



Ultra Wide Band Low Noise Amplifier 50MHz~46GHz

Features

- Gain: 29dB Typical
- Noise Figure: 3.0dB Typical
- P1dB Output Power: 21dBm Typical
- Supply Voltage: +12V @ 355mA
- 50 Ohm Matched Input / Output
- Size: 1.18" x 1.89" x0.39"



Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.05		6	6		40	40		46	GHz
Gain	27	29		20	25		18	23		dB
Gain Flatness		±2.0			±2.0			±2.0		dB
Gain Variation Over Temperature (-40°C~+85°C)		±1.0			±1.0			±1.0		dB
Noise Figure		4.0			3.0			8.0		dB
Input VSWR		1.3	1.6		1.8			2.5		:1
Output VSWR		1.3	1.6		1.8			2.5		:1
Output Power for 1 dB Compression (P1dB)	21	23		15	18		13	15		dBm
Saturated Output Power (Psat)		25			20			18		dBm
Output Third Order Intercept (OIP3)		31			28			25		dBm
Supply Current (Idd) (Vcc=+12V)		355	400		355	400		355	400	mA
Isolation S12		-60			-50			-40		dB

Weight	1.76 ounces	Impedance	50ohms
Input /Output Connectors	2.4mm-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)	@0.05-6GHz -8dBm @6-26.5GHz -5dBm @26.5-46GHz -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

