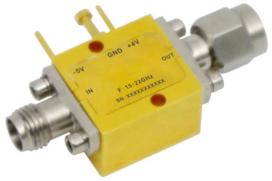
Wide Band Low Noise Amplifier 15GHz~22GHz

Features



- Gain: 20dB Typical
- Noise Figure: 2.0dB Typical
- P1dB Output Power: +16dBm Typical
- Supply Voltage: +4V @ 90mA
- 50 Ohm Matched Input / Output
- Size: 0.63” x 0.59” x 0.41”

Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	15		22	GHz
Gain	18	20		dB
Gain Flatness		±0.25	±0.5	dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±0.5		dB
Noise Figure		2.0	2.8	dB
Input VSWR		1.3	1.4	: 1
Output VSWR		1.2	1.4	: 1
Output 1dB Compression Point (P1dB)	13.5	16		dBm
Saturated Output Power (Psat)		18		dBm
Output Third Order Intercept (OIP3)		25		dBm
Supply Current (Vdd=+4V, Vgg=-5V)		90	150	mA
Isolation S12		-40		dB

Weight	0.71 ounces	Impedance	50ohms
Input /Output Connectors	2.92mm-Female/2.92mm-Male	Material	copper
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)	-2dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
step 3	Connect -5V biasing
Step 4	Connect +4V biasing

Power OFF Procedure

Step 1	Turn off +4V biasing
step 2	Turn off -5V biasing
Step 3	Remove RF connection
Step 4	Remove Ground.

