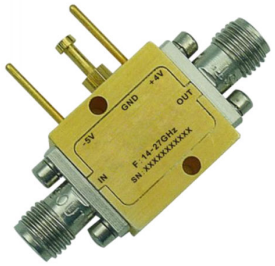
Wide Band Low Noise Amplifier 14GHz~27GHz

Features

- Gain: 20dB Typical
- Noise Figure: 2.0dB Typical
- P1dB Output Power: +15dB Typical
- Supply Voltage: +4V & -5V
- 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	14		21	21		27	GHz
Gain	18	20		16	18		dB
Gain Flatness		±1.0			±1.5		dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±0.5			±0.5		dB
Noise Figure		2.2	3.0		2.0	2.5	dB
Input VSWR		1.6	2.0		1.6	2.0	: 1
Output VSWR		1.6	2.0		1.6	2.0	: 1
Output Power for 1 dB Compression (P1dB)	14	15		14	16		dBm
Saturated Output Power (Psat)		16			18		dBm
Output Third Order Intercept (OIP3)		25			28		dBm
Supply Current (Idd) (Vd=+4V)		90	150		90	150	mA
Isolation S12		-39			-36		dB

Weight	0.35 ounces	Impedance	50ohms
Input / Output Connectors	2.92mm-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	-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
step2	Turn off -5V biasing
Step 3	Remove RF connection
Step 4	Remove Ground.