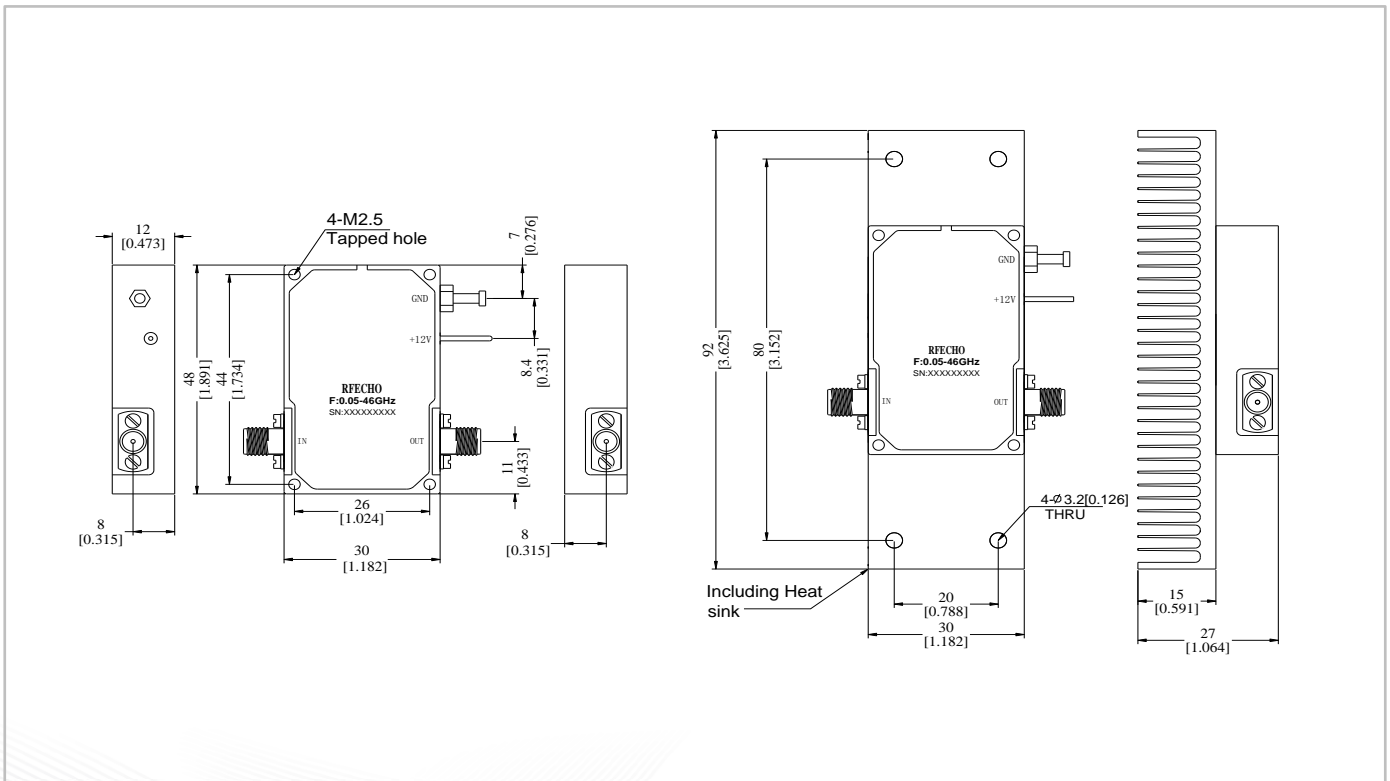
Environmental Specifications

Operational Temperature	-40°C~+85°C
Storage Temperature	-50°C~+105°C
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 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Outline Drawing:

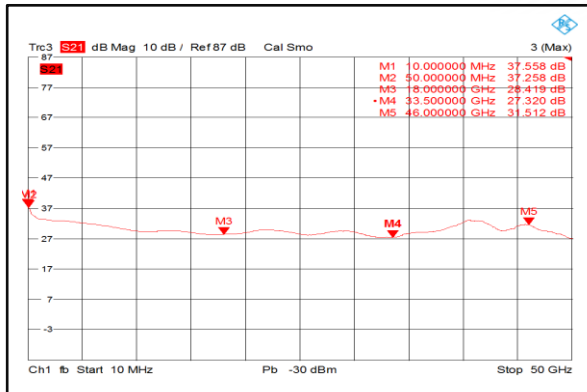
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