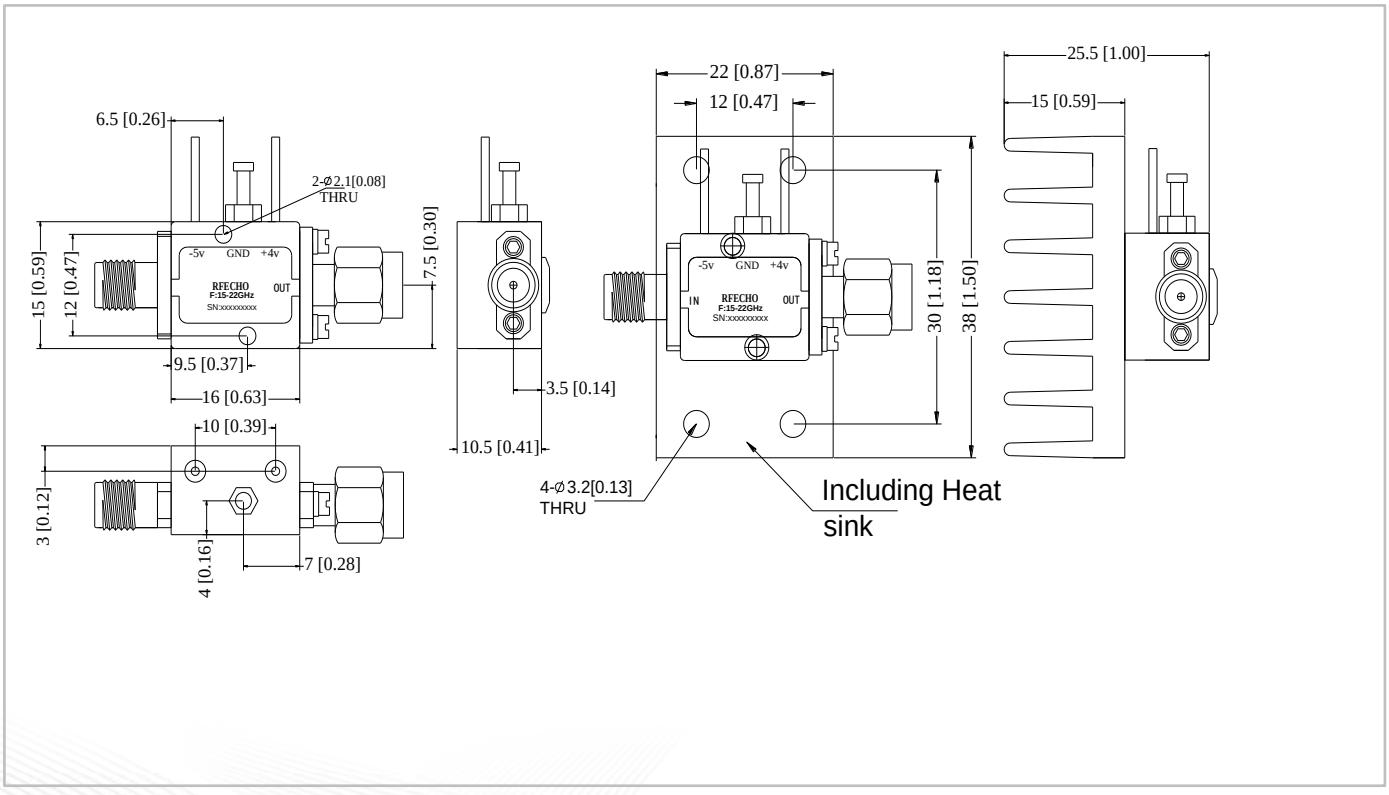
Environmental Specifications

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

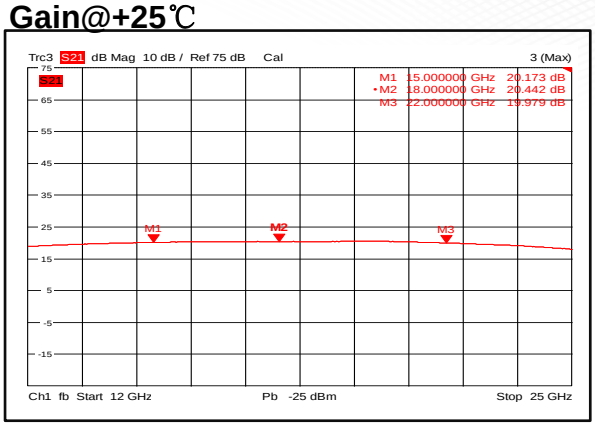
Outline Drawing:

All Dimensions in mm (inches)

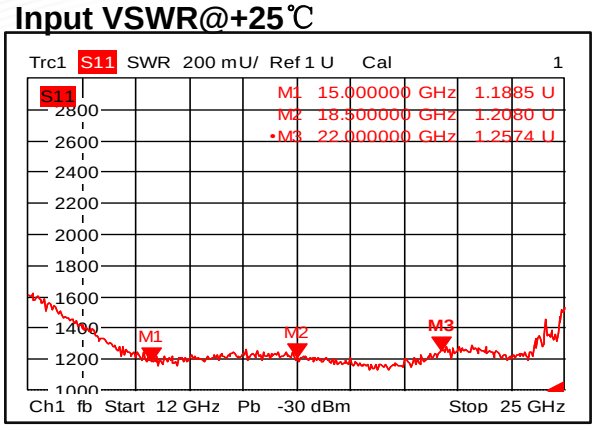
Heat Sink required during operation(Sold Separately)



