Ultra Wide BandLow Noise Amplifier 6GHz~17GHz

Features

- Gain: 19dB Typical
- Noise Figure: 1.7dB Typical
- P1dB Output Power: +15dBm Typical
- Supply Voltage: +4V @ 90mA
- 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	6		12	12		17	GHz
Gain	18	20		17	19		dB
Gain Flatness		±1.0	±1.5		±0.5	±1.0	dB
Gain Variation Over Temperature(-40 ~ +85)		±0.5			±0.8		dB
Noise Figure		2.0	2.8		1.7	2.5	dB
Input VSWR		1.8	2.2		1.8	2.2	: 1
Output VSWR		1.9	2.2		1.8	2.2	: 1
Output 1dB Compression Point (P1dB)	13	15		14	16		dBm
Saturated Output Power (Psat)		16			17		dBm
Output Third Order Intercept (OIP3)		25			27		dBm
Supply Current (Idd) (Vcc=+4V)		90	120		90	120	mA
Isolation S12		-35			-35		dB

Weight	0.35 ounces	Impedance	50 ohms
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	+4.5V
RF Input Power (RFIN)	+10dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +4V biasing

Power OFF Procedure

Step 1	Turn off +4V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

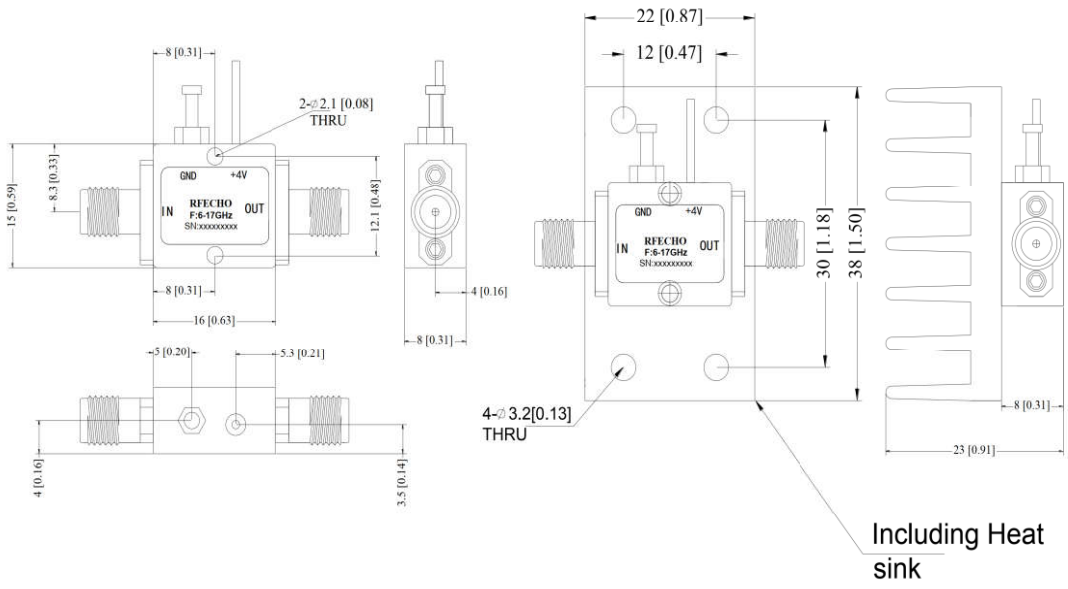
Environmental Specifications

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

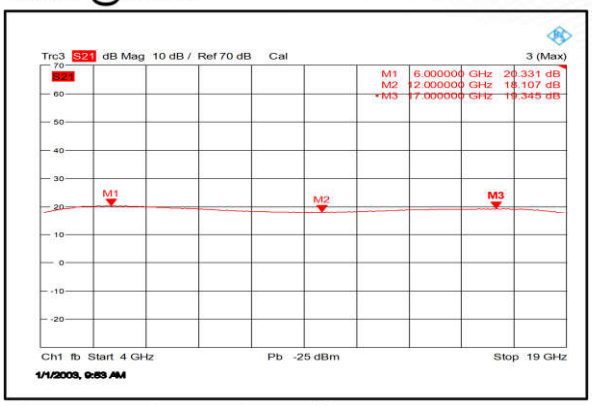
Outline Drawing:

All Dimensions in mm (inches)

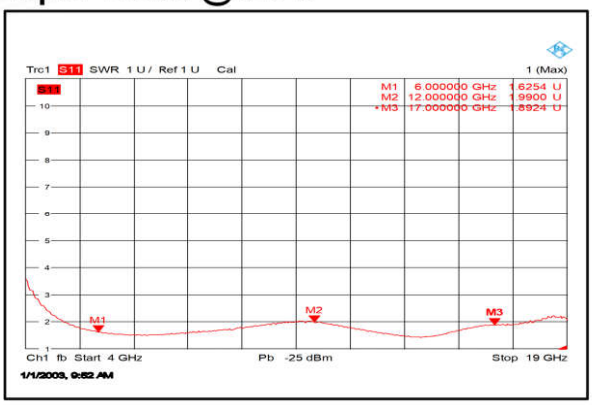
Heat Sink required during operation(Sold Separately)



