructure.

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1		8	8		18	GHz
Gain	40	43		38	40		dB
Gain Flatness		±1.0			±1.5		dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±2.5			±3.0		dB
Noise Figure		2.0			2.5	4.0	dB
Input VSWR		1.5			1.6	2.0	: 1
Output VSWR		1.3	2.0		1.6	2.0	: 1
Output 1dB Compression Point (P1dB)	15	17		12	14.5		dBm
Saturated Output Power (Psat)		19			18		dBm
Output Third Order Intercept (OIP3)		27			26		dBm
Isolation S12		-70			-70		dB
Supply Current @AC=220V	60 Max.						mA

Weight	40 ounces (Max.)	Impedance	50ohms
Input /Output Connectors	SMA-Female	Material	Aluminum
Finish	Gray Painted		

Absolute Maximum Ratings

Operating Voltage	AC110~230V
RF Input Power (RFIN)	-12dBm

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

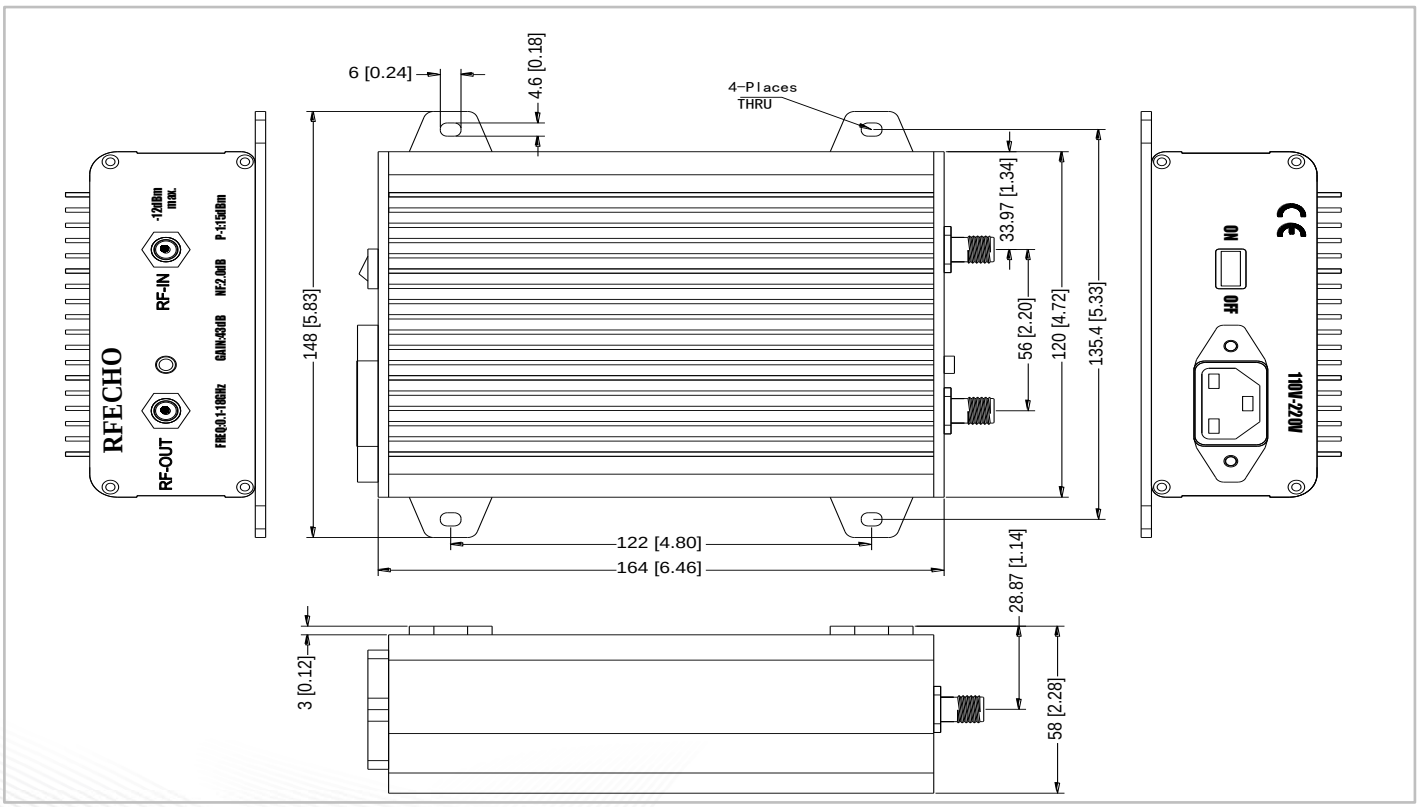
Step 1	Flip switch to “OFF” position
Step 2	Remove AC Plug
Step 3	Remove RF Connection