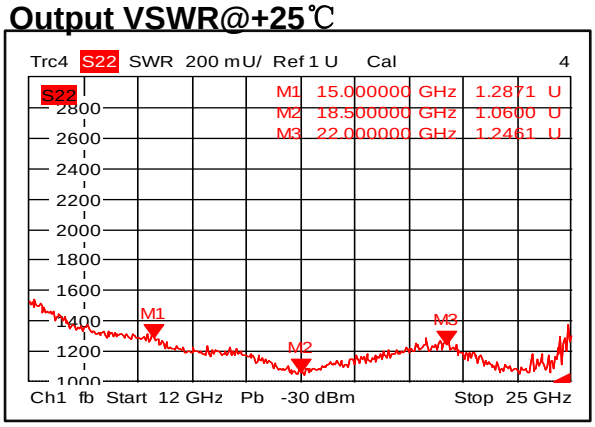
Gain@+25℃



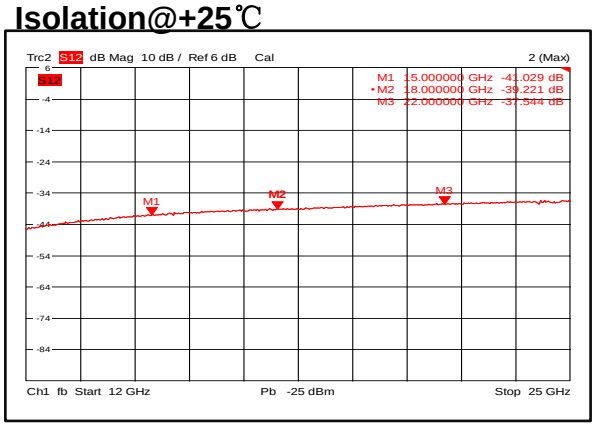
Input VSWR@+25℃



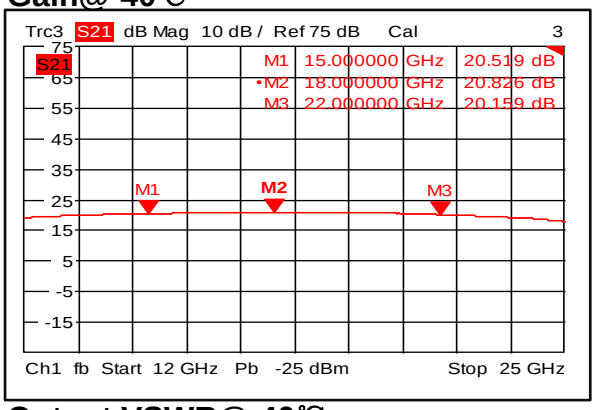
Output VSWR@+25℃



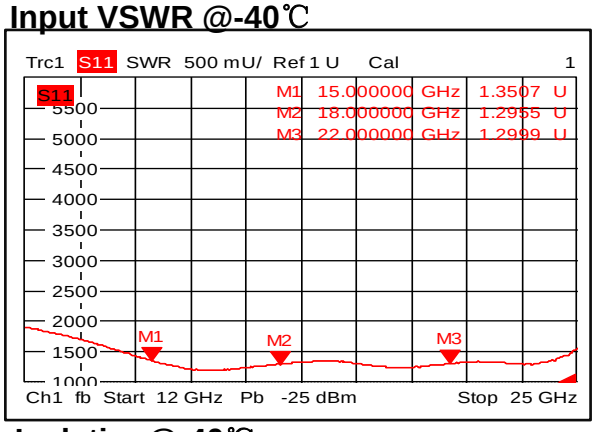
Isolation@+25℃



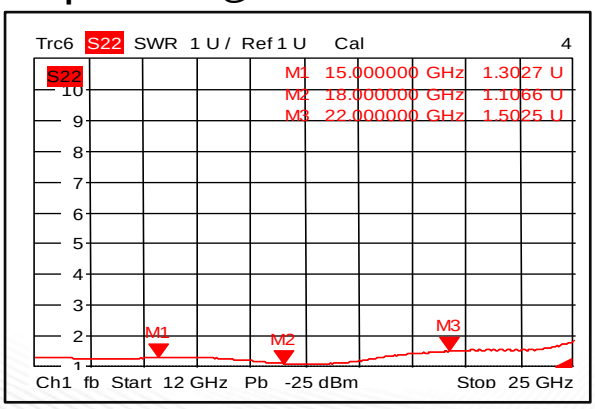
Gain@-40℃



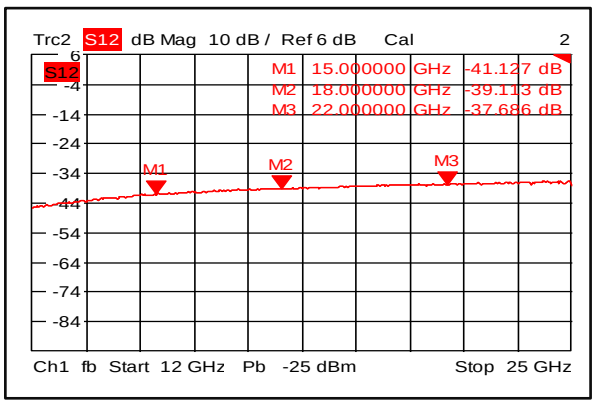
Input VSWR @-40℃



