Low Noise Amplifier 9.5~10.8GHz

Features

- Gain: 36dB typical
- Noise Figure: 2.0dB typical
- High P1dB: +15dBm typical
- Supply Voltage: +12V
- 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	9.5		10.8	GHz
Gain	34	36		dB
Gain Flatness		±0.5	±1.0	dB
Gain Variation Over Temperature (-40°C~+85°C)		±0.8	±1.0	dB
Noise Figure		2.0	2.5	dB
Input VSWR		1.6	1.8	: 1
Output VSWR		1.5	1.8	: 1
Output 1dB Compression Point (P1dB)	13	15		dBm
Saturated Output Power (Psat)		16		dBm
Output Third Order Intercept (OIP3)		25		dBm
Supply Current (Vcc=+12V)		180	210	mA
Isolation S12		-60		dB

Weight	0.71 ounces	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	+15V
RF Input Power (RFIN)	-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

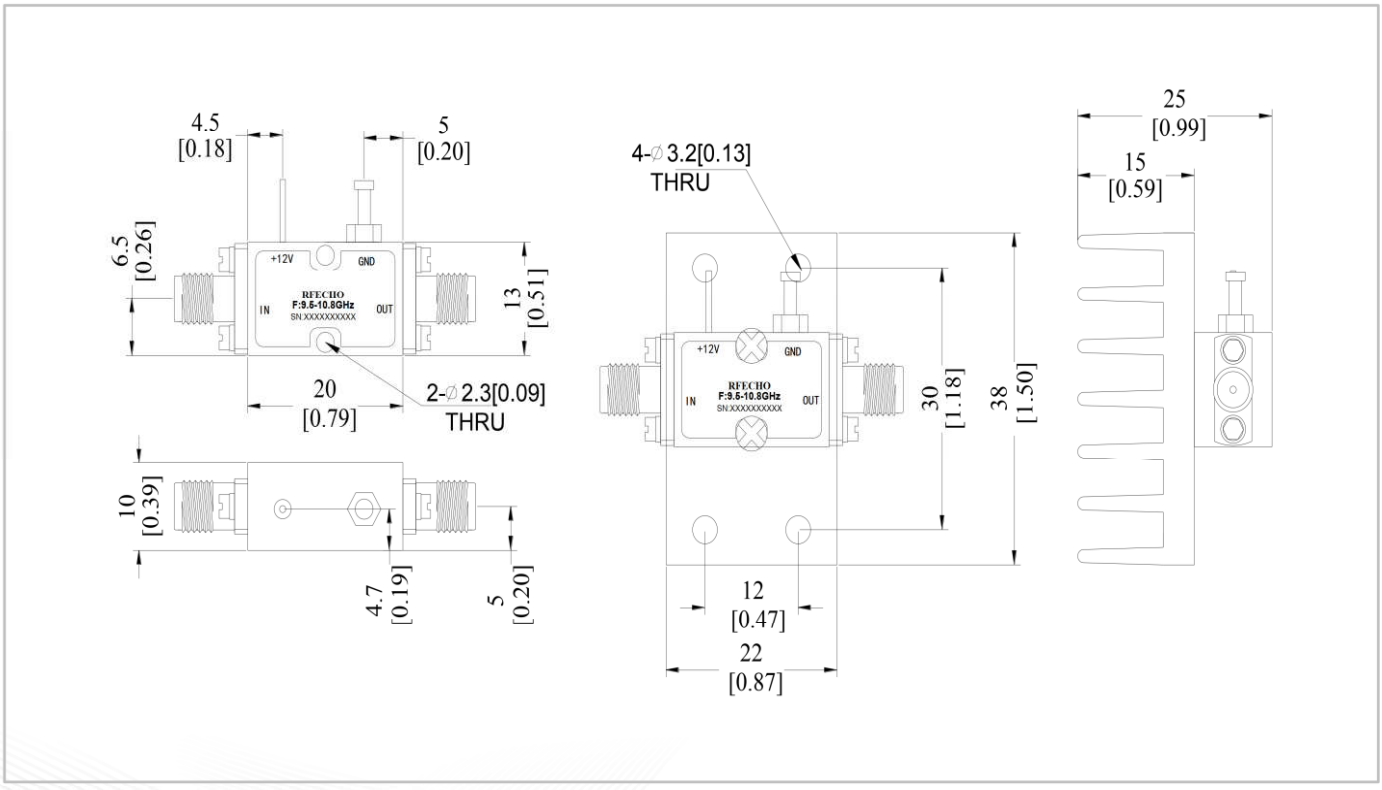
Environmental Specifications

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 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

