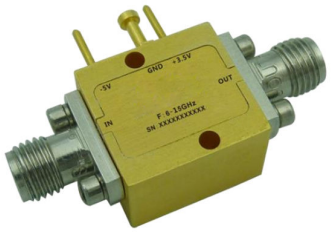
Ultra Wide Band Low Noise Amplifier 6GHz~15GHz



Features

- Gain: 25dB Typical
- Noise Figure: 1.8dB Typical
- P1dB Output Power: +18dBm Typical
- Supply Voltage: +3.5V
- 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	6		15	GHz
Gain	23	25		dB
Gain Flatness		±1.0		dB
Gain Variation Over Temperature (-40 ~ +85)		±1.0		dB
Noise Figure		1.4	1.8	dB
Input VSWR		1.8		: 1
Output VSWR		1.8		: 1
Output 1dB Compression Point (P1dB)	14	18		dBm
Saturated Output Power (Psat)		20		dBm
Output Third Order Intercept (OIP3)		24		dBm
Supply Current (Vcc=+3.5V)		120	180	mA
Isolation S12		-48		dB

Weight	0.35ounces	Impedance	50ohms
Input /Output Connectors	SAM - Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+4V
RF Input Power (RFIN)	+20dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
step3	Connect -5V biasing
Step 4	Connect +3.5V biasing

Power OFF Procedure

Step 1	Turn off +3.5V biasing
step2	Turn off -5V biasing
Step 3	Remove RF connection
Step 4	Remove Ground.

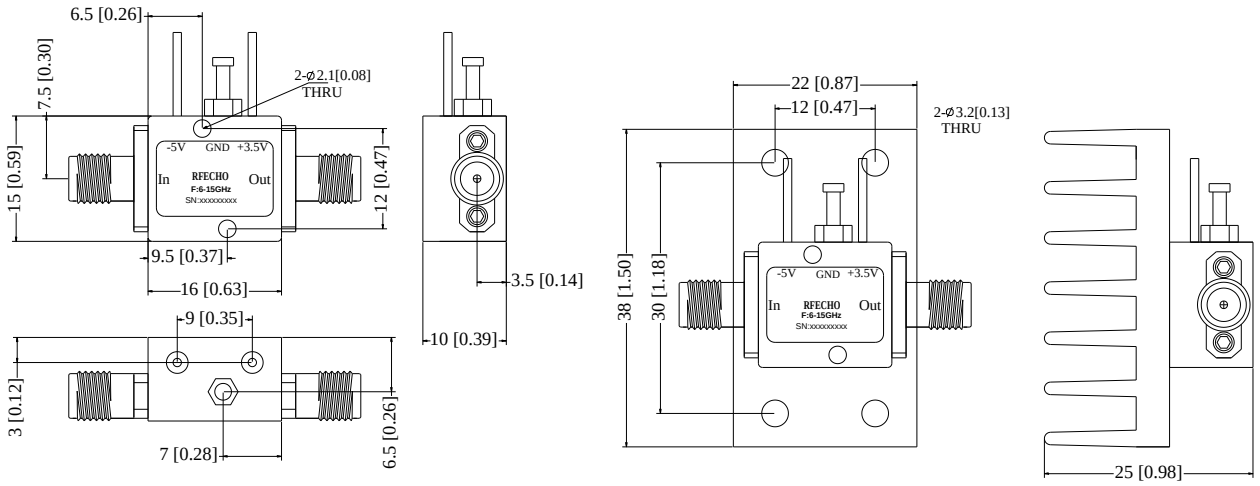
Environmental Specifications

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 35c, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