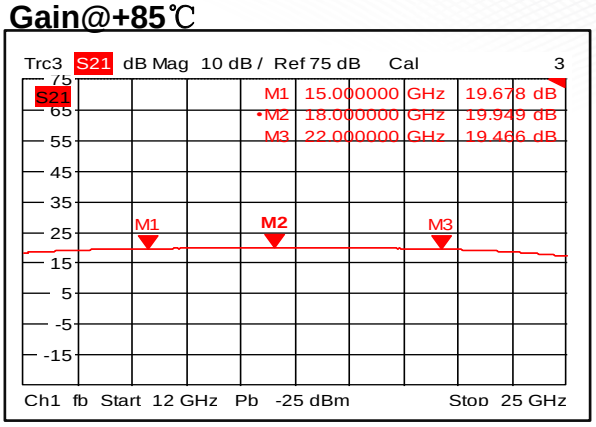
Output VSWR@-40℃



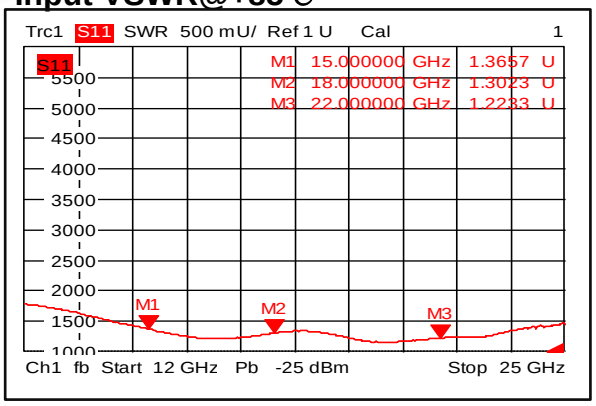
Isolation@-40℃



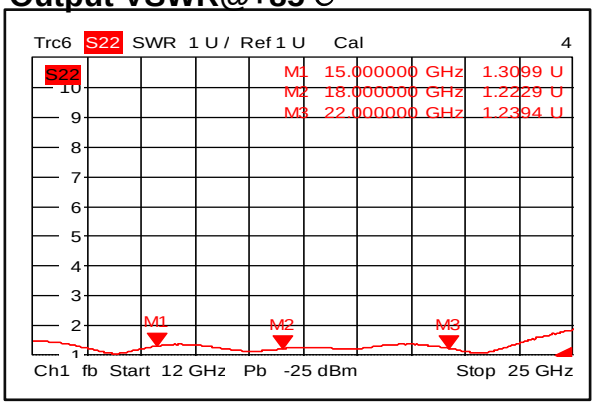
Gain@+85℃



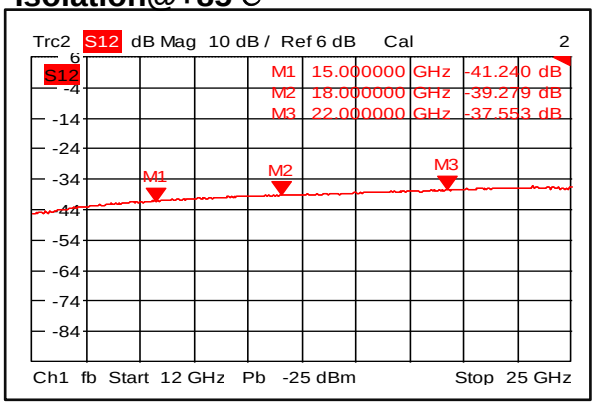
Input VSWR@+85℃



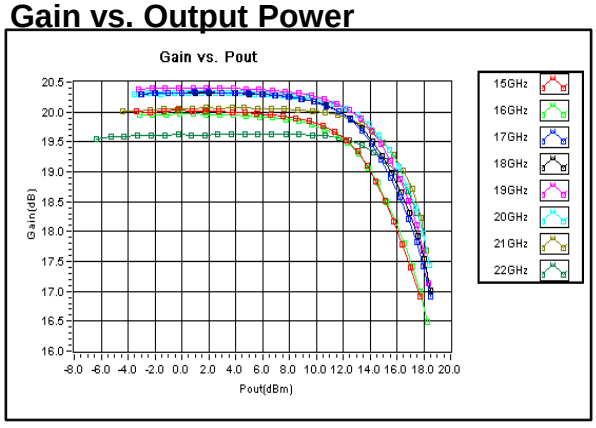
Output VSWR@+85℃



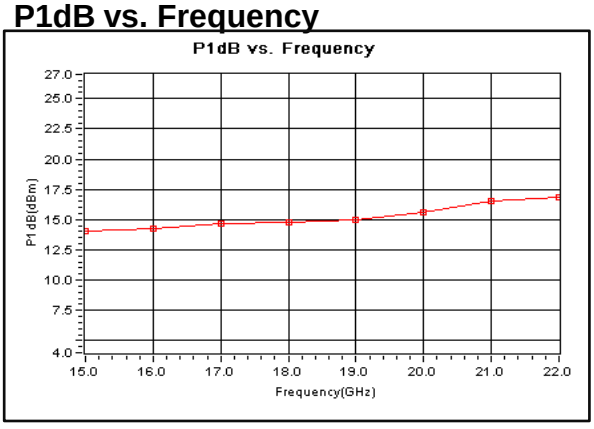