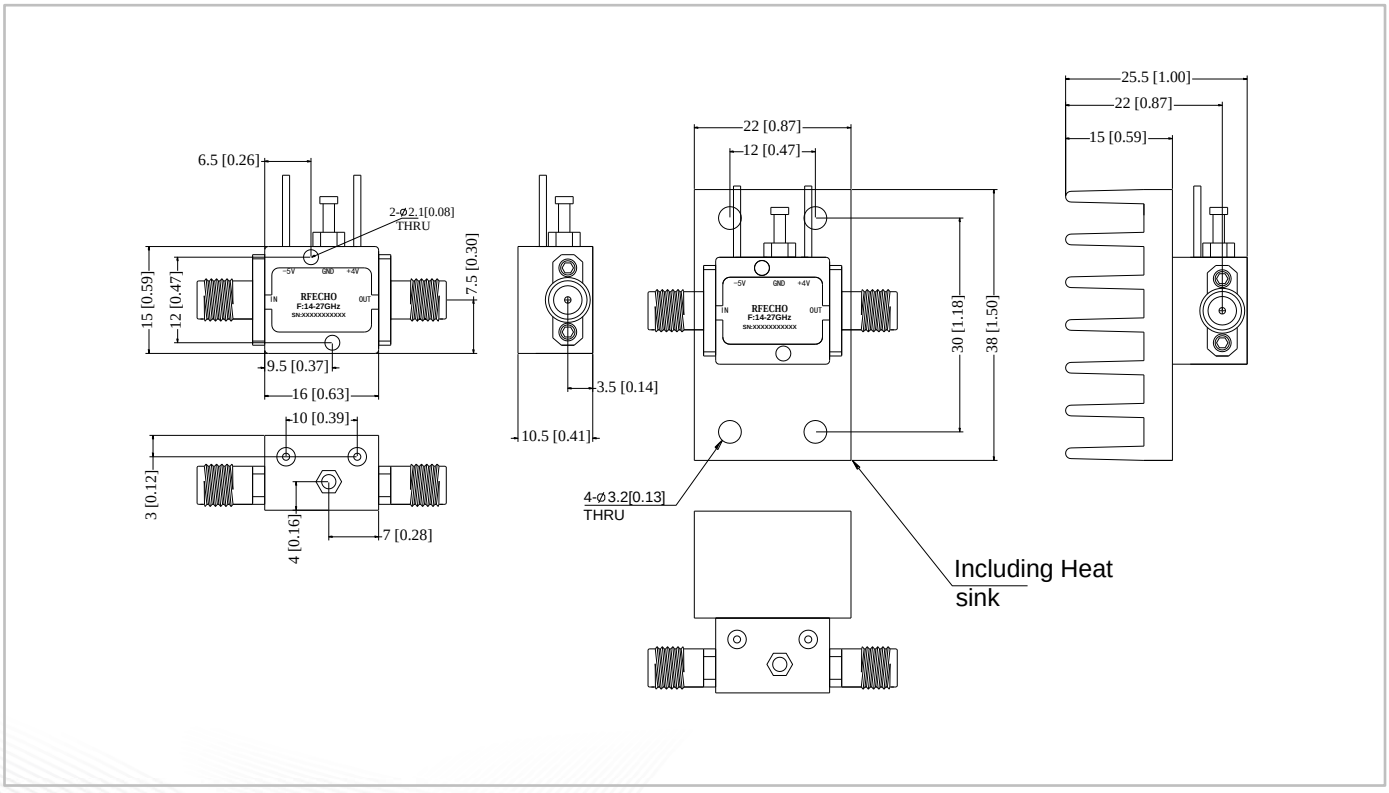
Environmental Specifications

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

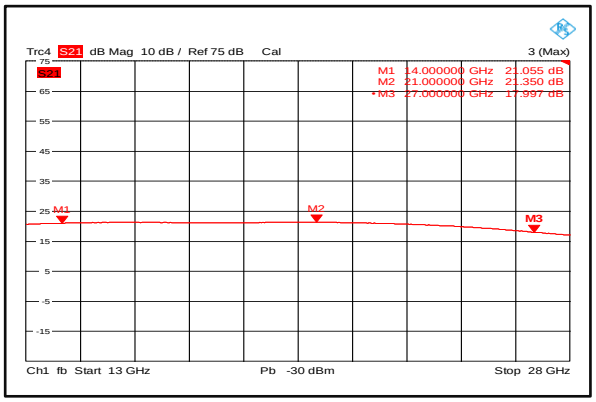
Outline Drawing:

All Dimensions in mm (inches)

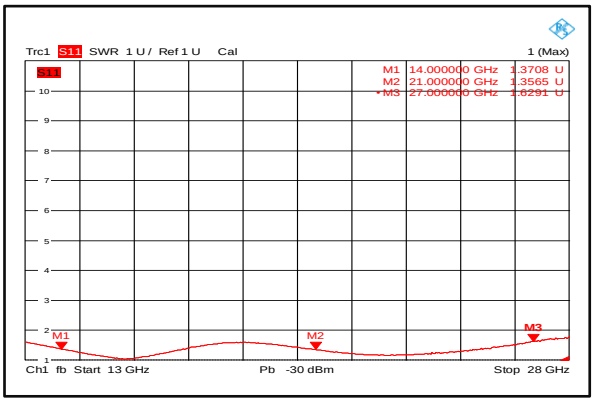
Heat Sink required during operation(Sold Separately)



