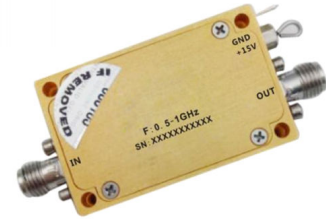




Ultra Low Noise Figure Amplifier 0.5GHz~1GHz

Features

- Gain: 45dB Typical
- Noise Figure: 0.6dB Typical
- P1dB Output Power: +21dBm Typical
- Supply Voltage: +15V /160mA
- 50 Ohm Matched



Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.5		1	GHz
Gain	41	45		dB
Gain Flatness		±2.5	±3.0	dB
Gain Variation Over Temperature(-40 ~ +85)		±0.8		dB
Noise Figure		0.6	0.95	dB
Input VSWR		1.5	2.0	: 1
Output VSWR		2.0	2.5	: 1
Output 1dB Compression Point (P1dB)	19.5	21		dBm
Saturated Output Power (Psat)		23		dBm
Output Third Order Intercept (OIP3)		36		dBm
Supply Current (Vcc=+15V)		160	200	mA
Isolation S12		-55		dB

Weight	1.76ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)



Absolute Maximum Ratings

Operating Voltage	+15.5V
RF Input Power (RFIN)	-25dBm

Biassing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +15V biasing

Power OFF Procedure

Step 1	Turn off +15V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

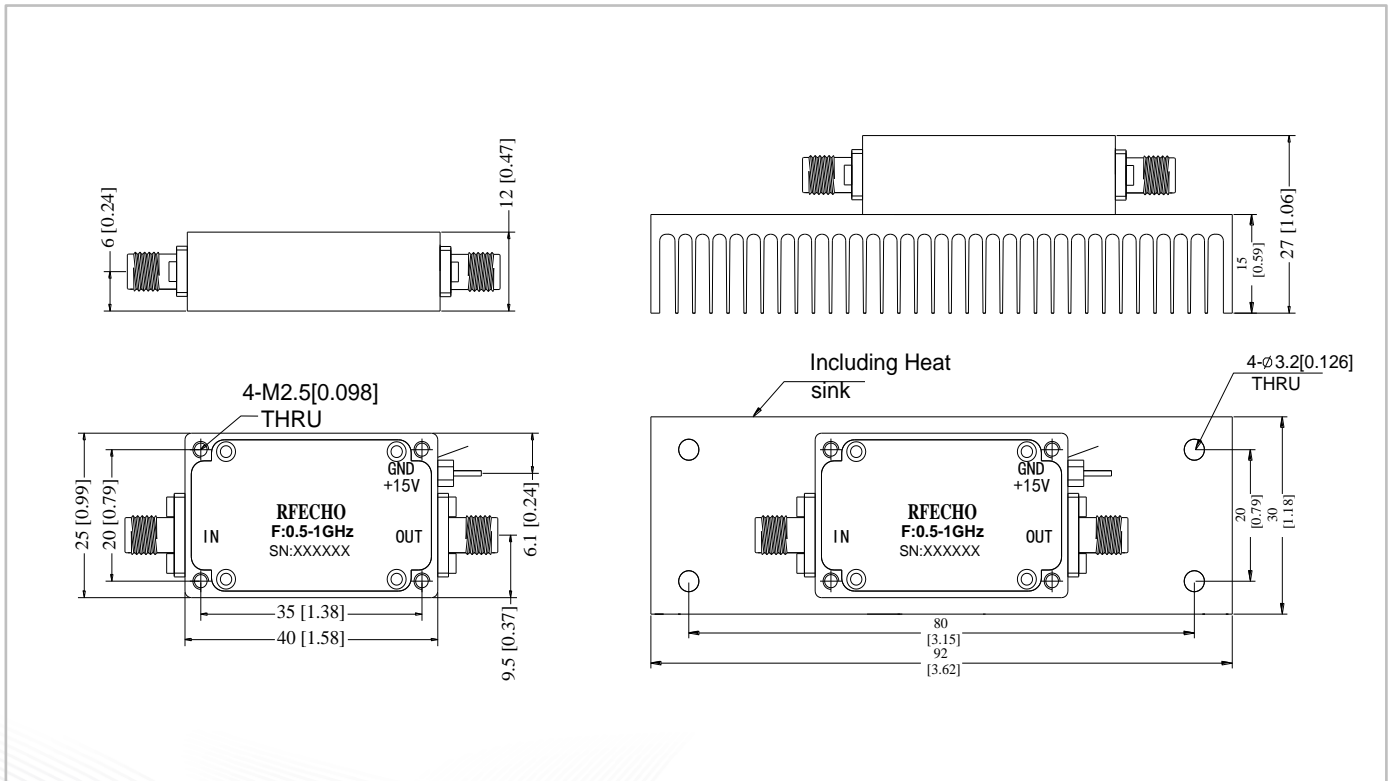
Environmental Specifications

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 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:

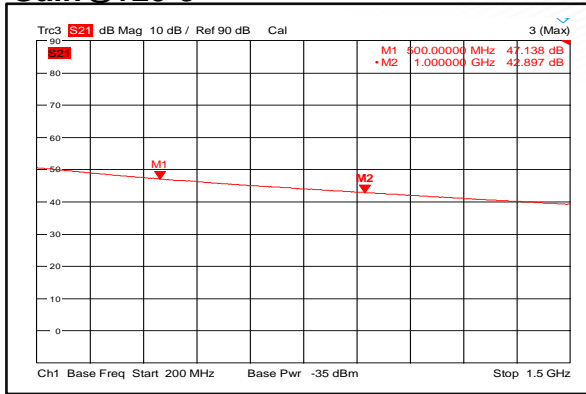
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

