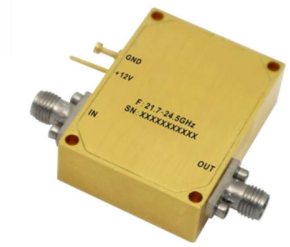
Low Noise Amplifier 21.7GHz~24.5GHz



Features

- Gain: 34dB Typical
- Noise Figure: 2.0dB Typical
- P1dB Output Power: +21dBm Typical
- Supply Voltage: +12V @ 160mA
- 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	21.7		23	23		24.5	GHz
Gain	32	34		32	34		dB
Gain Flatness		±0.5			±0.5		dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±1.0			±1.0		dB
Noise Figure		2.1	2.5		2.2	2.5	dB
Input VSWR		1.2	1.5		1.2	1.5	: 1
Output VSWR		1.5	1.8		1.5	1.8	: 1
Output 1dB Compression Point (P1dB)	19	21.5		19	21		dBm
Saturated Output Power (Psat)		22			22		dBm
Output Third Order Intercept (OIP3)		26.5			26.5		dBm
Supply Current (Vcc=12V)		160	200		160	200	mA
Isolation S12		-55			-45		dB

Weight	3.53 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	copper
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power (RFIN)(Vcc= +12V)	-2dBm

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

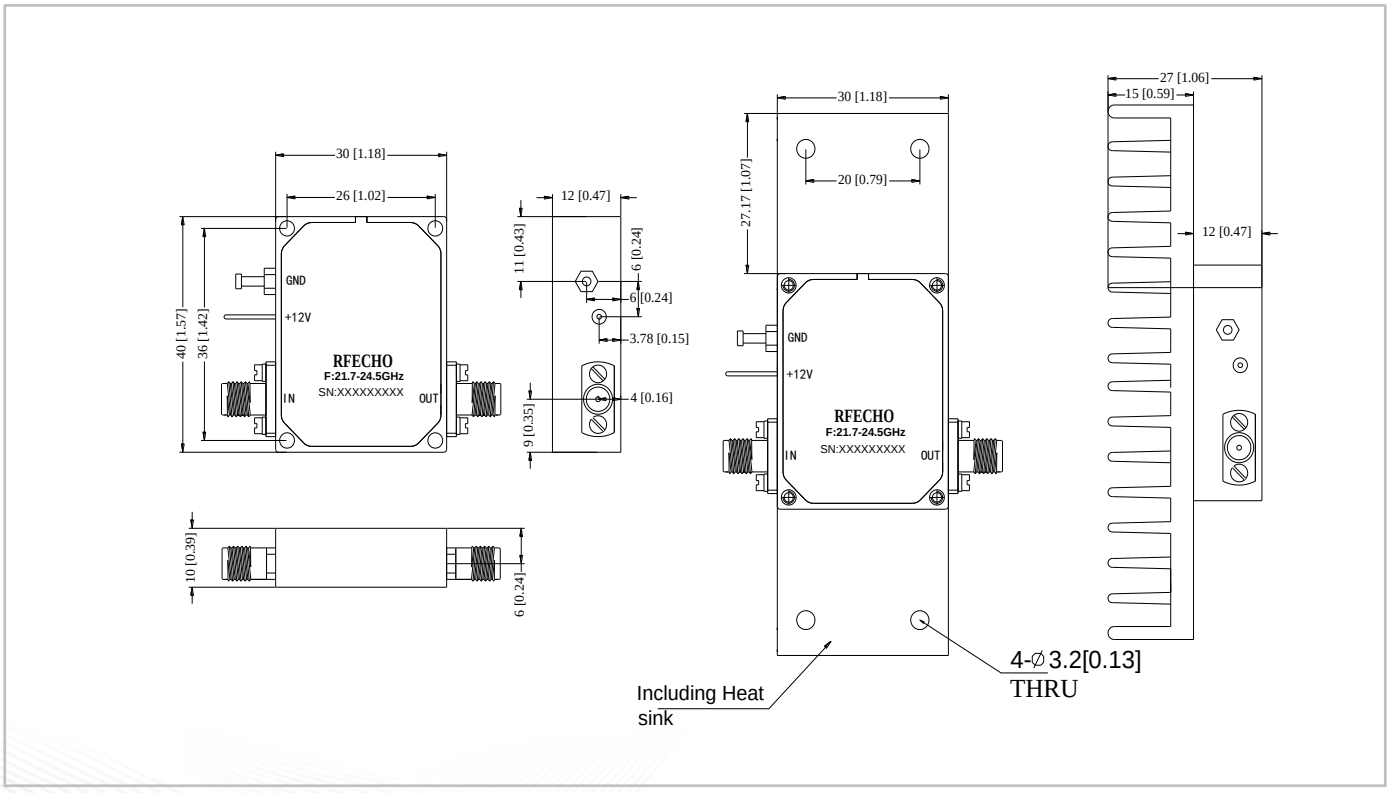
Environmental Specifications

Operational Temperature	-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

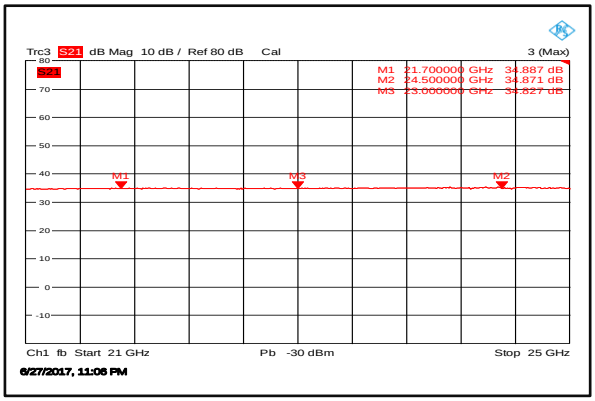
Outline Drawing:

All Dimensions in mm (inches)

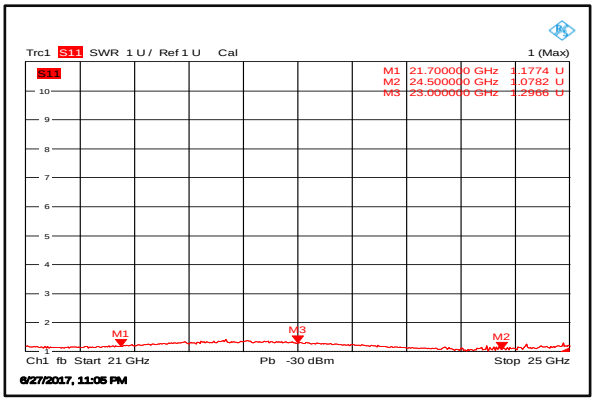
Heat Sink required during operation(Sold Separately)