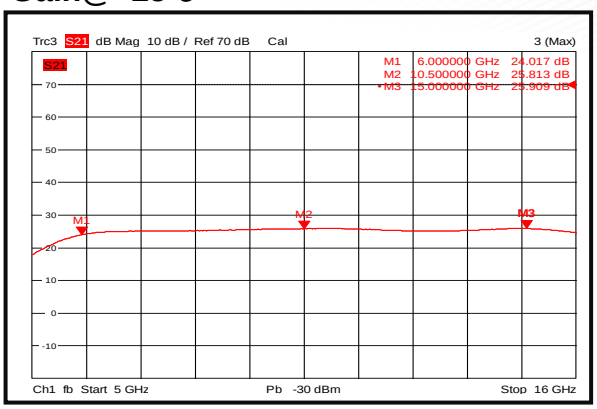
Outline Drawing:

All Dimensions in mm (inches)

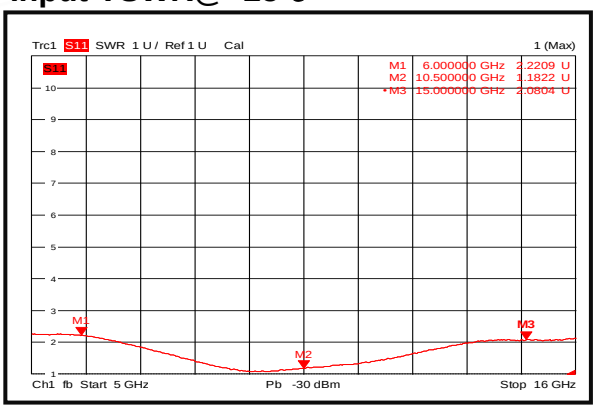
Heat Sink required during operation(Sold Separately)