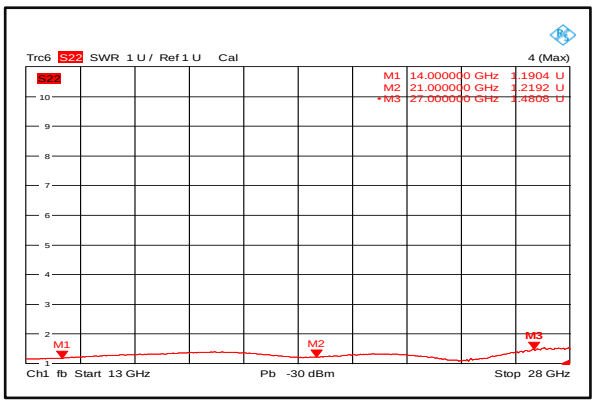
Gain @+25℃



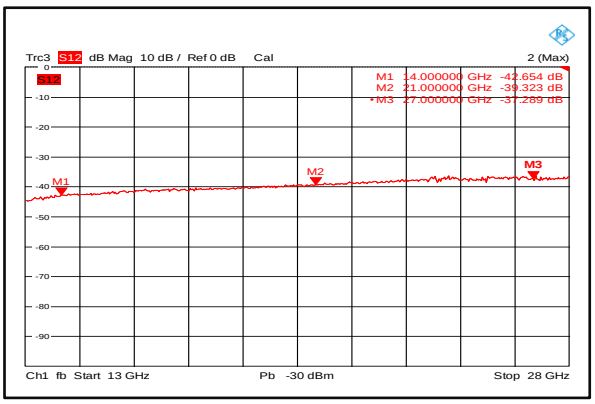
Input VSWR @+25℃



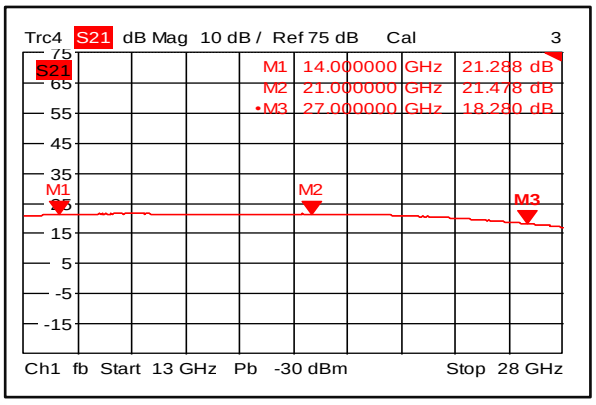
Output VSWR @+25℃



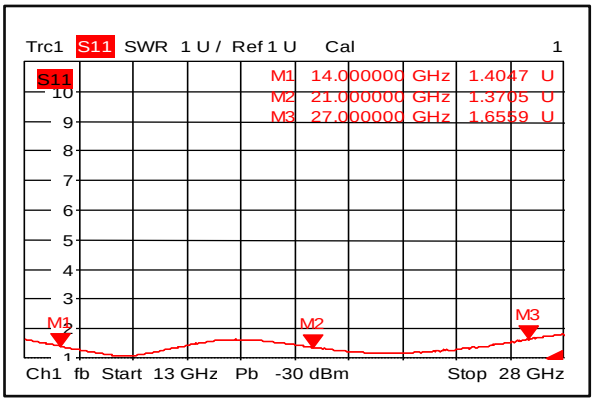
Isolation @+25℃



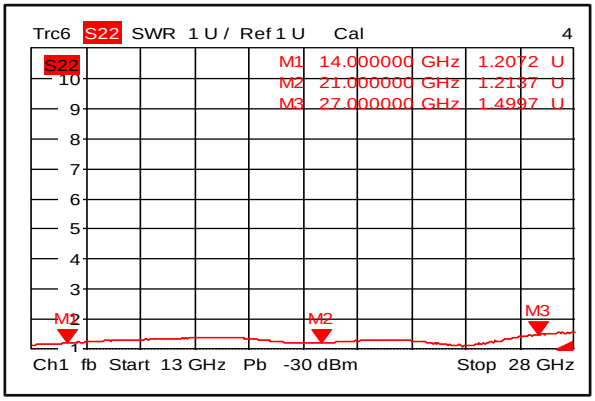
Gain @-40℃



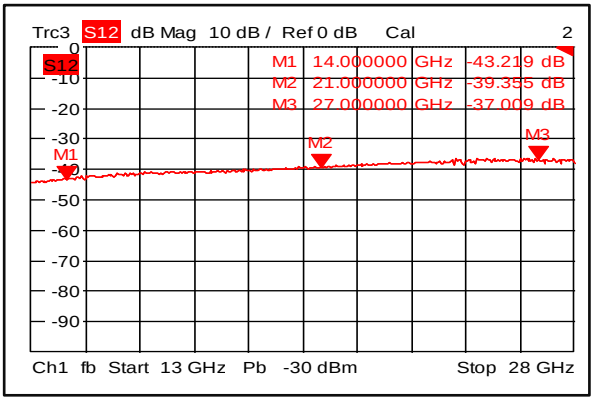