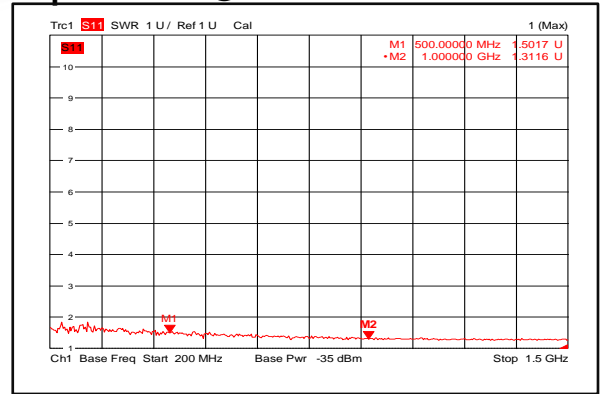




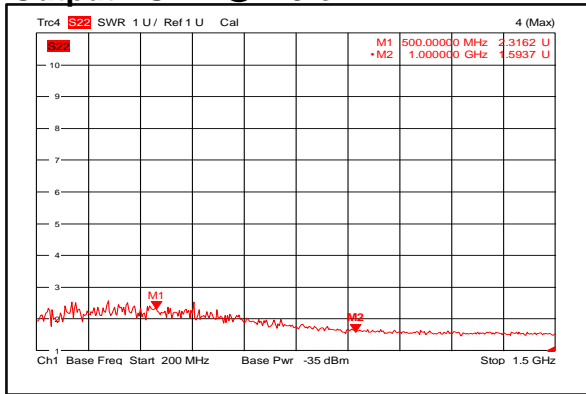
Gain@+25°C



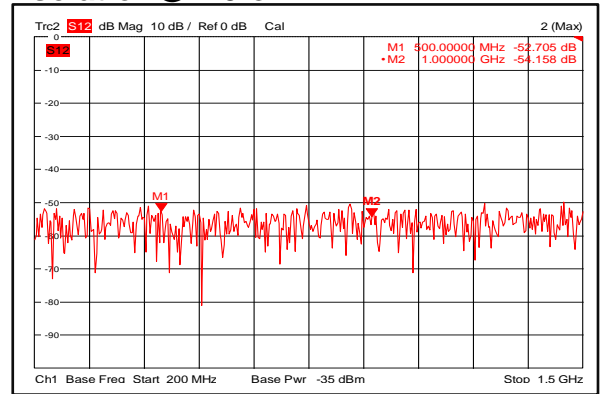
Input VSWR @+25°C



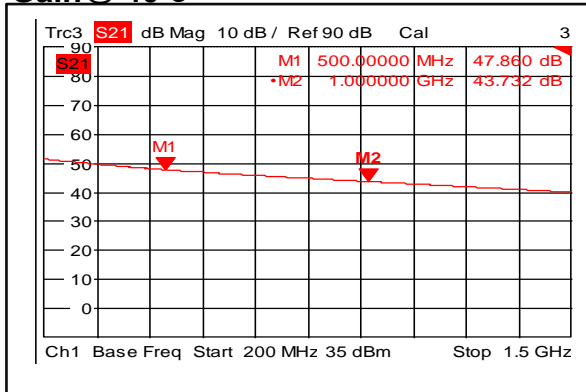
Output VSWR @+25°C



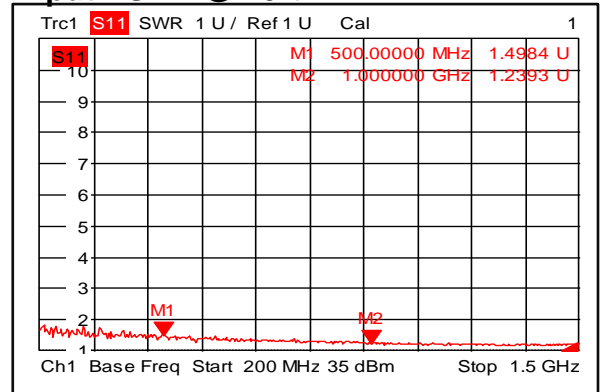