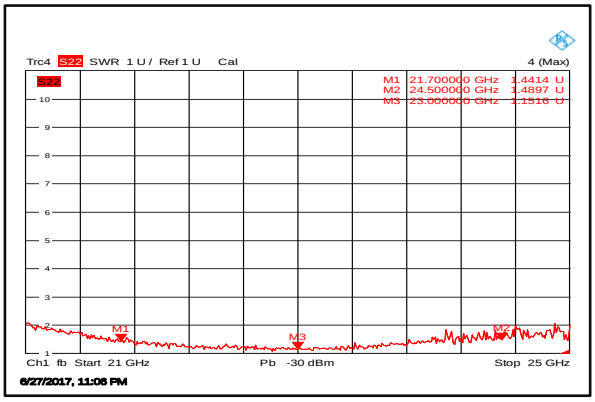
Gain @+25℃



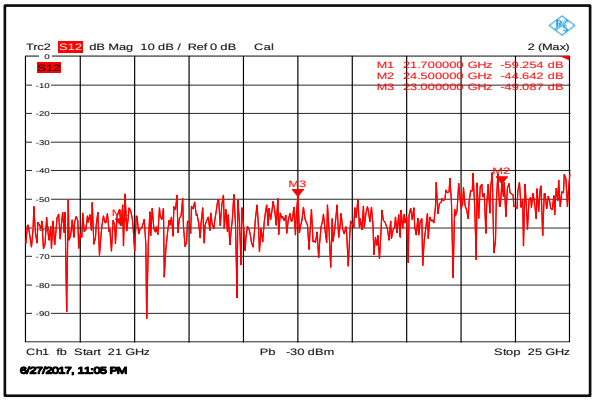
Input VSWR @+25℃



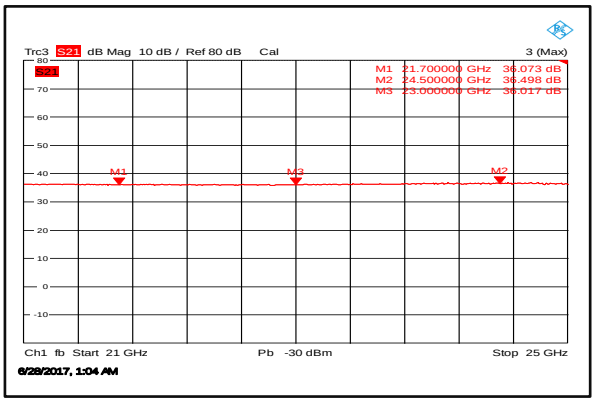
Output VSWR @+25℃



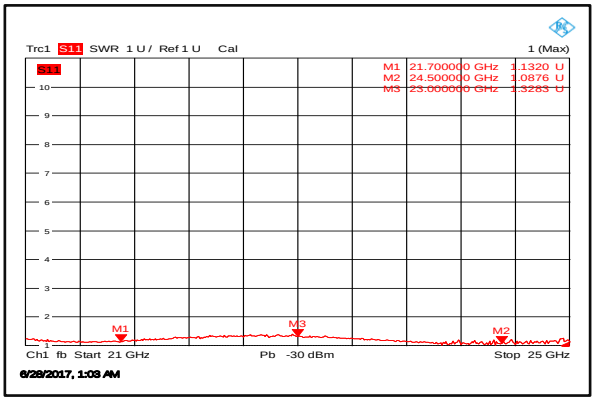
Isolation @+25℃



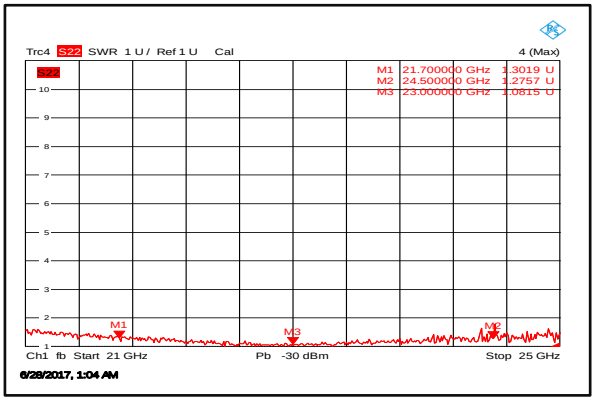
