Ultra Wide Band AC-Low Noise Amplifier 0.1GHz~50GHz

Features

- Low noise figure 5.0 Typical
- Output Power: +20dBm Typical .
- Microwave Radio and VSAT.
- Telecom Infrastructure Applications.
- High peak to average handling capability.
- High linearity and low noise figure.
- Convenient AC Power Input.
- Integrated Heat Sink and Fan.
- All specifications can be modified upon request

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		20	20		50	GHz
Gain	38	44		35	40		dB
Gain Flatness		±3.0			±4.0		dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±2.0			±3.0		dB
Noise Figure		4.5			6.5		dB
Input VSWR		2.0			3.0		: 1
Output VSWR		2.0			2.5		: 1
Output 1dB Compression Point (P1dB)	18	20			15		dBm
Saturated Output Power (Psat)		22			17		dBm
Output Third Order Intercept (IP3)		31			24		dBm
Isolation S12		-60			-58		dB
Reference Supply Current (AC=110~220V)		87			87		mA

Weight	39 ounces(Max.)	Impedance	50ohms
Input /Output Connectors	2.4mm-Female	Material	Aluminum
Finish	Gray Painted		

Absolute Maximum Ratings

Supply Voltage	AC110~240V
RF Input Power (RFIN)	-18dBm

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 4	Flip switch to “ON” position

Power OFF Procedure

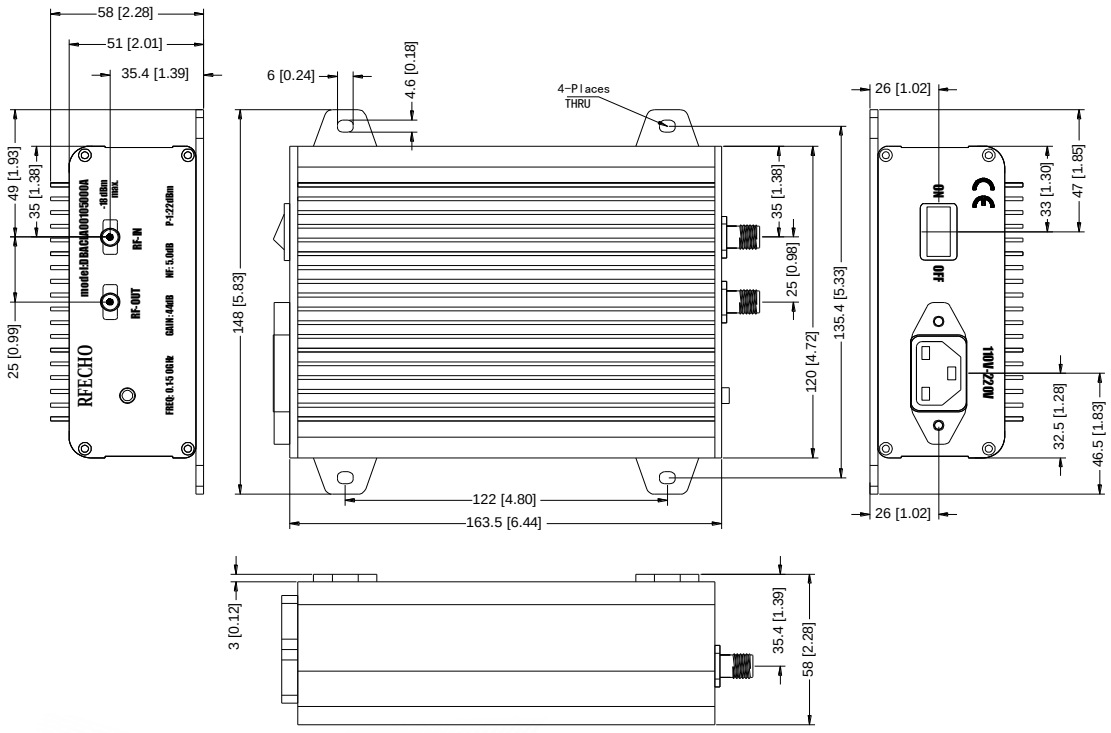
Step 2	Flip switch to “OFF” position
Step 3	Remove AC Plug
Step 4	Remove RF Connection