Isolation @+25°C



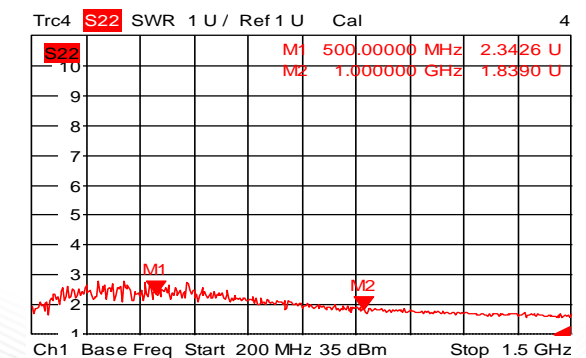
Gain@-40°C



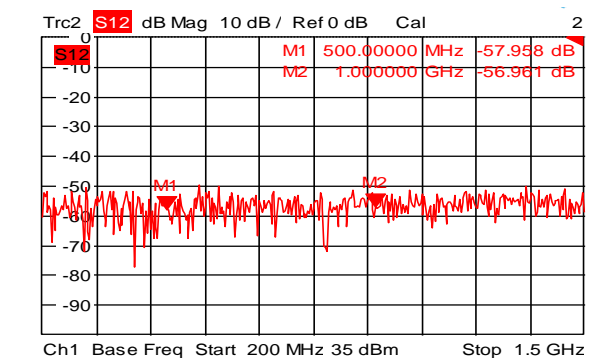
Input VSWR @-40°C



Output VSWR @-40°C

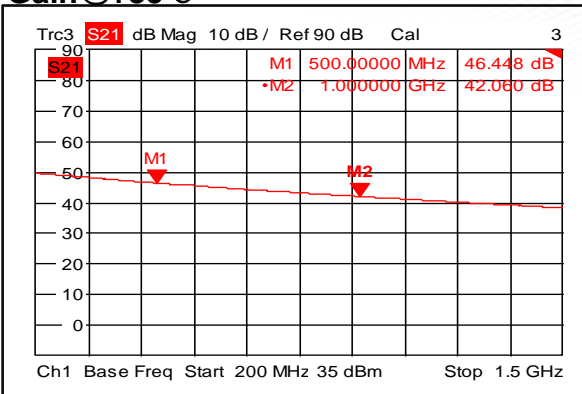


Isolation @-40°C

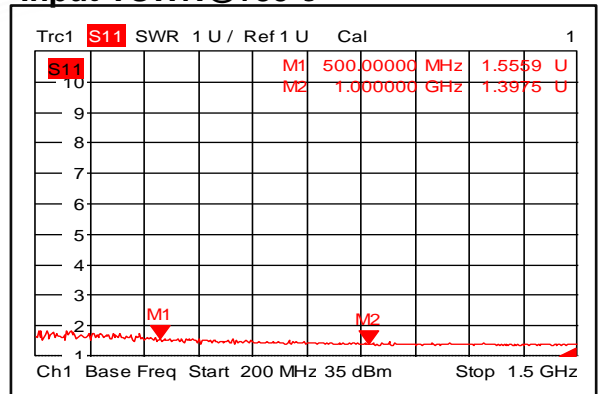




