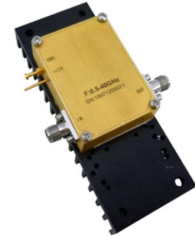




# Ultra Wide Band Low Noise Amplifier 0.5GHz~40GHz



## Features

- Gain: 43dB Typical
- Noise Figure: 4.0dB Typical
- P1dB Output Power: +18dBm Typical
- Supply Voltage: +12V @ 550mA
- 50 Ohm Matched

## 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	0.5		18	18		40	GHz
Gain	40	45		39	43		dB
Gain Flatness		±4.0			±2.5		dB
Gain Variation Over Temperature (-40°C~+85°C)		±1.5			±1.5		dB
Noise Figure		4.0			5.0		dB
Input VSWR		1.6			2.5		: 1
Output VSWR		1.6			2.0		: 1
Output 1dB Compression Point (P1dB)	18	22		13	18		dBm
Saturated Output Power (Psat)		23			20		dBm
Output Third Order Intercept (OIP3)		27			22		dBm
Supply Current (Idd) (Vdd=+12V)		550	650		550	650	mA
Isolation S12		-60			-50		dB

Weight	3.88 Ounces	Impedance	50ohms
Input / Output Connectors	2.92mm-Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)



### Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power (RFIN)	@0.5-6GHz -22dBm @6-26.5GHz -18dBm @26.5-40GHz -15dBm