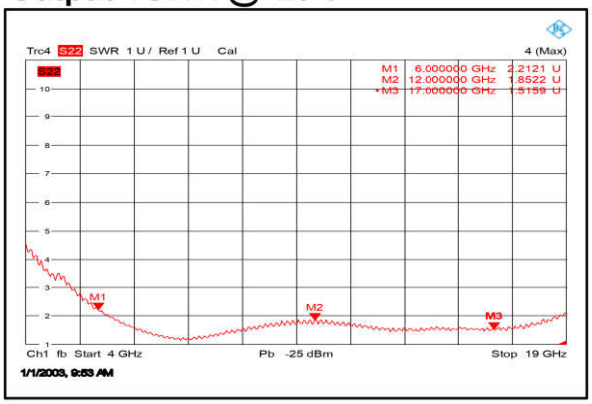
Gain @+25℃



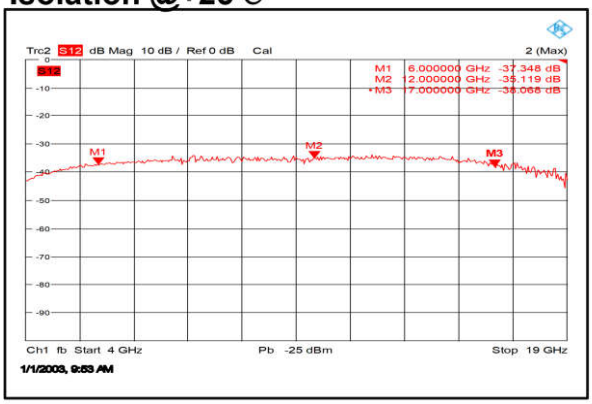
Input VSWR @+25℃



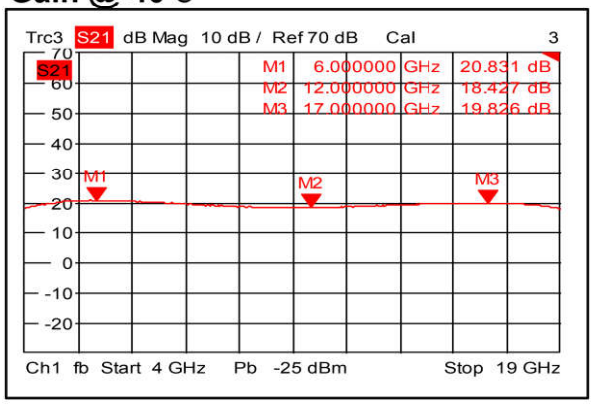
Output VSWR @+25℃



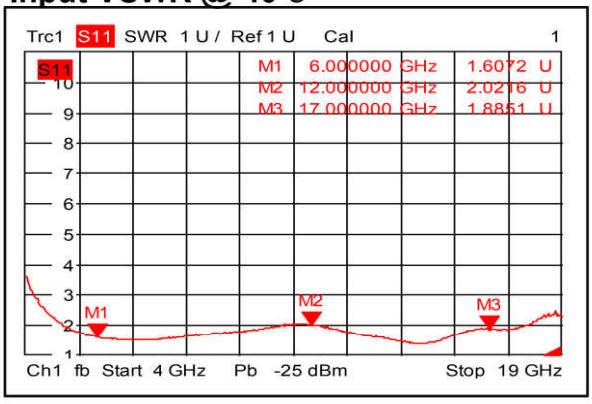
Isolation @+25℃



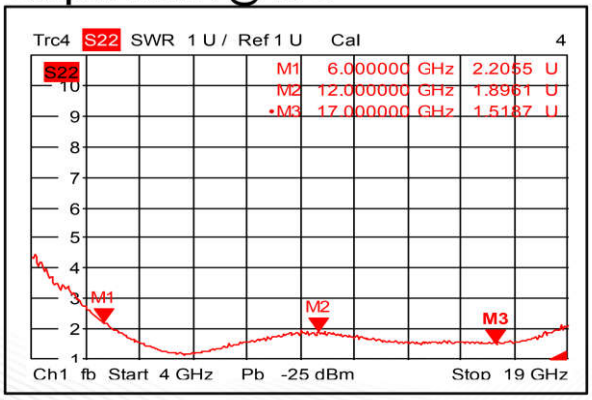
Gain @-40℃



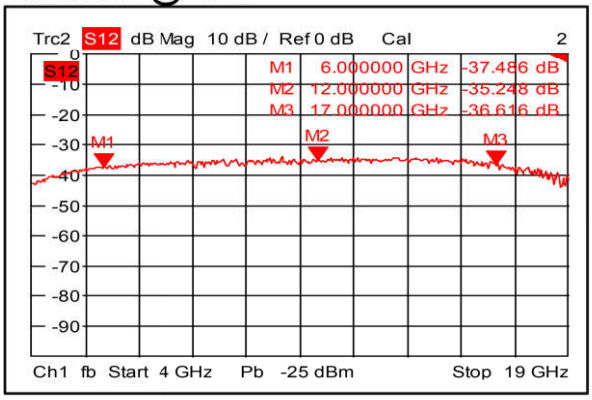
Input VSWR @-40℃