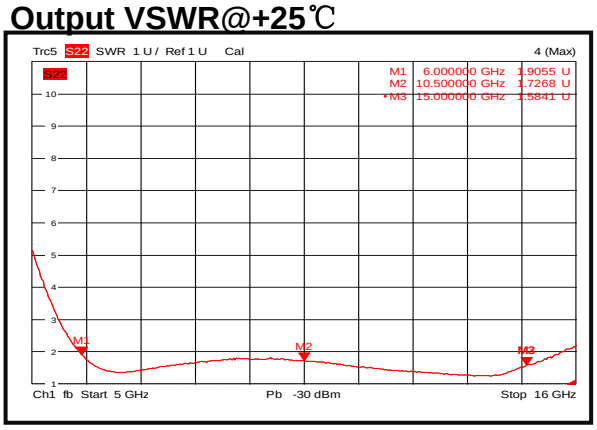
Gain@+25℃



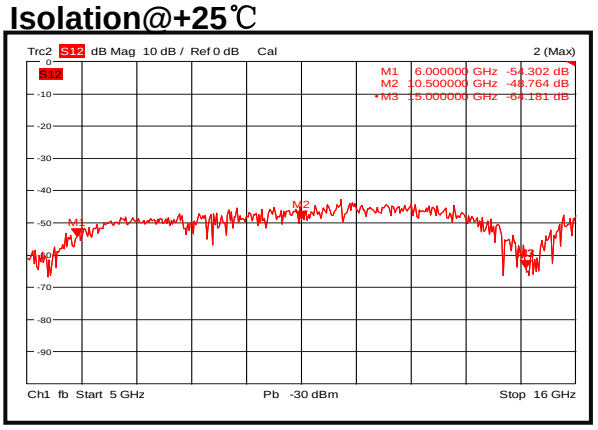
Input VSWR@+25℃



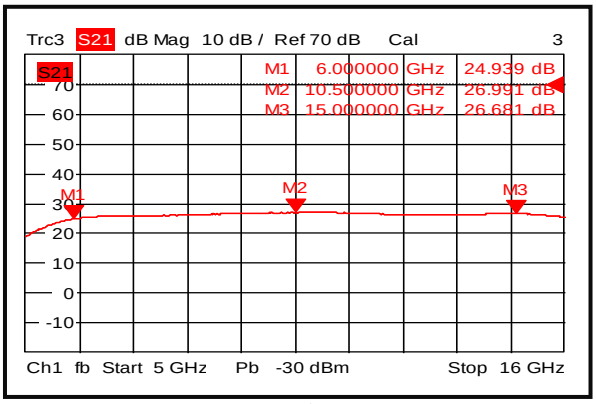
Output VSWR@+25℃



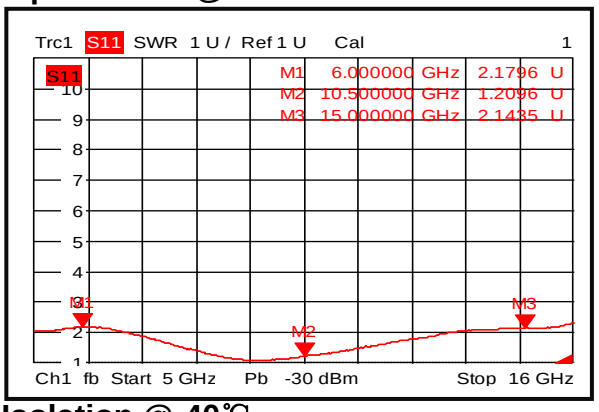
Isolation@+25℃



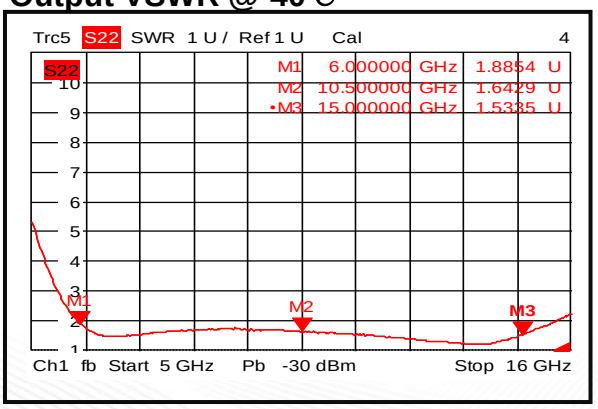
Gain @-40℃



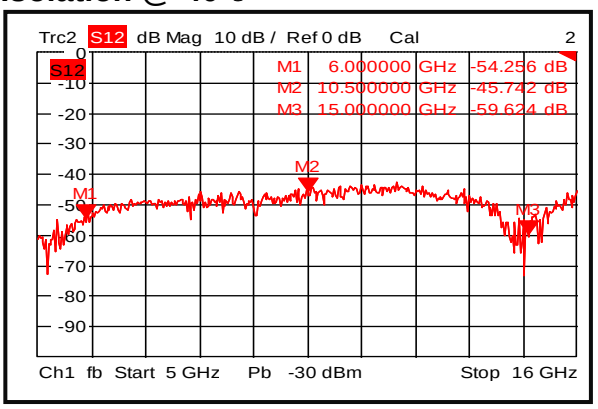
Input VSWR @-40℃