Environmental Specifications

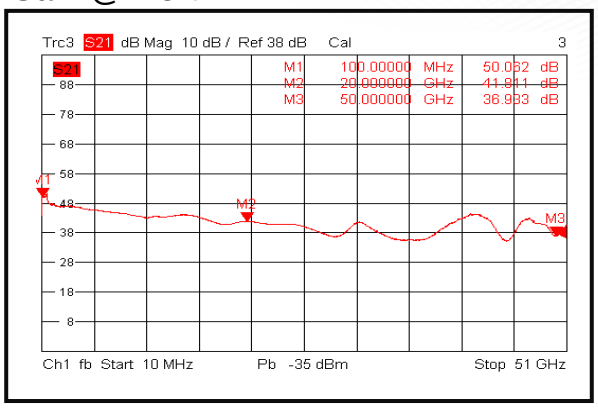
Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH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

Outline Drawing:

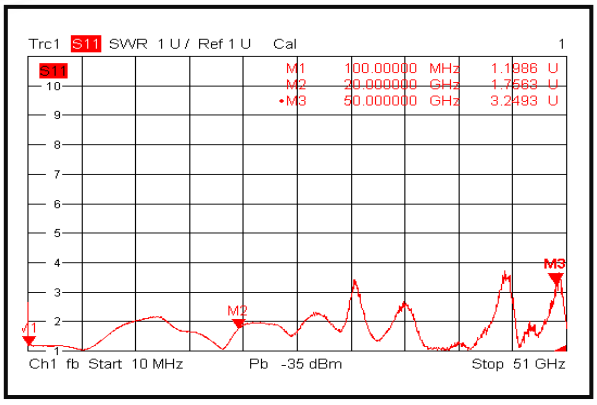
All Dimensions in mm (inches)