Environmental Specifications

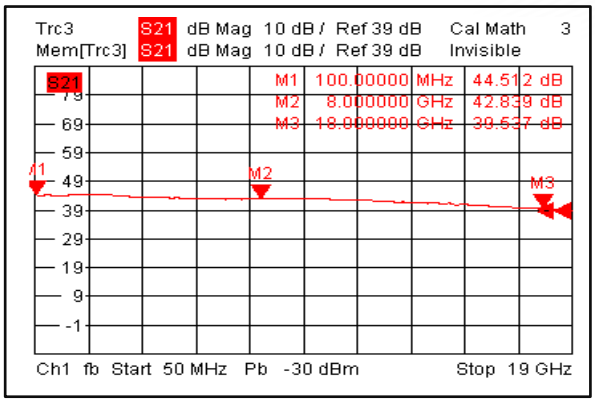
Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH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

Outline Drawing:

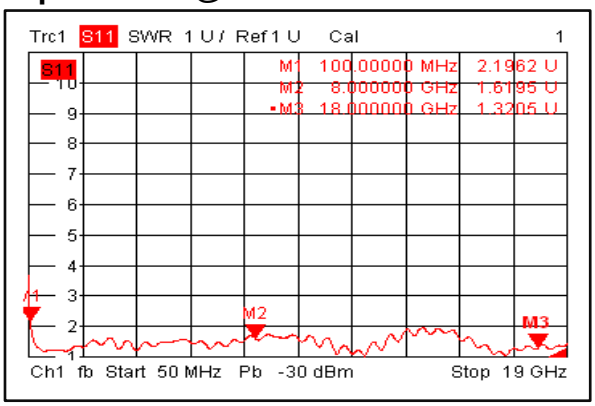
All Dimensions in mm (inches) Tolerances ±1.5 (0.06)