### 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

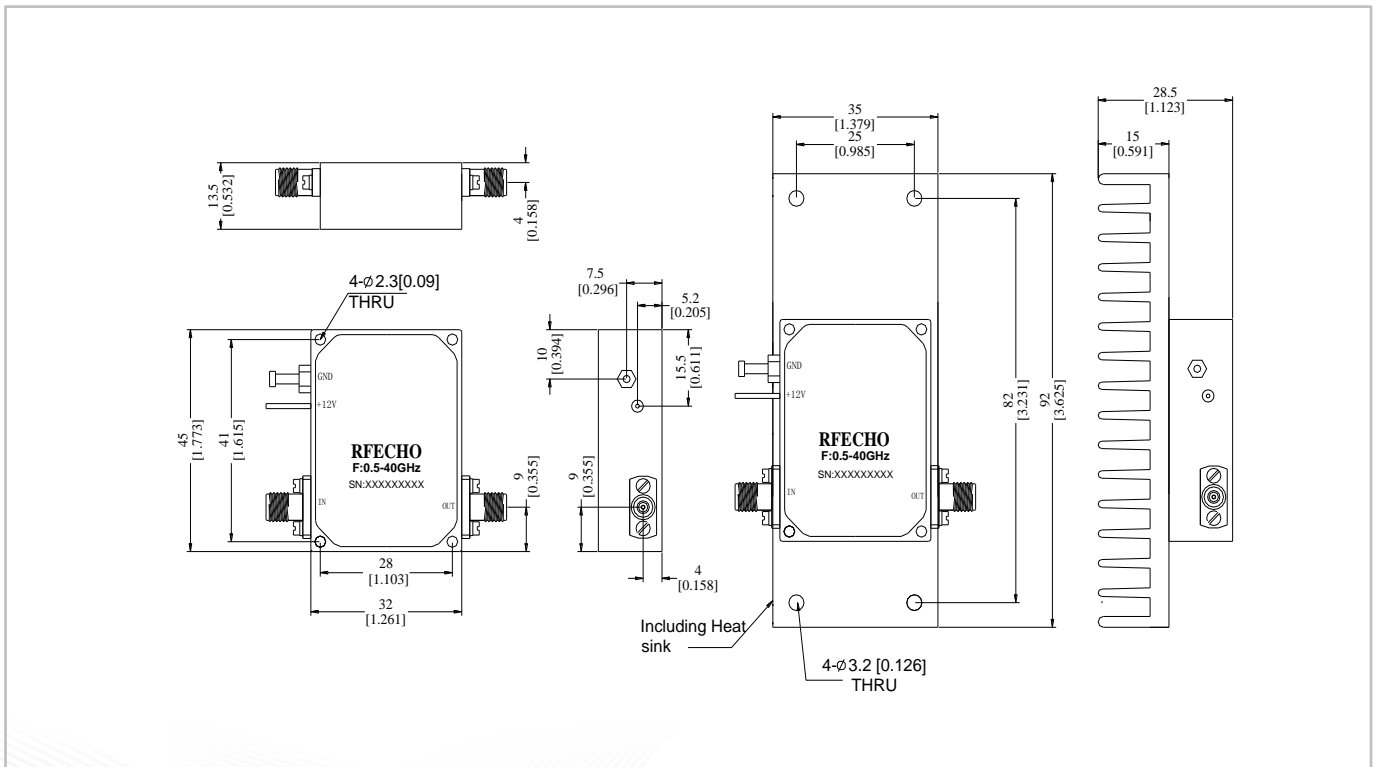
### Environmental Specifications

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 Uncontrolled 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:

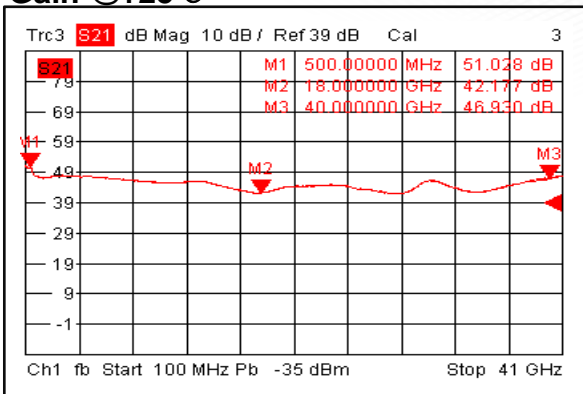
All Dimensions in mm [inches]

Heat Sink required during operation(Sold Separately)