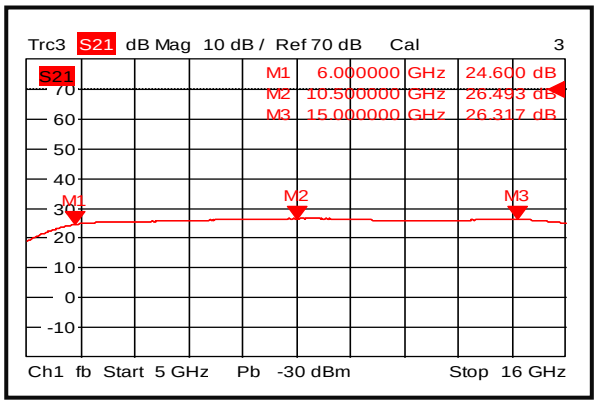
Output VSWR @-40℃



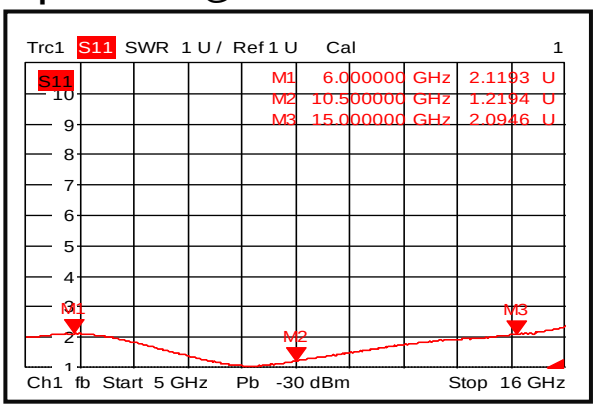
Isolation @-40℃



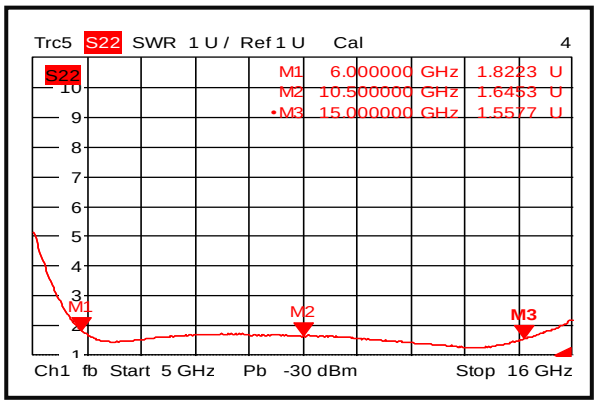
Gain @+85℃



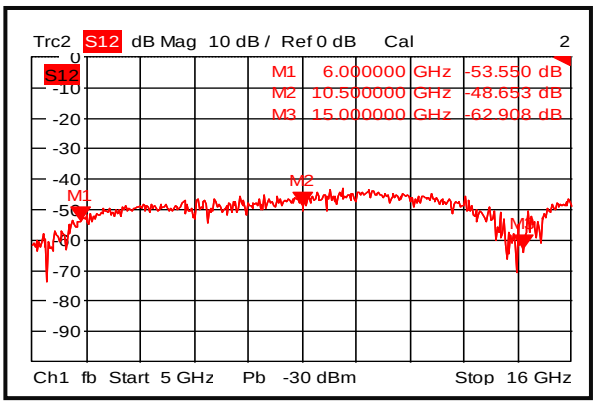
Input VSWR @+85℃



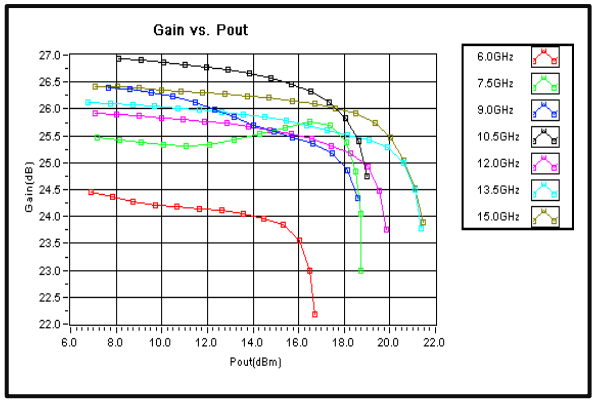
Output VSWR @+85℃



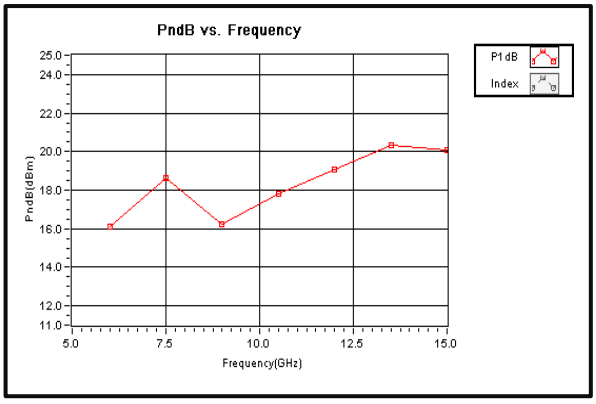