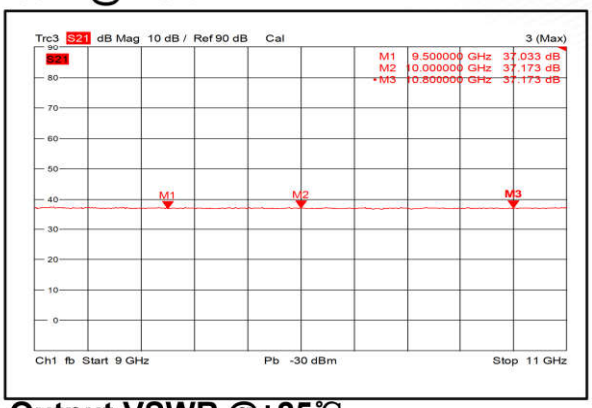
Outline Drawing:

All Dimensions in mm (inches)

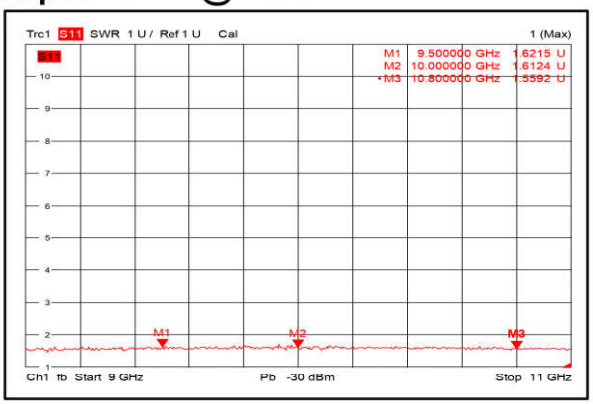
Heat Sink required during operation(Sold Separately)