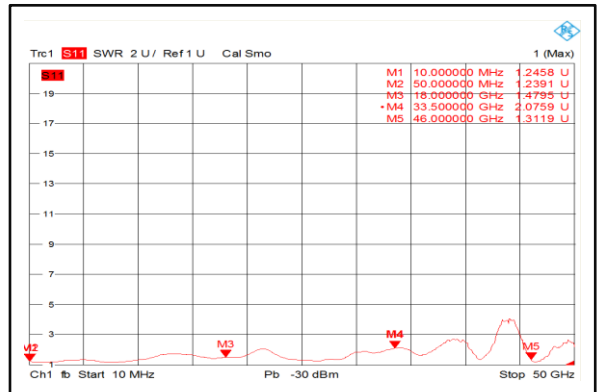




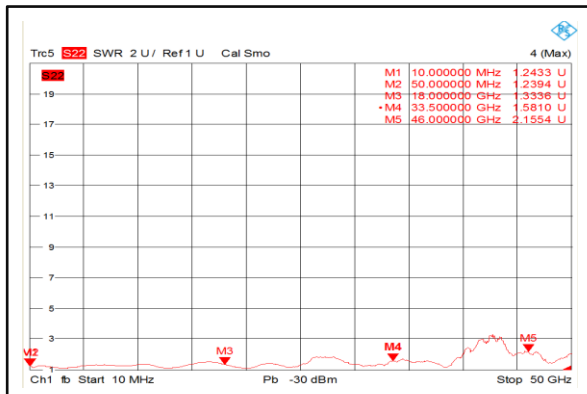
Gain



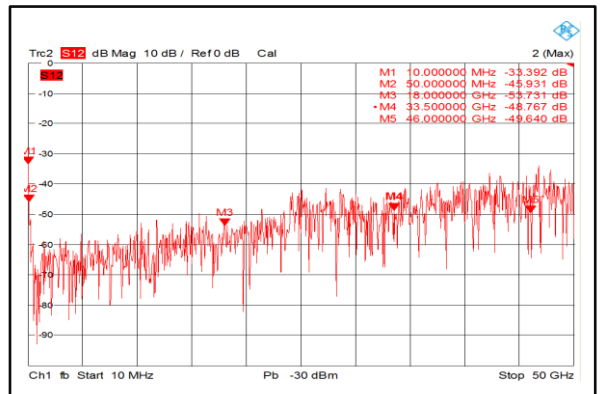
Input VSWR



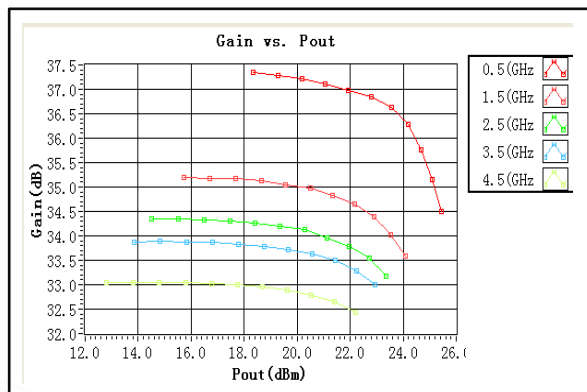
Output VSWR



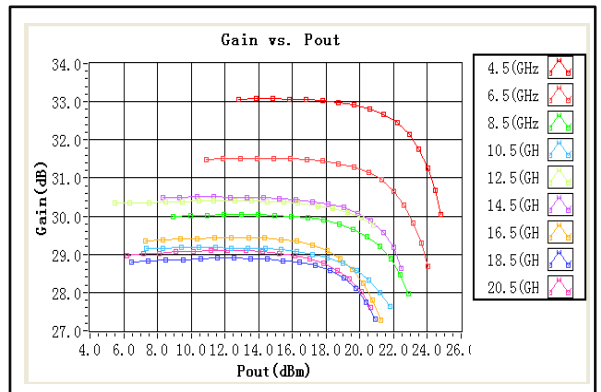
Isolation



Gain vs. Output Power

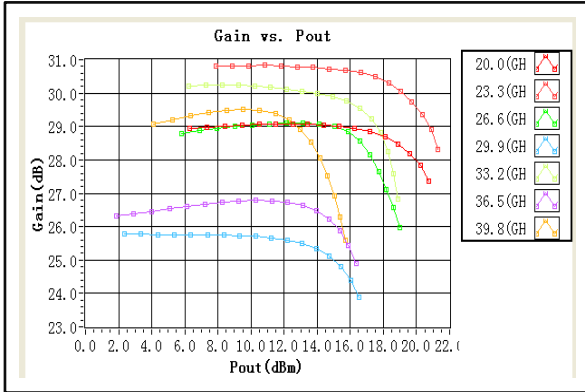


Gain vs. Output Power

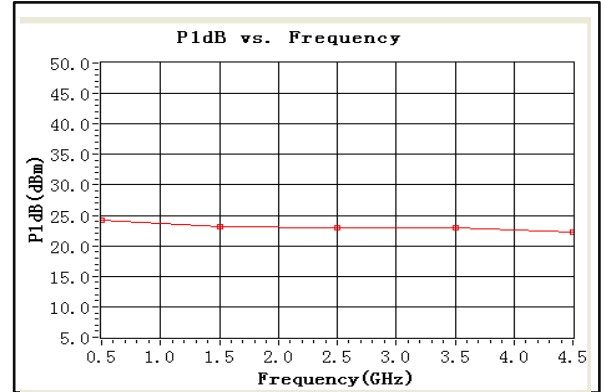




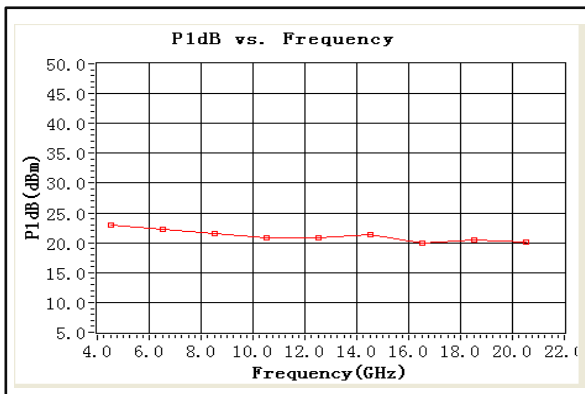