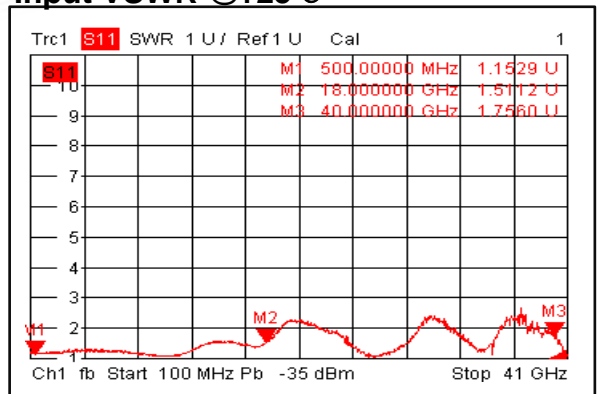




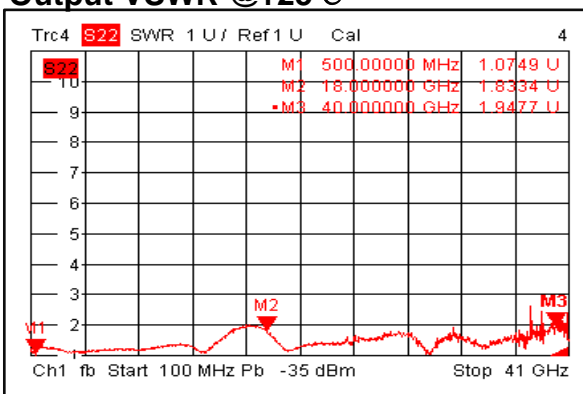
### Gain @+25°C



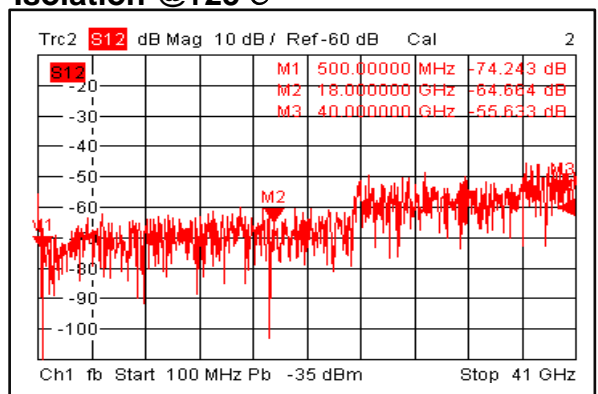
### Input VSWR @+25°C



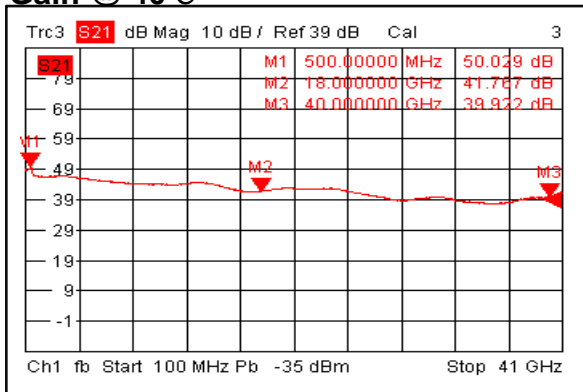
### Output VSWR @+25°C



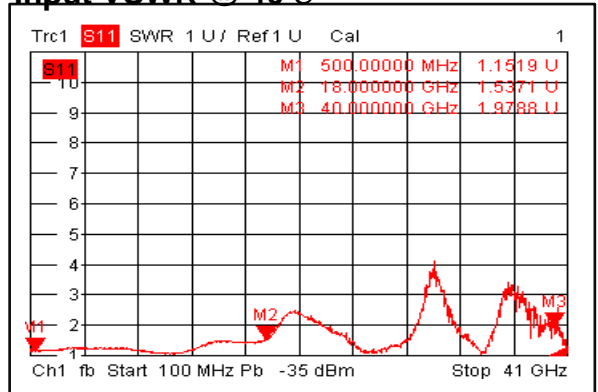
### Isolation @+25°C



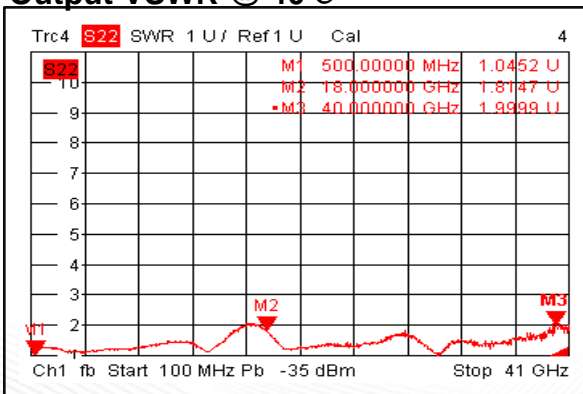
### Gain @-40°C



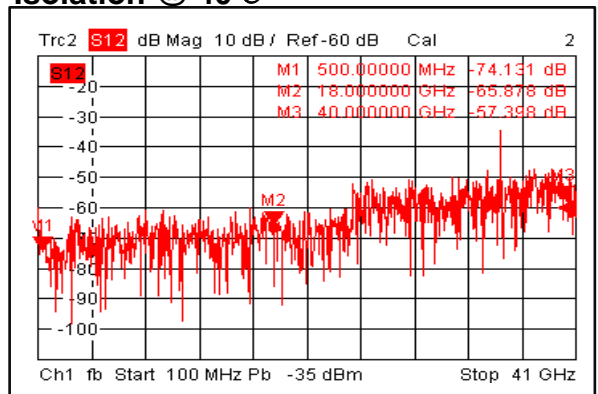