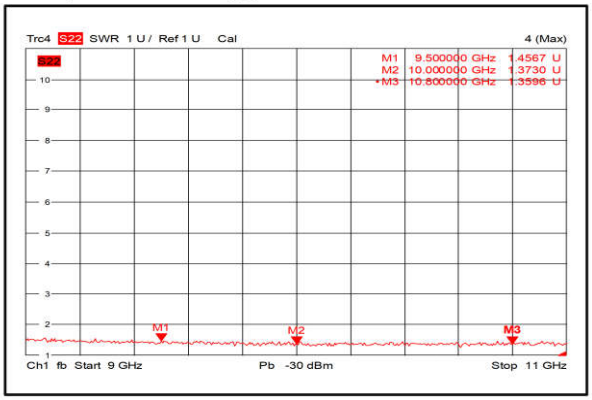
Gain @+25℃



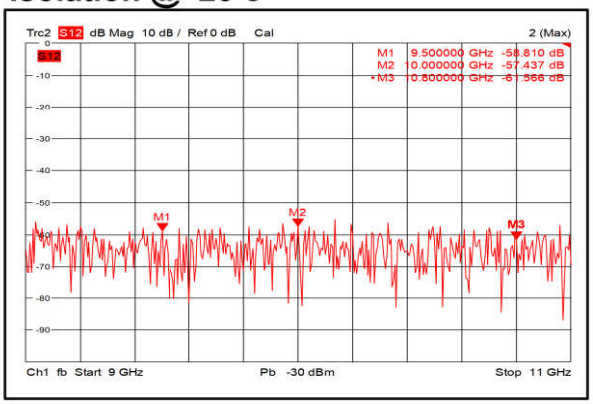
Input VSWR @+25℃



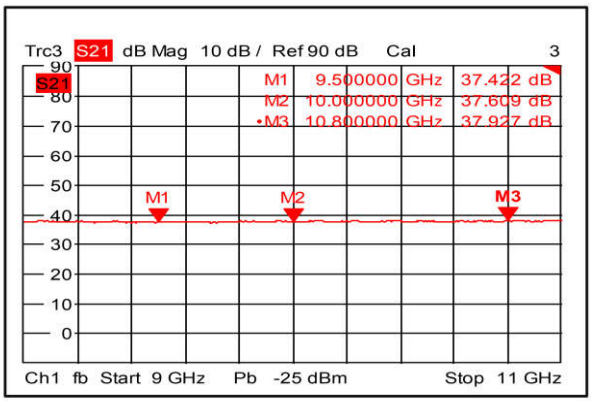
Output VSWR @+25℃



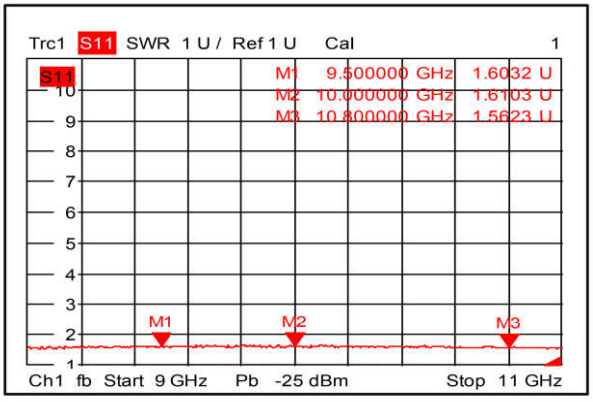
Isolation @+25℃



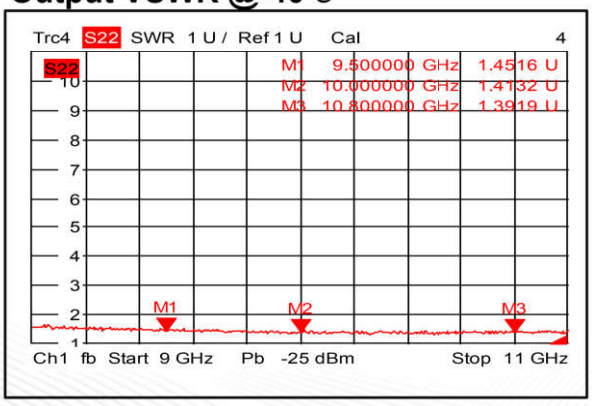
Gain @-40℃



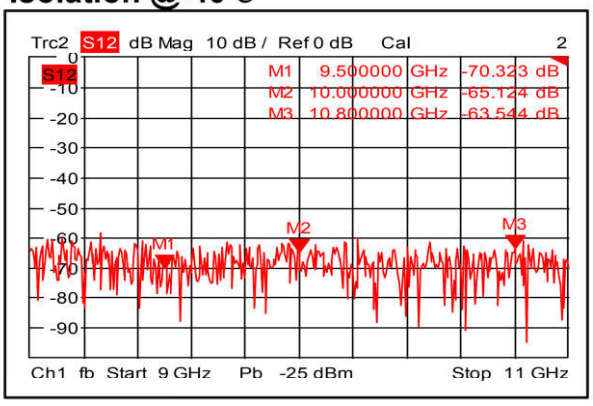
Input VSWR @-40℃