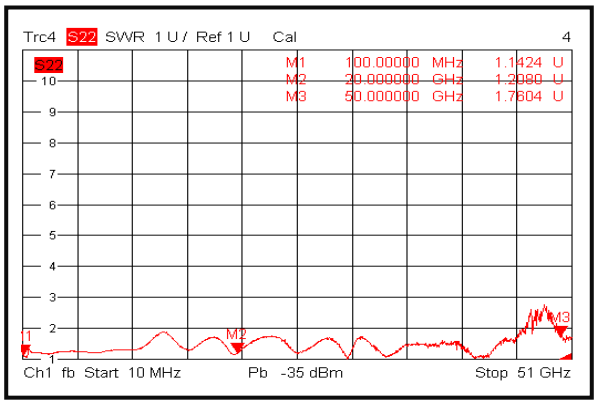
Gain @+25℃



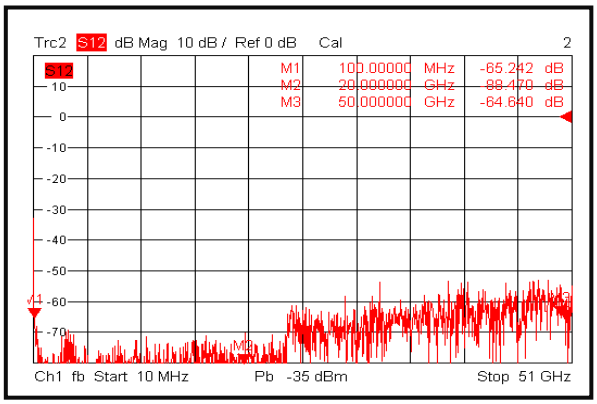
Input VSWR @+25℃



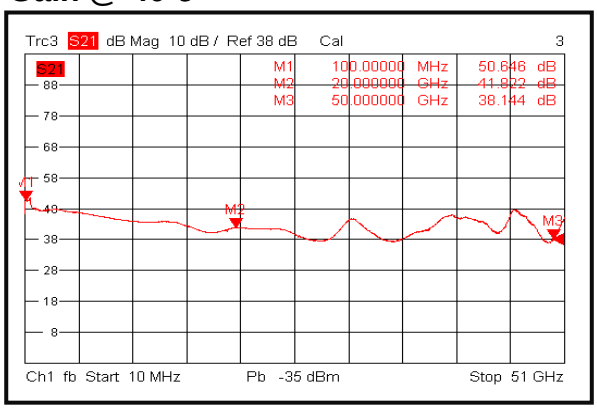
Output VSWR @+25℃



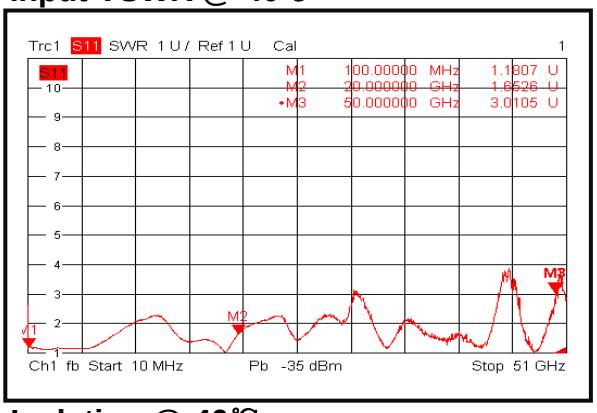
Isolation @+25℃



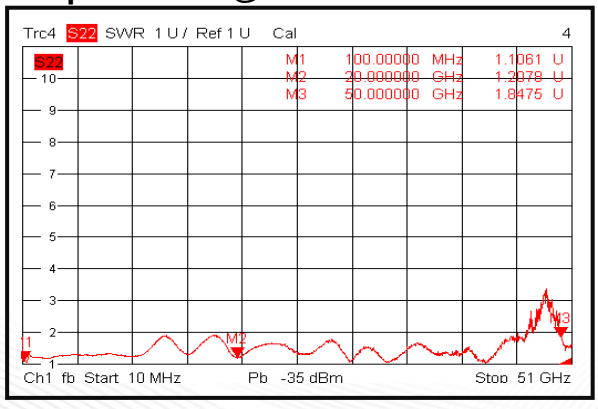
Gain @-40℃



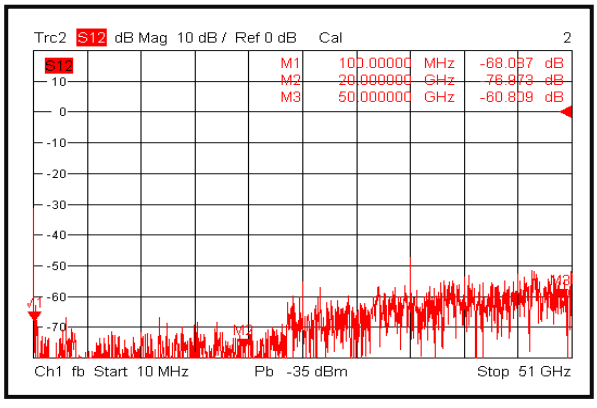
Input VSWR @-40℃