Isolation @+85℃



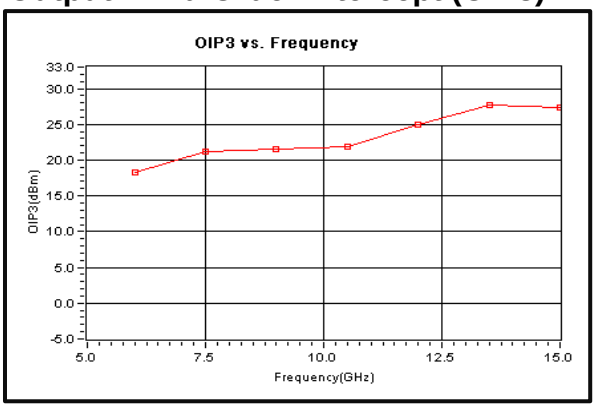
Gain vs. Output Power



P1dB vs. Frequency

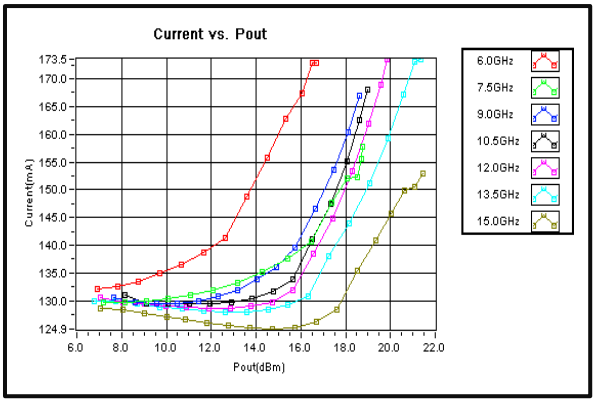


Output Third Order Intercept (OIP3)

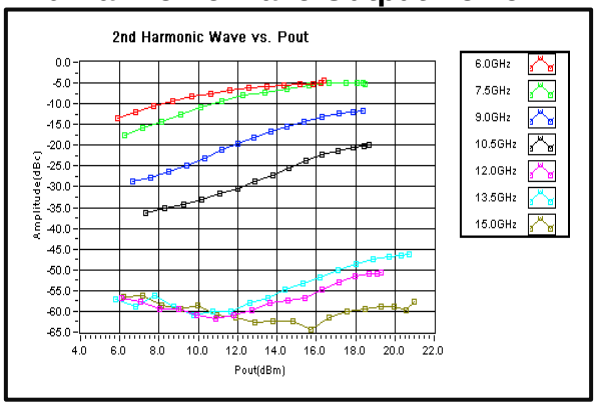


Noise Figure

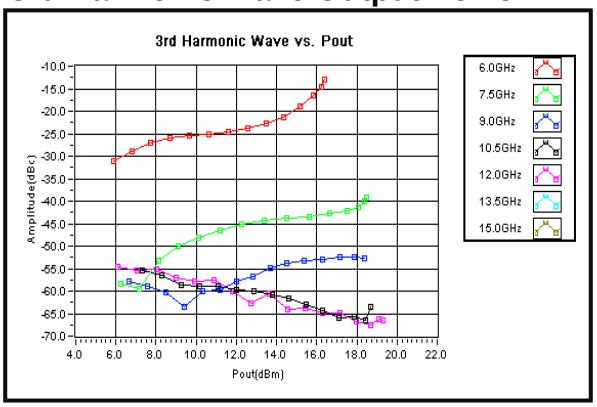
Current



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power