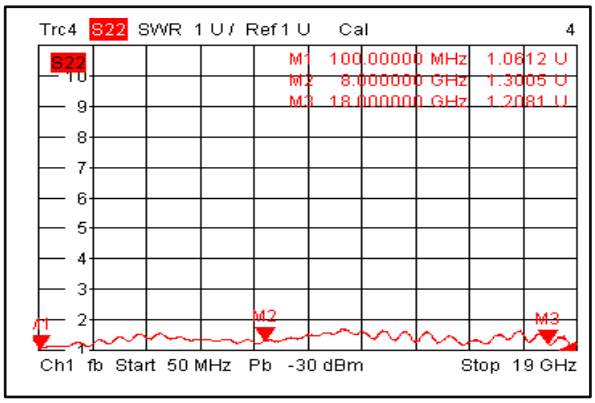
Gain@+25℃



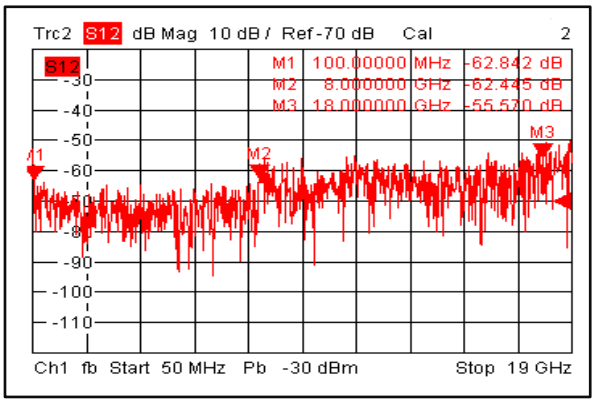
Input VSWR@+25℃



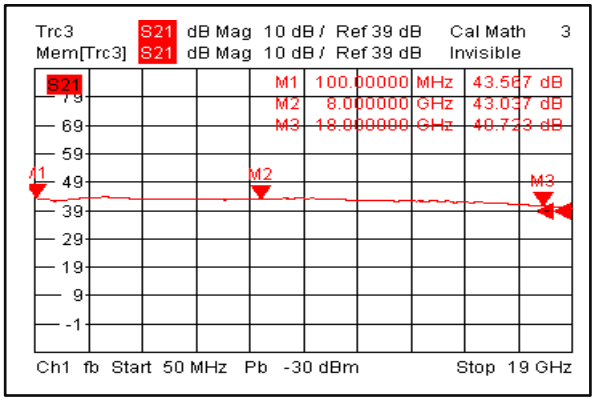
Output VSWR@+25℃



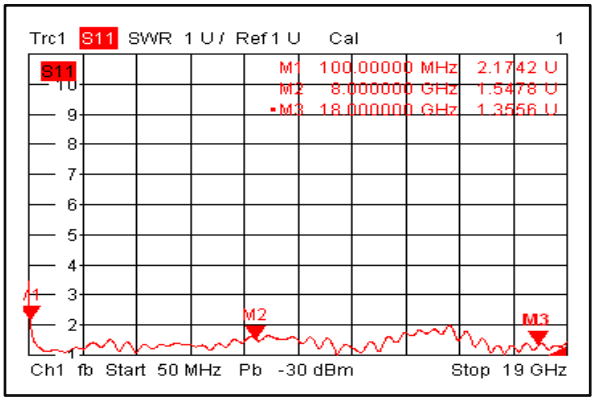
Isolation@+25℃



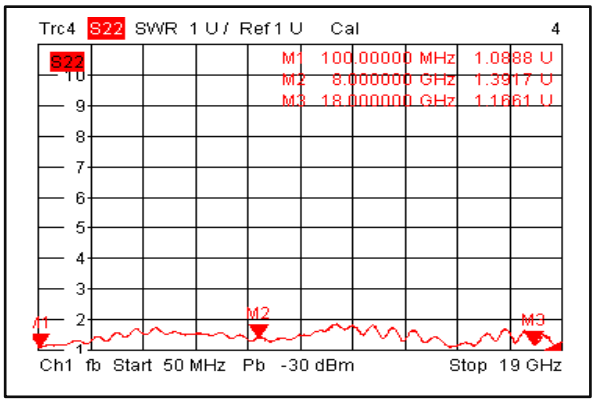
Gain@-40℃



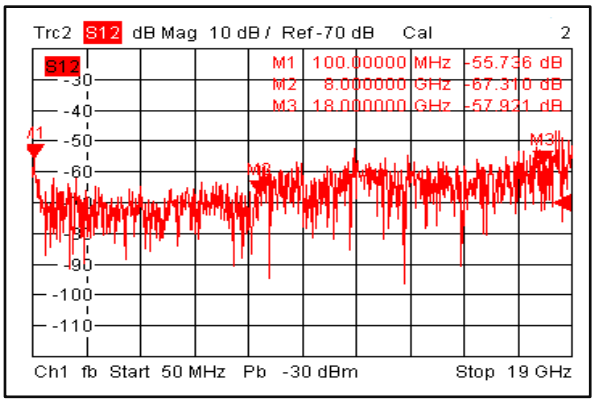
Input VSWR @-40℃



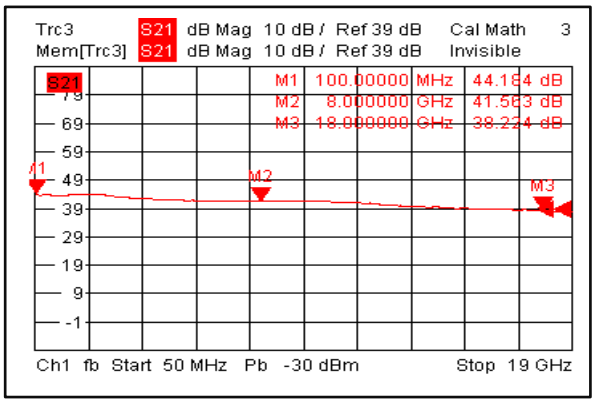