Isolation@+85℃



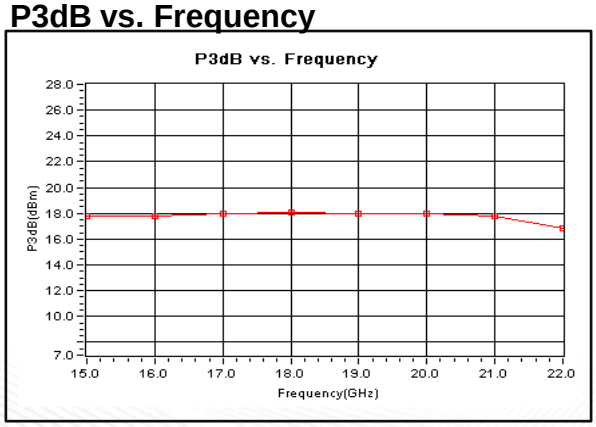
Gain vs. Output Power



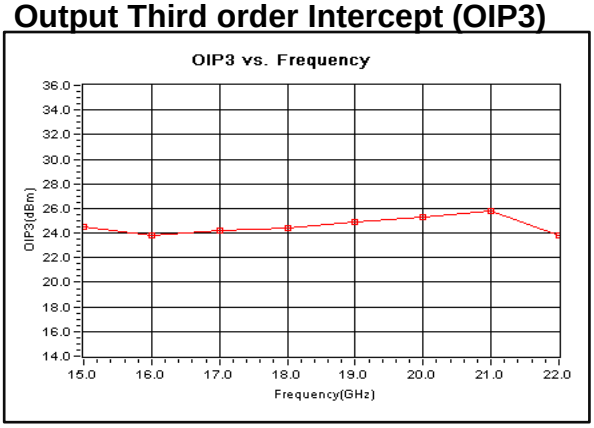
P1dB vs. Frequency



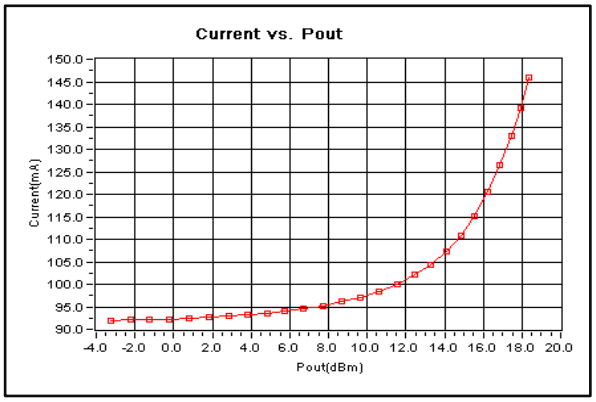
P3dB vs. Frequency



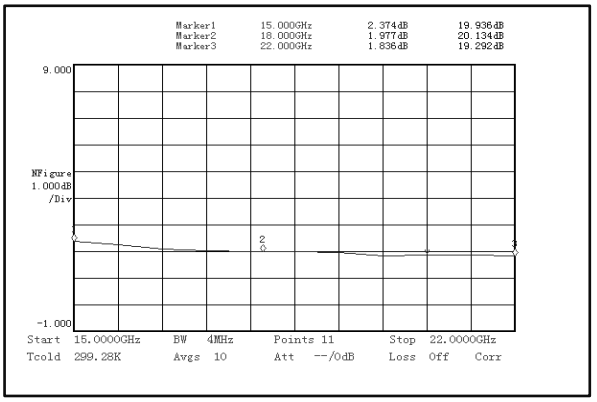
Output Third order Intercept (OIP3)



Current



Noise Figure



2nd Harmonic Wave Output Power