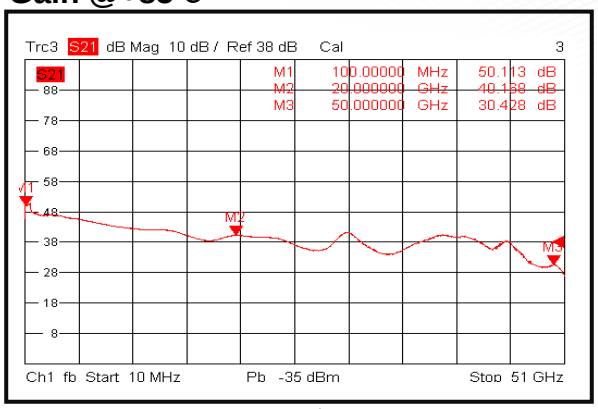
Output VSWR @-40℃



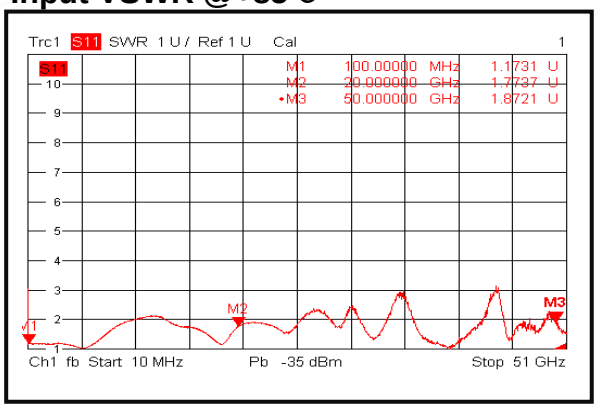
Isolation @-40℃



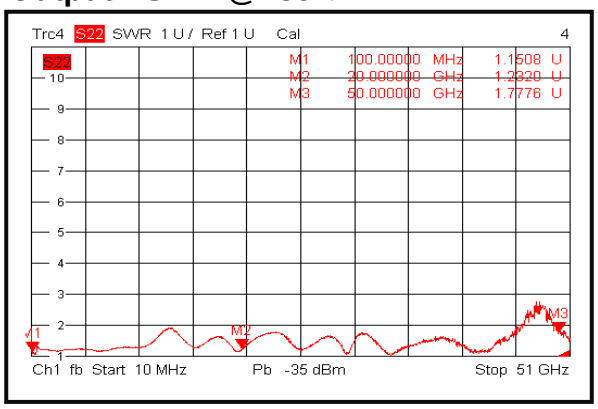
Gain @+85℃



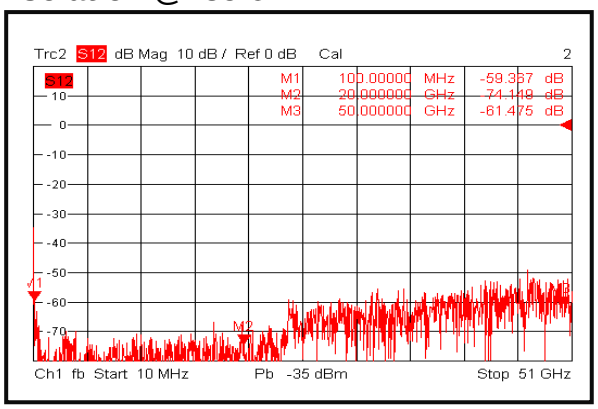
Input VSWR @+85℃



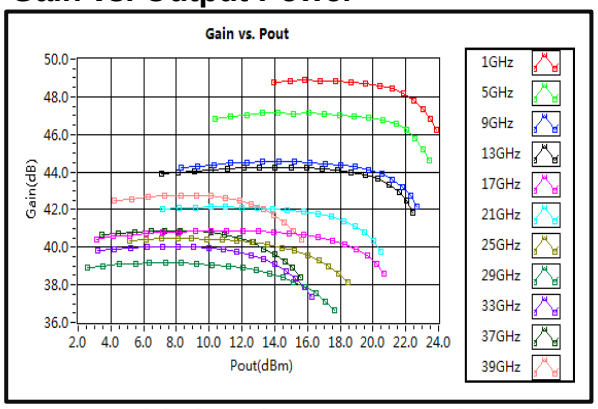
Output VSWR @+85℃



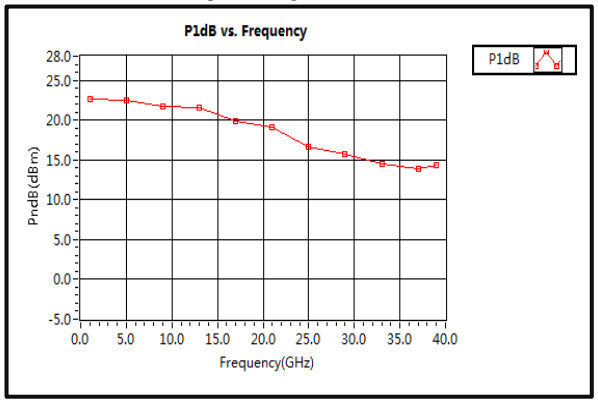
Isolation @+85℃



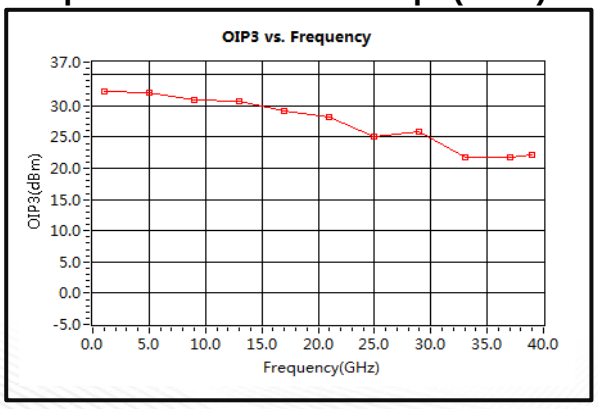