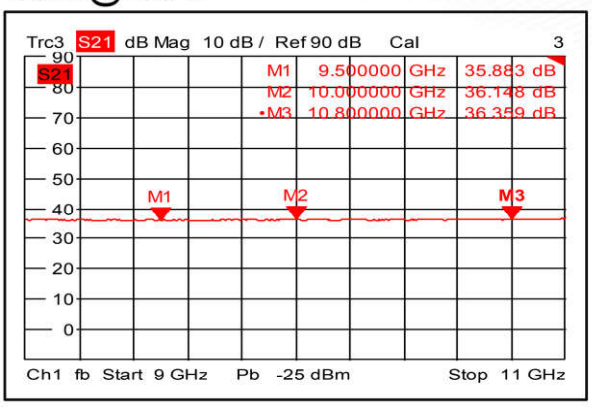
Output VSWR @-40℃



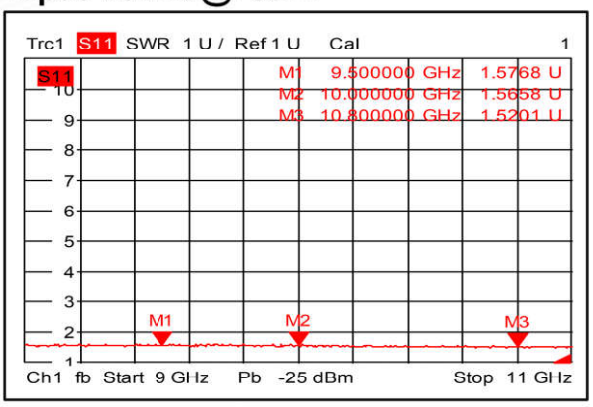
Isolation @-40℃



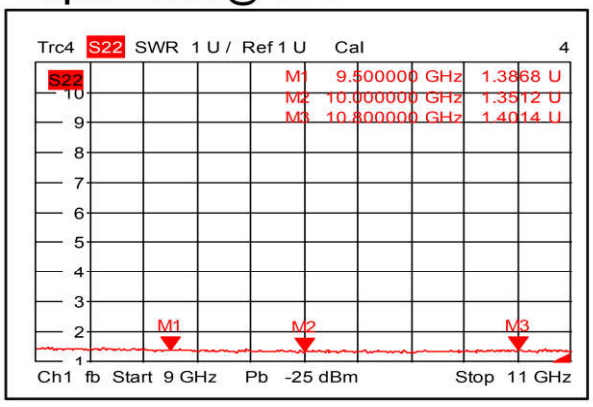
Gain @+85℃



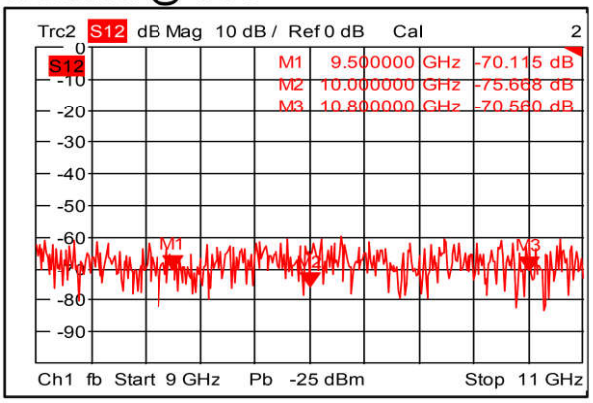
Input VSWR @+85℃



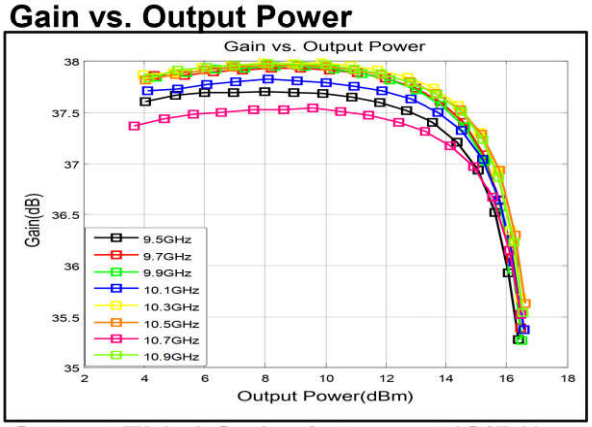
Output VSWR @+85℃



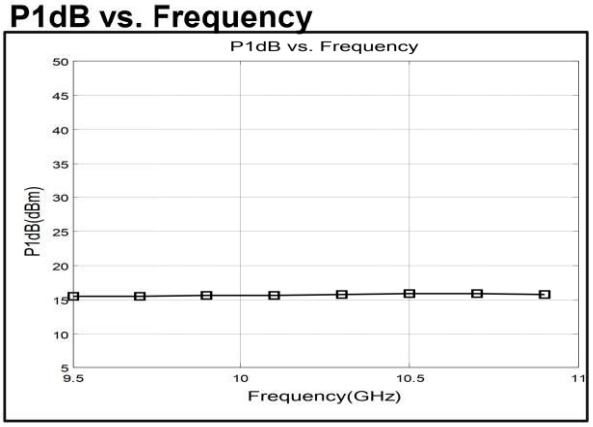
Isolation @+85℃