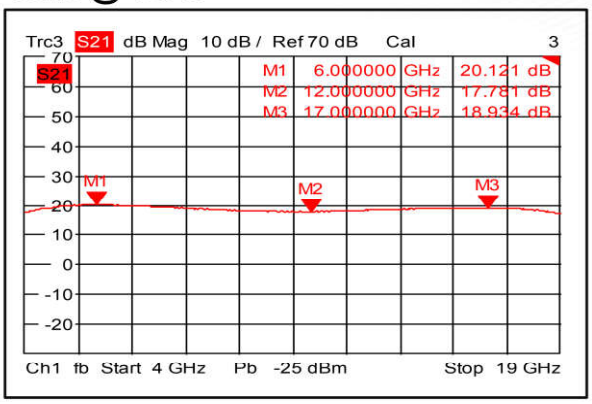
Output VSWR @-40℃



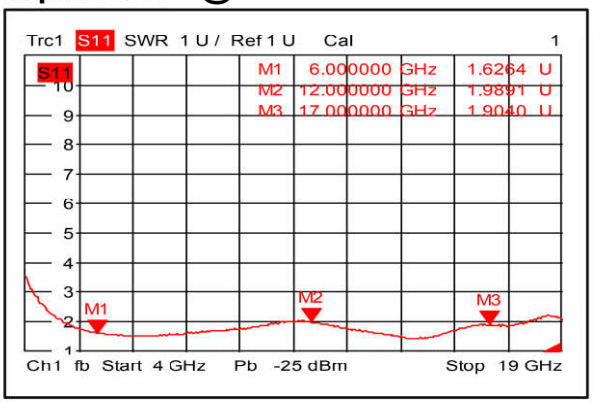
Isolation @-40℃



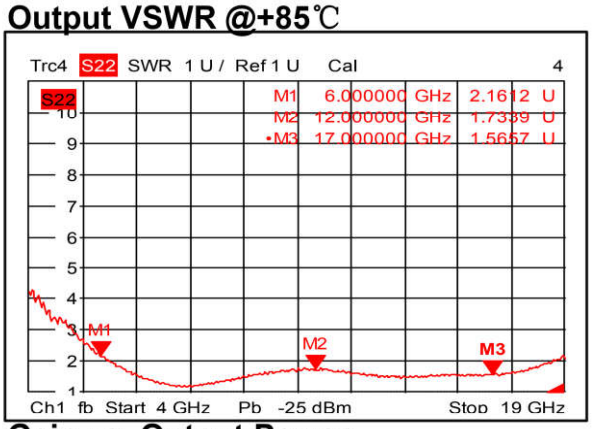
Gain @+85℃



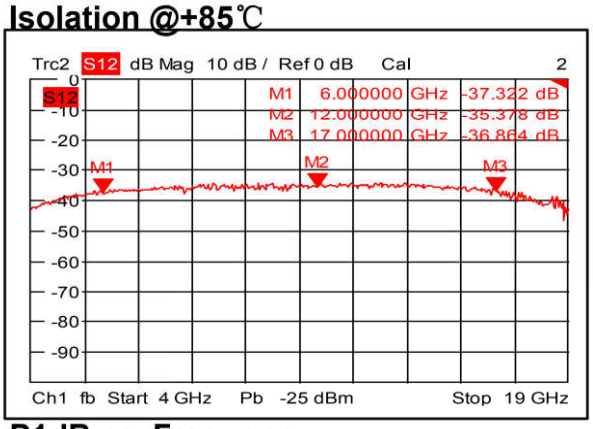
Input VSWR @+85℃



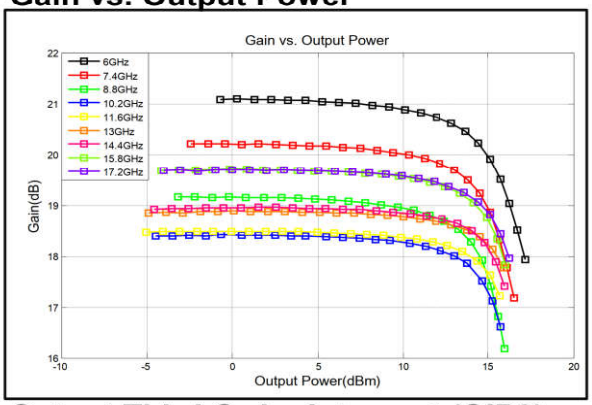
Output VSWR @+85℃



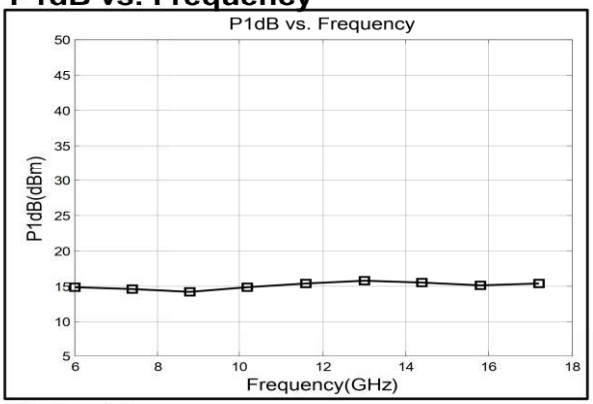
Isolation @+85℃