Input VSWR @-40℃



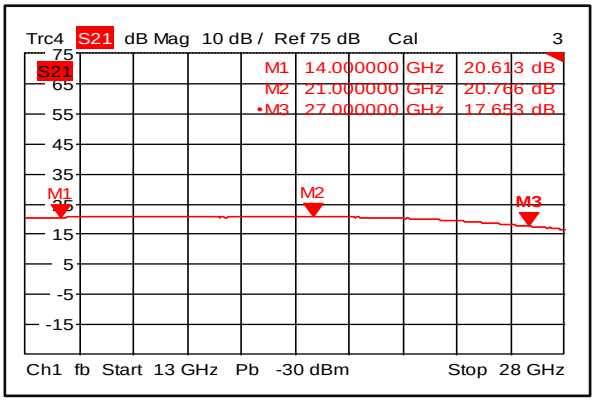
Output VSWR @-40℃



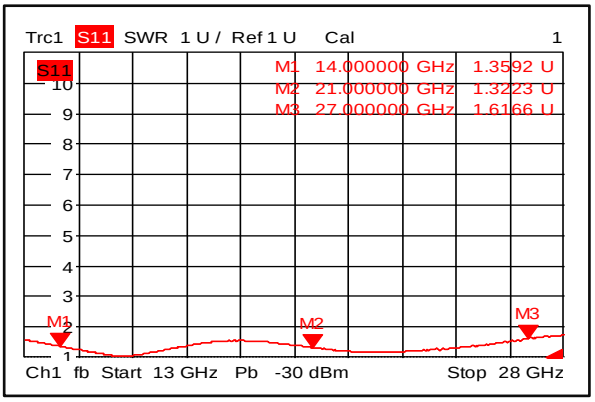
Isolation @-40℃



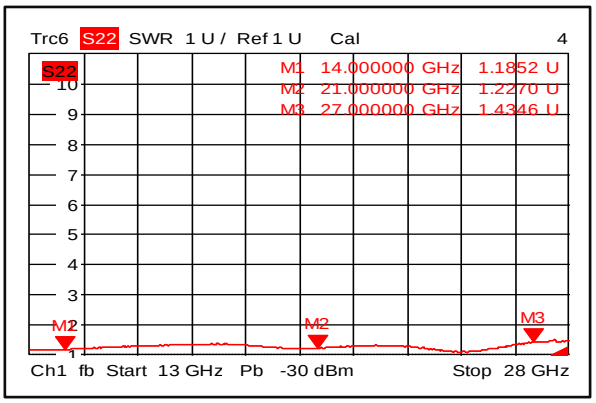
Gain @+85℃



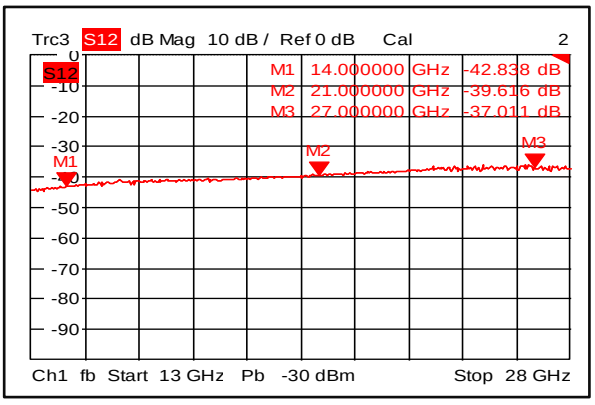
Input VSWR @+85℃



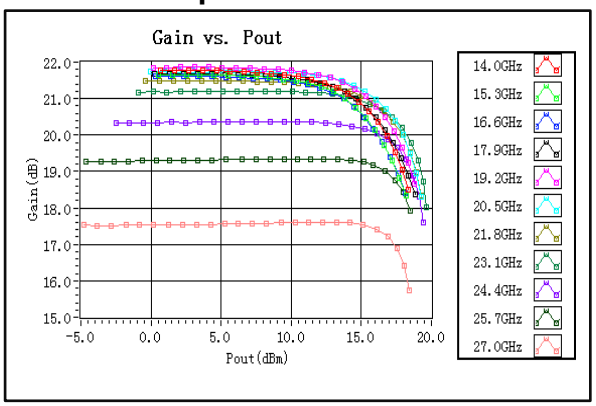
Output VSWR @+85℃