### Input VSWR @-40°C



### Output VSWR @-40°C

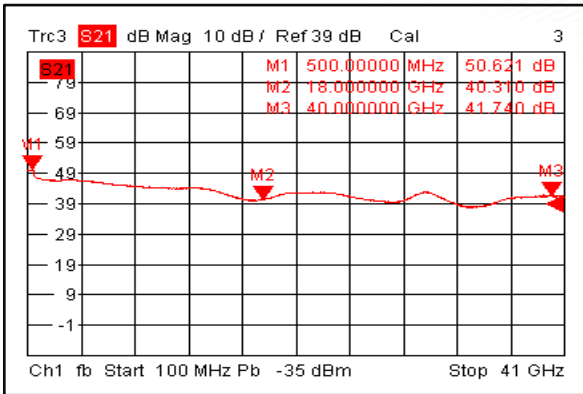


### Isolation @-40°C

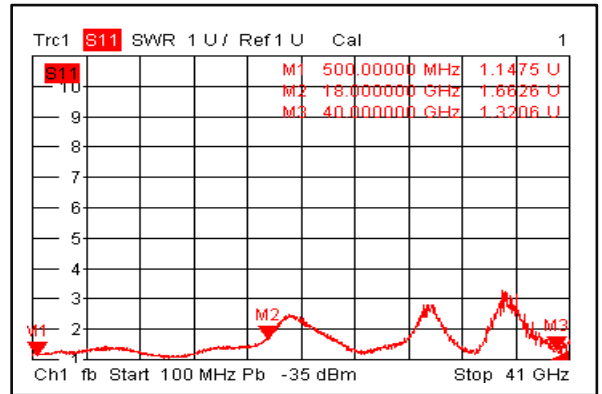




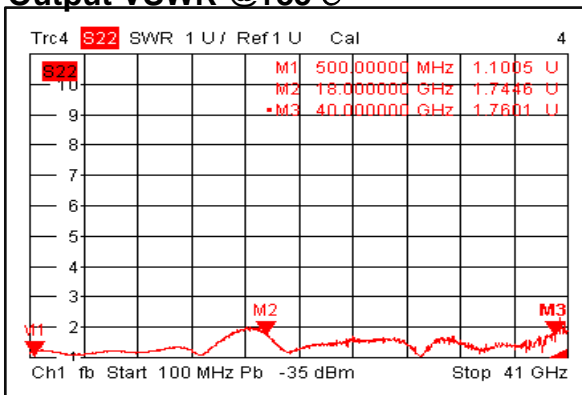
### Gain @+85°C



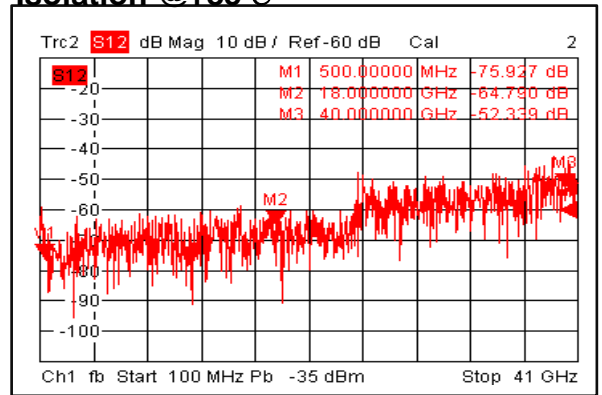
### Input VSWR @+85°C



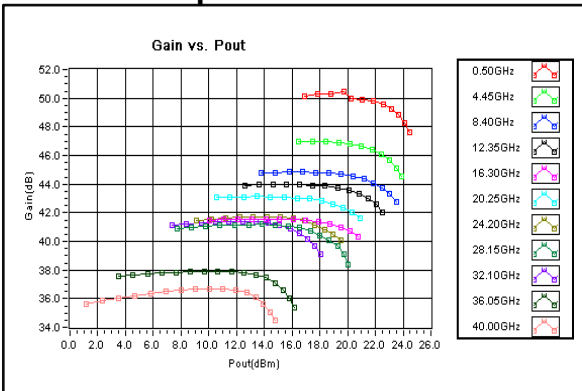
### Output VSWR @+85°C



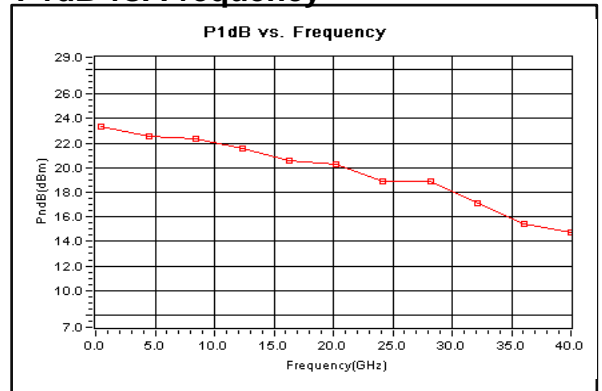