Gain vs. Output Power



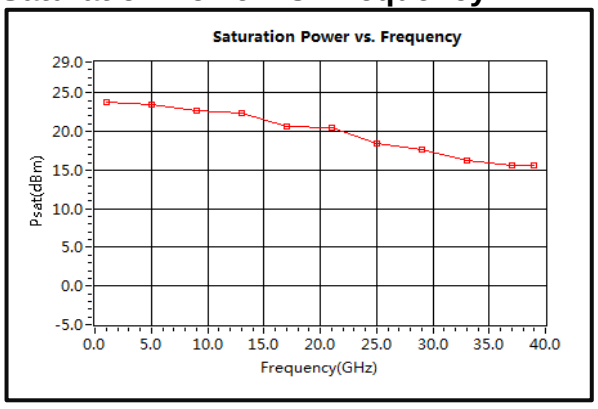
P1dB vs. Frequency



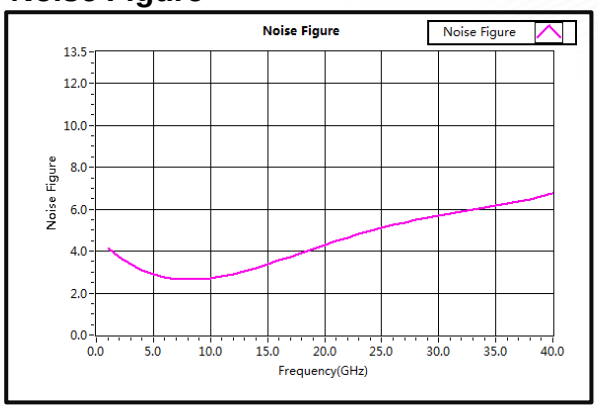
Output Third Order Intercept (OIP3)



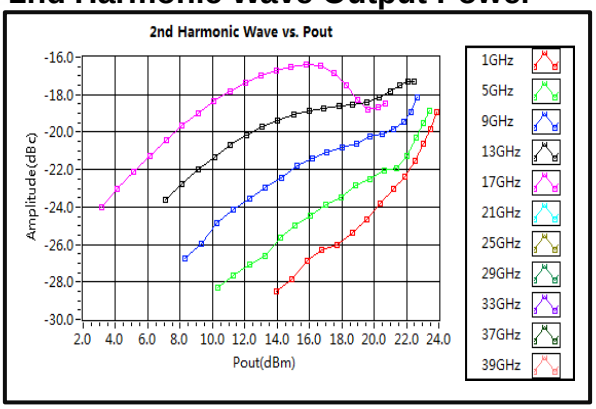
Saturation Power vs. Frequency



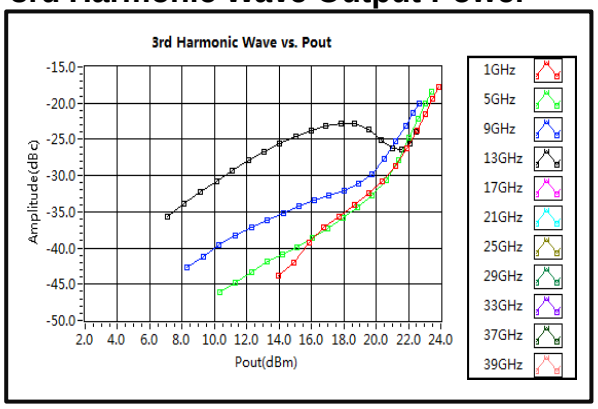
Noise Figure



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power