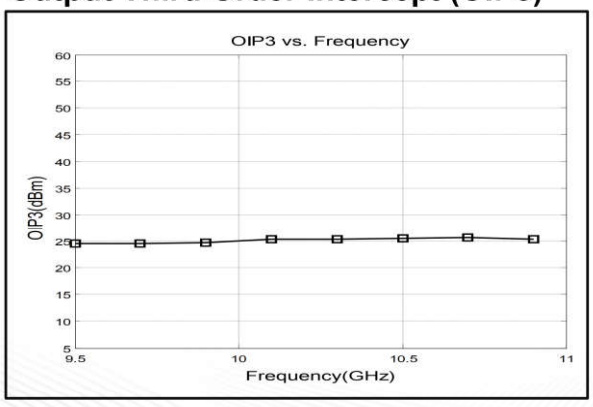
Gain vs. Output Power



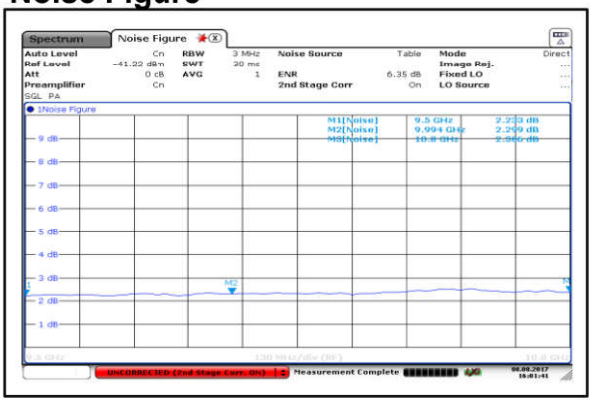
P1dB vs. Frequency



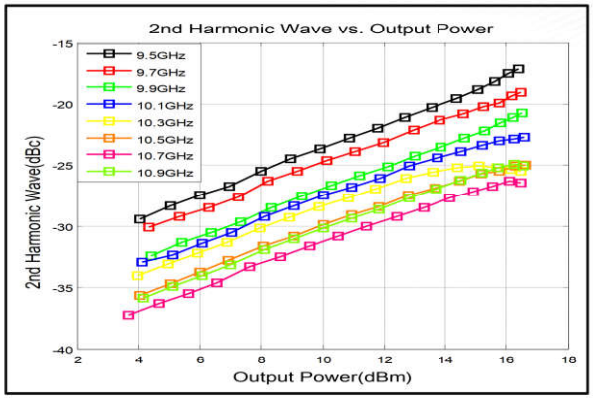
Output Third Order Intercept (OIP3)



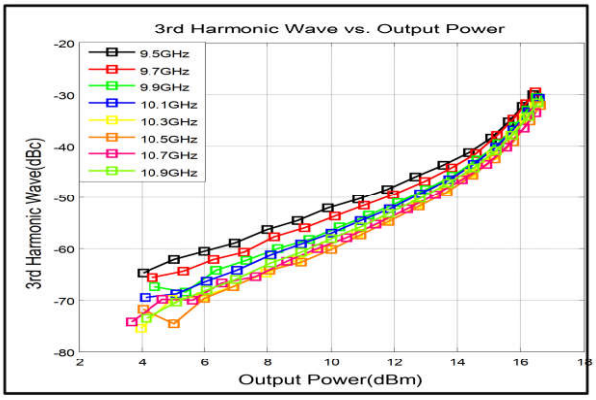
Noise Figure



2nd Harmonic Wave output Power



3rd Harmonic Wave output Power



4th Harmonic Wave output Power