### Isolation @+85°C



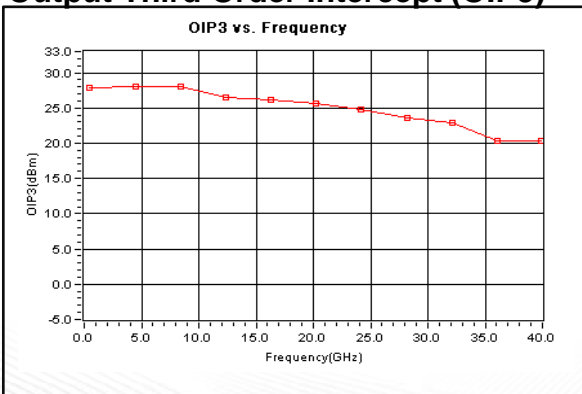
### Gain vs. Output Power



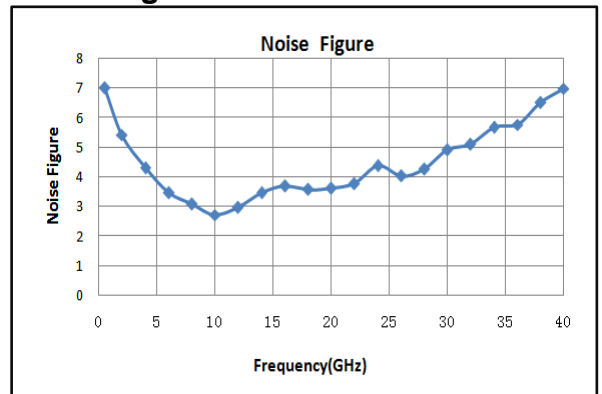
### P1dB vs. Frequency



### Output Third Order Intercept (OIP3)

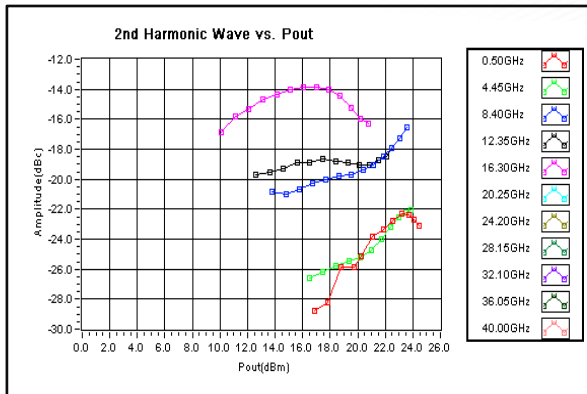


### Noise Figure

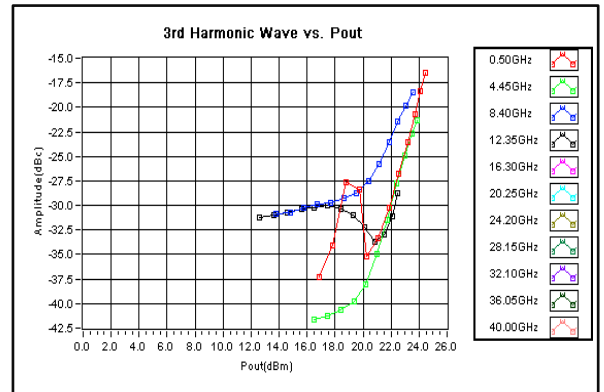




## 2nd Harmonic Wave Output Power



## 3rd Harmonic Wave Output Power



## 4th Harmonic Wave Output Power