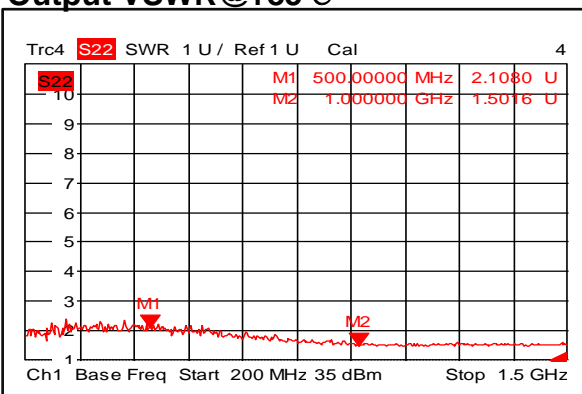
Gain@+85°C



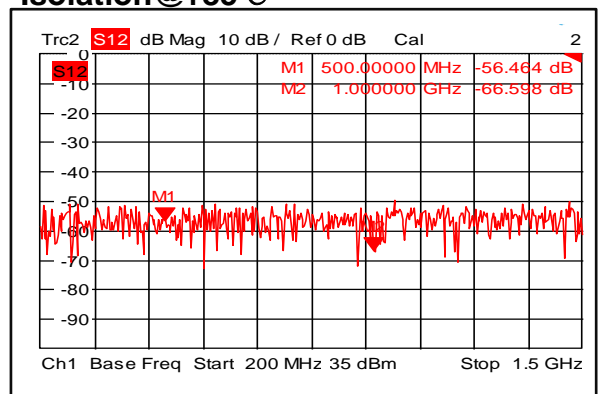
Input VSWR@+85°C



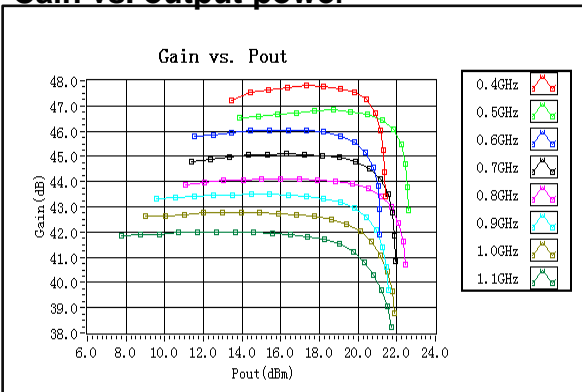
Output VSWR@+85°C



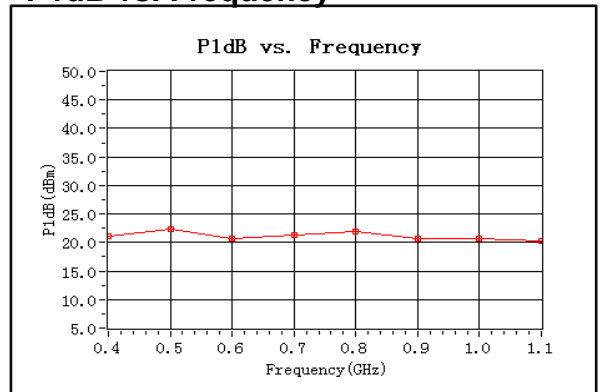
Isolation@+85°C



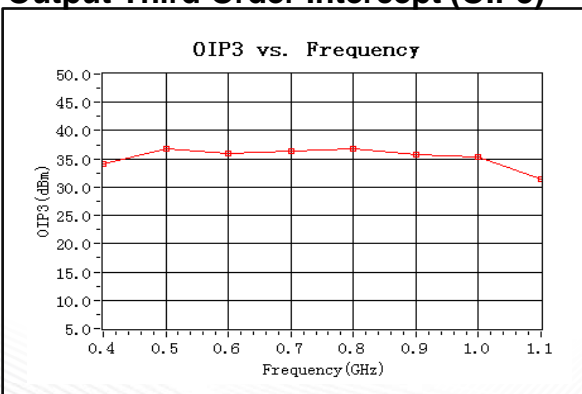