Gain @-40℃



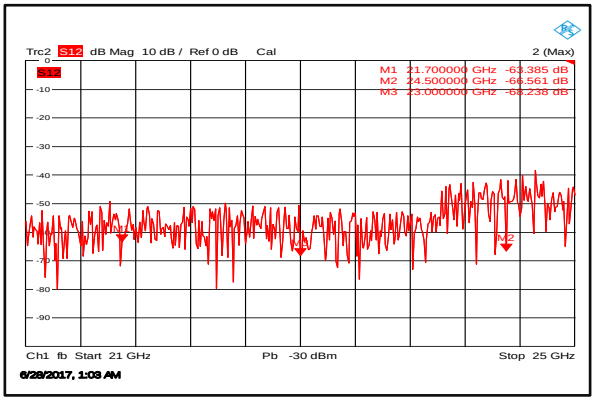
Input VSWR @-40℃



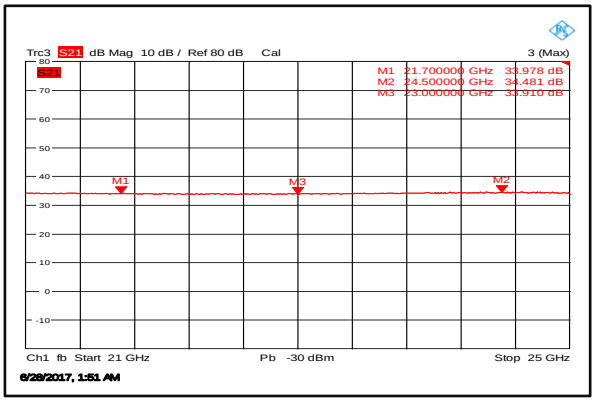
Output VSWR @-40℃



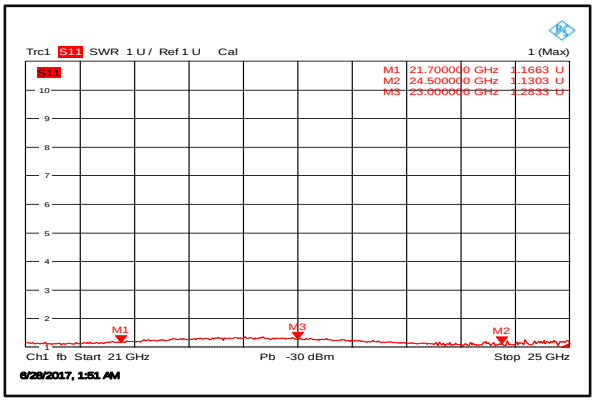
Isolation @-40℃



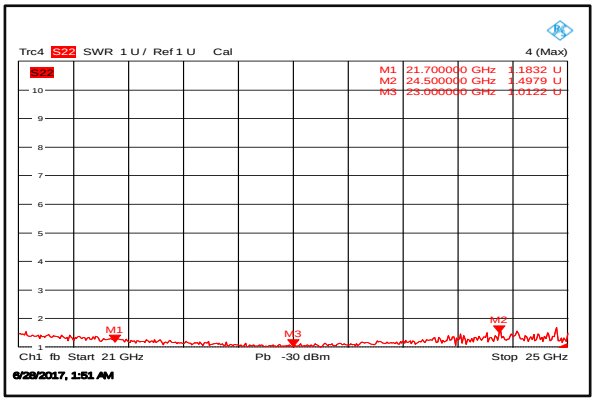
Gain @+85℃



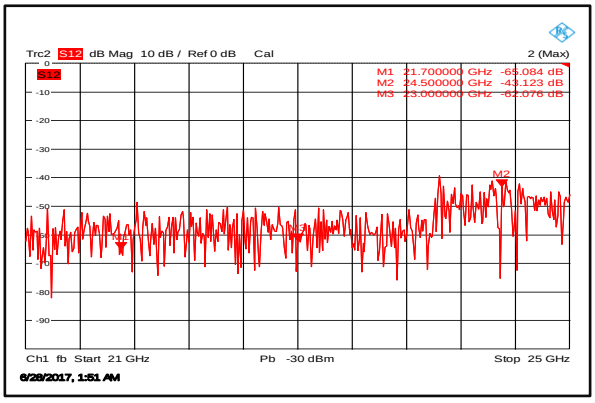