Output VSWR @-40℃



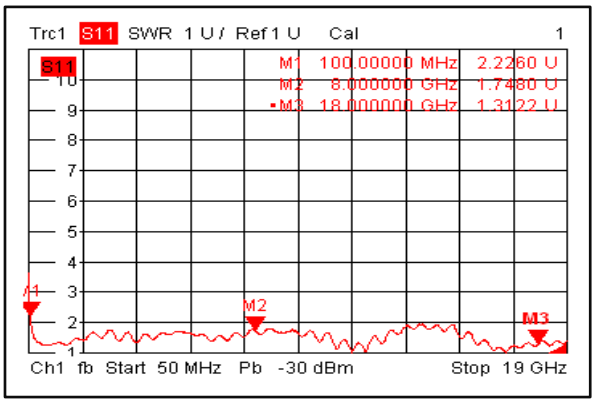
Isolation @-40℃



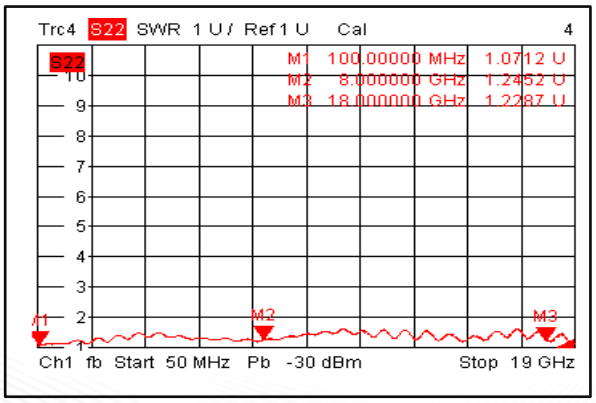
Gain@+85℃



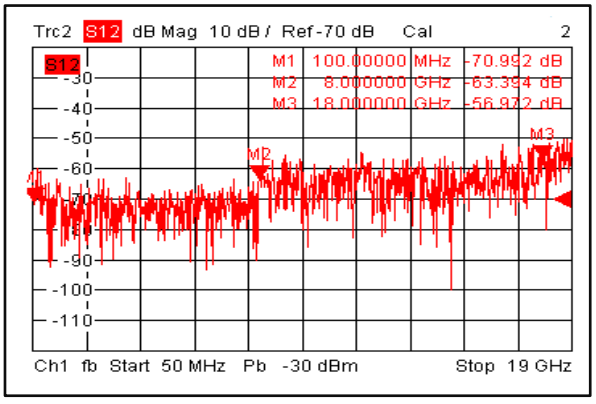
Input VSWR @+85℃



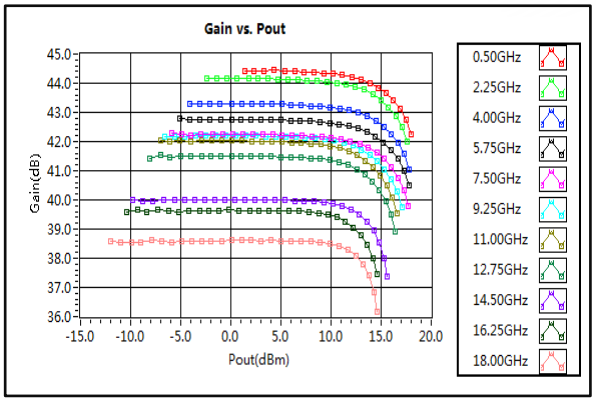
Output VSWR@+85℃



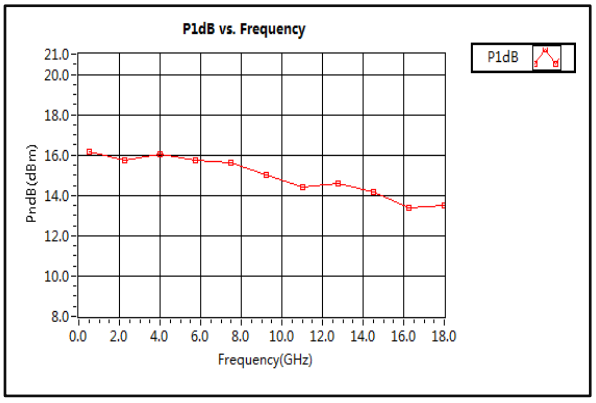
Isolation@+85℃



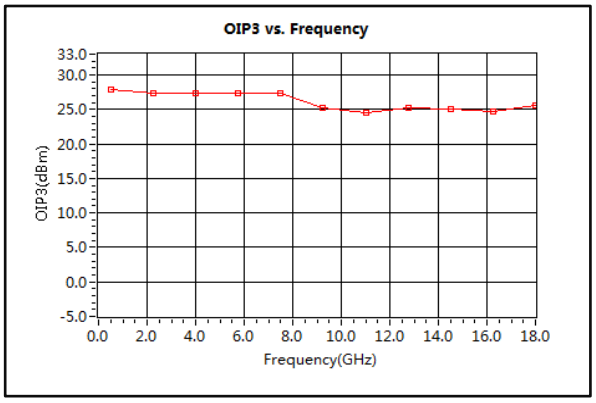