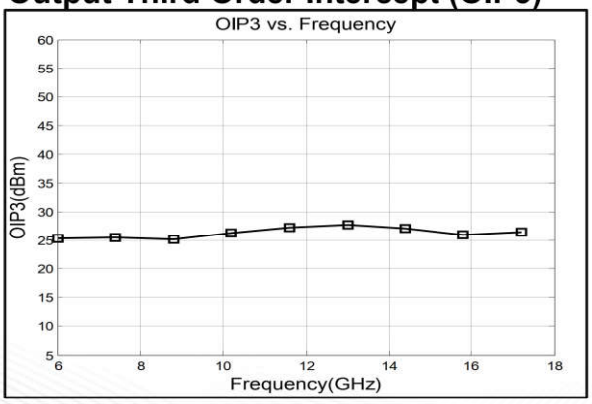
Gain vs. Output Power



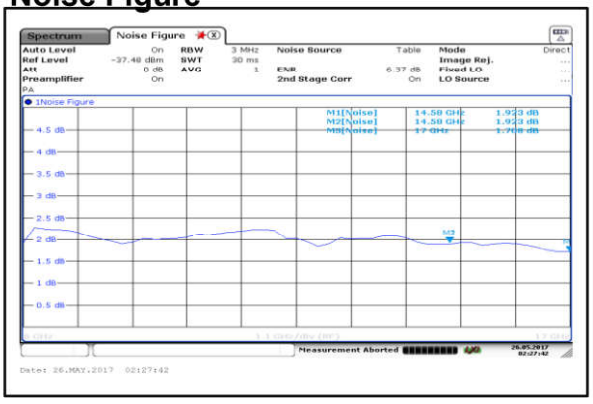
P1dB vs. Frequency



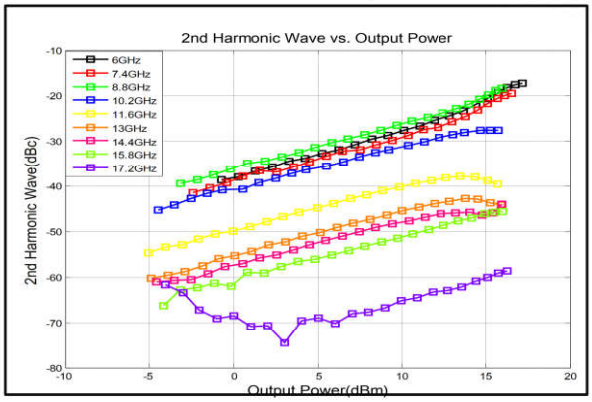
Output Third Order Intercept (OIP3)



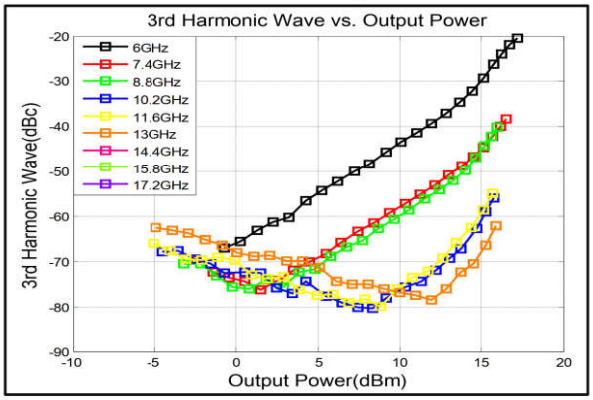
Noise Figure



2nd Harmonic Wave output Power



3rd Harmonic Wave output Power



4th Harmonic Wave output Power