Gain vs. output power



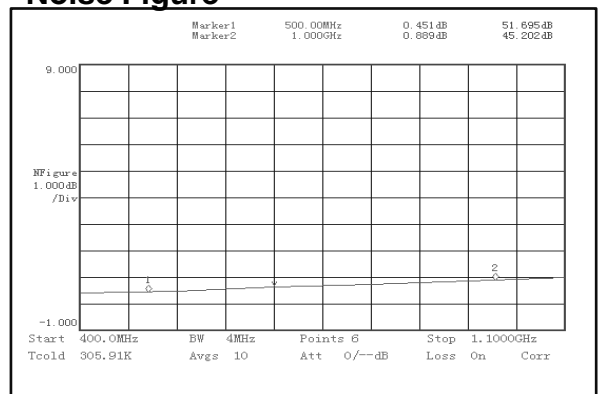
P1dB vs. Frequency



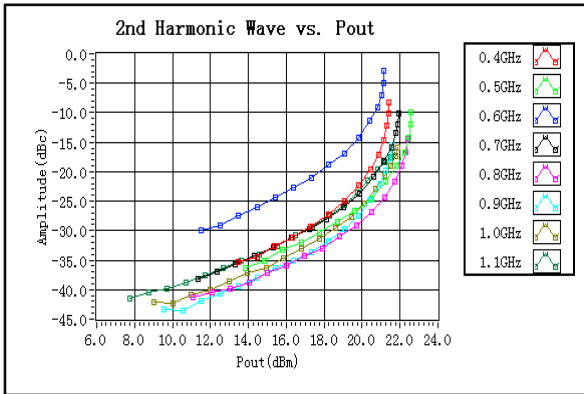
Output Third Order Intercept (OIP3)



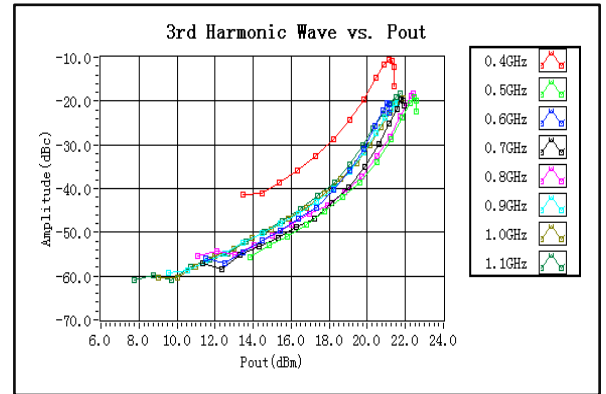
Noise Figure



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