Gain vs. Output Power



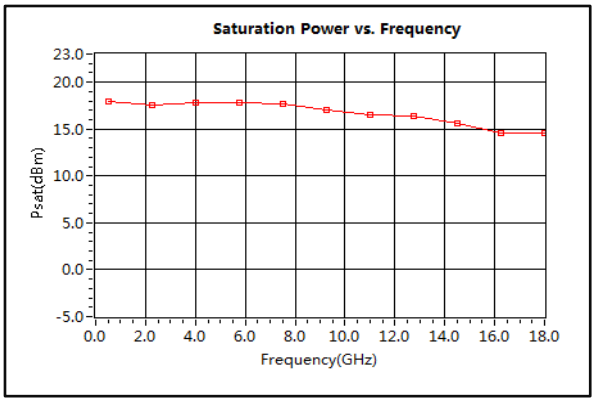
P1dB vs. Frequency



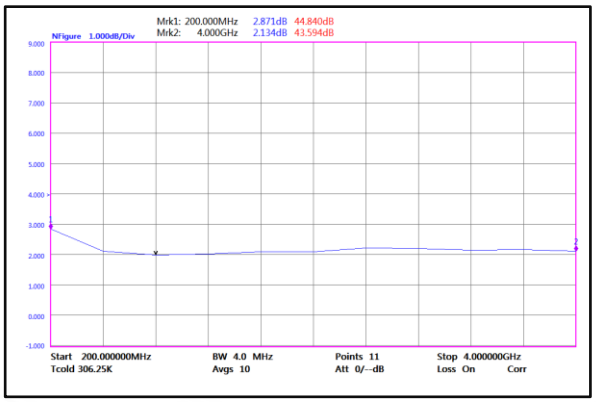
Output Third Order Intercept (OIP3)



Saturation Power vs. Frequency

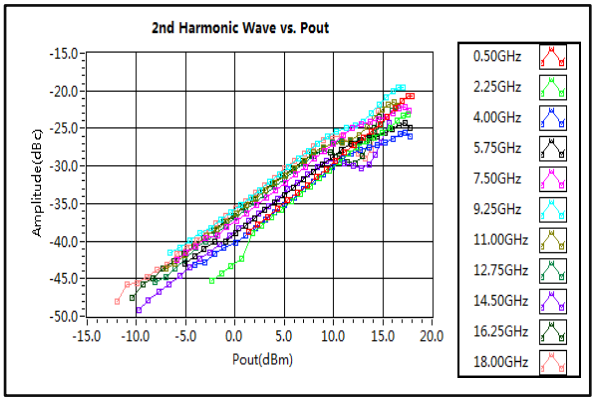


Noise Figure(0.2-4GHz)

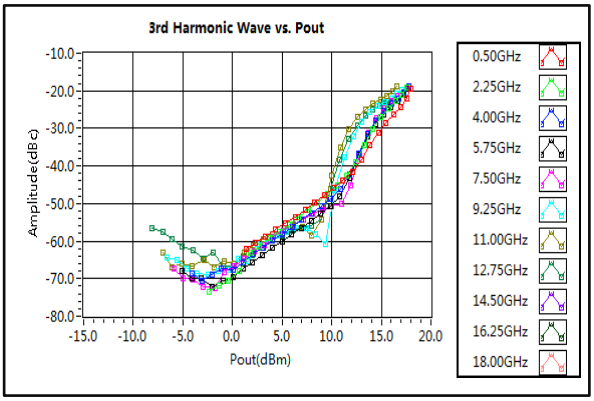


Noise Figure(4-18GHz)

2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power