Gain vs. Output Power



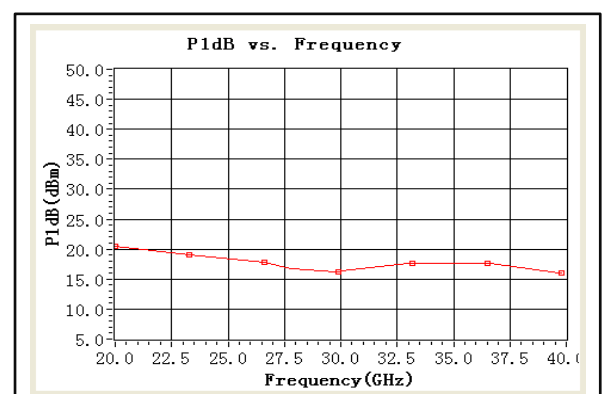
P1dB vs. Frequency(0.5-4GHz)



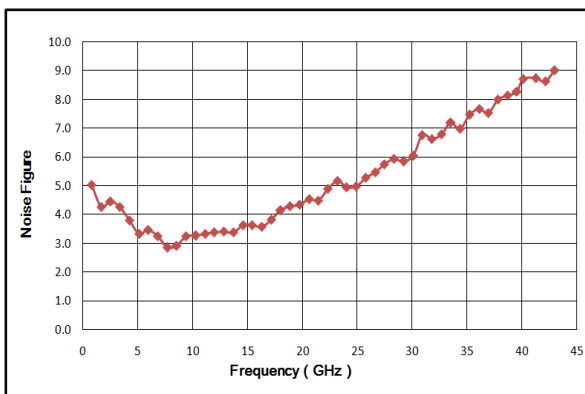
P1dB vs. Frequency(4-20GHz)



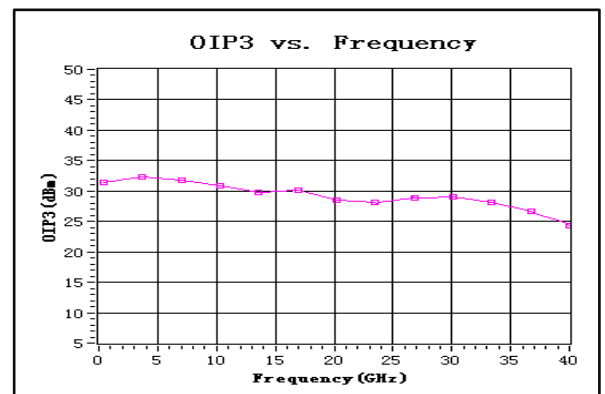
P1dB vs. Frequency(20-40GHz)



Noise Figure

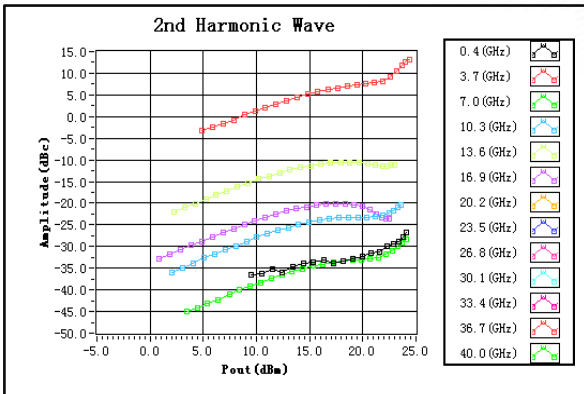


Output Third order Intercept (OIP3)

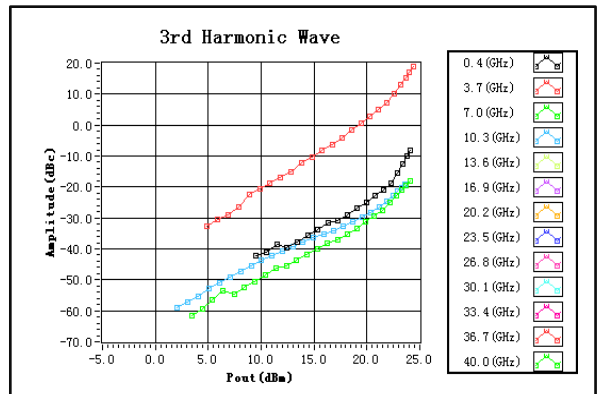




2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