Input VSWR @+85℃



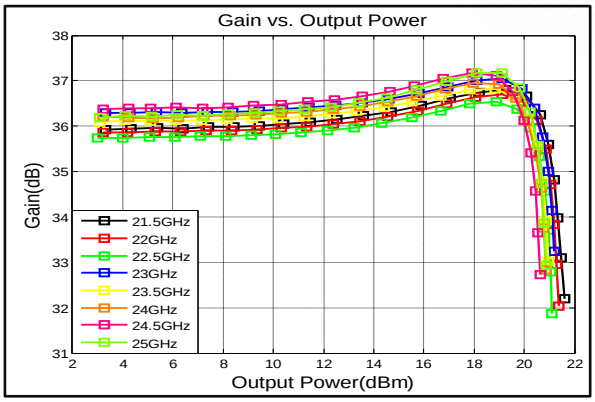
Output VSWR @+85℃



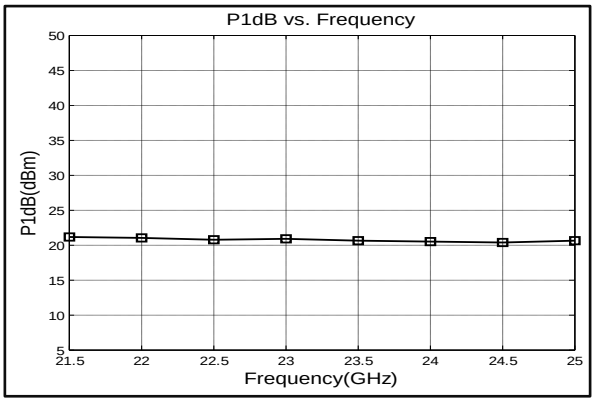
Isolation @+85℃



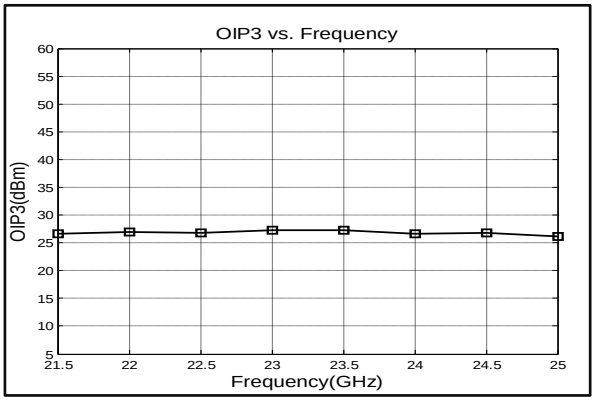
Gain vs. Output Power



P1dB vs. Frequency



Output Third Order Intercept (OIP3)



Noise Figure