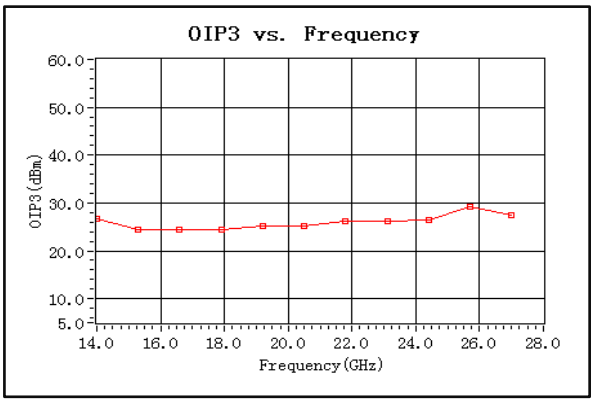
Isolation @+85℃



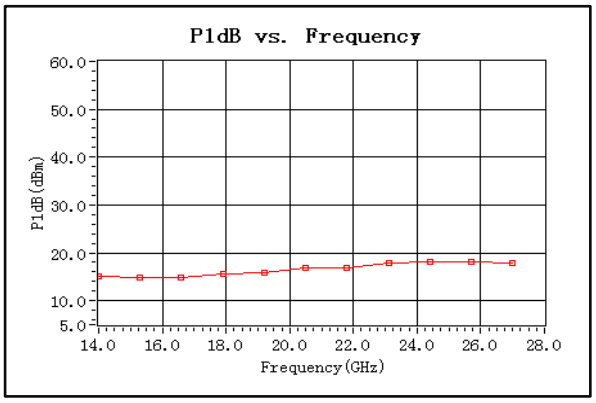
Gain vs. Output Power



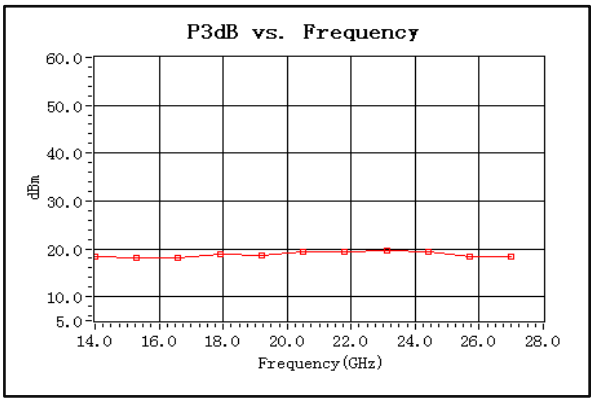
Output Third Order Intercept (OIP3)



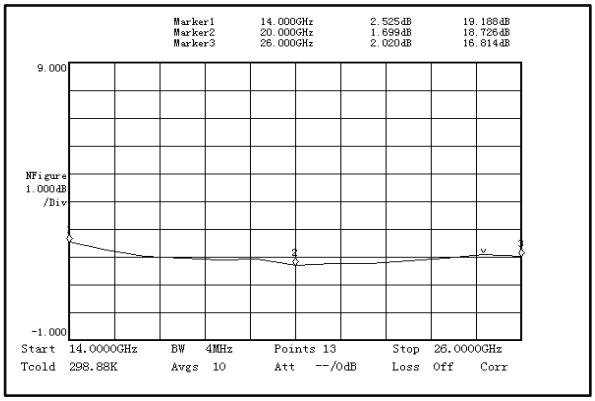
P1dB vs. Frequency



P3dB vs. Frequency



Noise Figure



2nd Harmonic Wave Output Power