Low Noise Amplifier 0.1GHz~18G

Features

- Gain: 43dB Typical
- Noise Figure: 2.0dB Typical
- P1dB Output Power: +16dBm Typical
- Supply Voltage: +12V @ 200mA
- 50 Ohm Matched Input / Output
- Size: 1.379” x 1.891” x0.473”

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	0.1		8	8		18	GHz
Gain	40	43		39	41		dB
Gain Flatness		±1.0	±1.5		±1.5	±2.0	dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±2.5			±3.0		dB
Noise Figure		2.0	5.0		3.0	4.0	dB
Input VSWR		1.5			1.6	2.0	: 1
Output VSWR		1.3	1.8		1.5	2.0	: 1
Output 1dB Compression Point (P1dB)	15	17		14	16		dBm
Saturated Output Power (Psat)		19			18		dBm
Output Third Order Intercept (OIP3)		27			26		dBm
Supply Current (Idd) (Vcc=+12V)		200	300		200	300	mA
Isolation S12		-80			-70		dB

Weight	1.85 ounces (Max.)	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Nickel Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)

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Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power	-12dBm

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

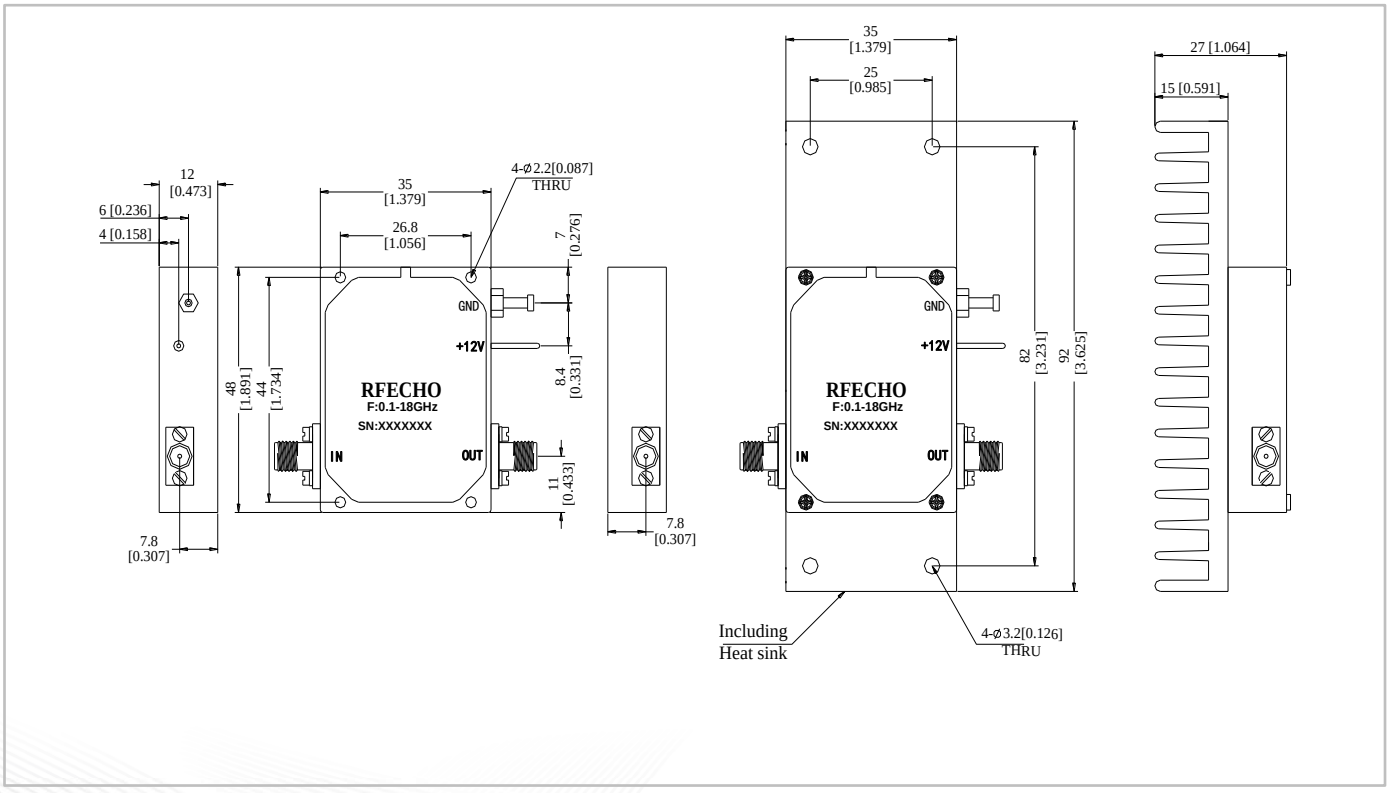
Environmental Specifications

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)



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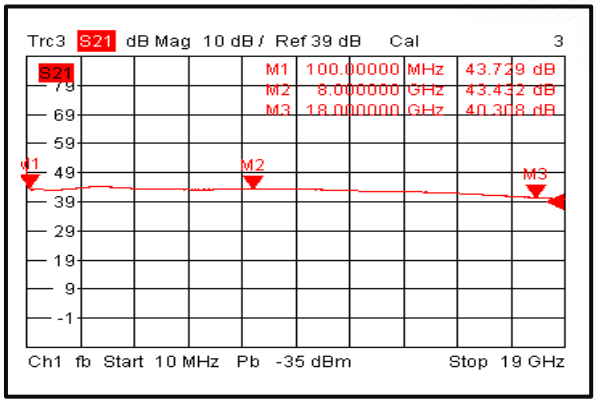
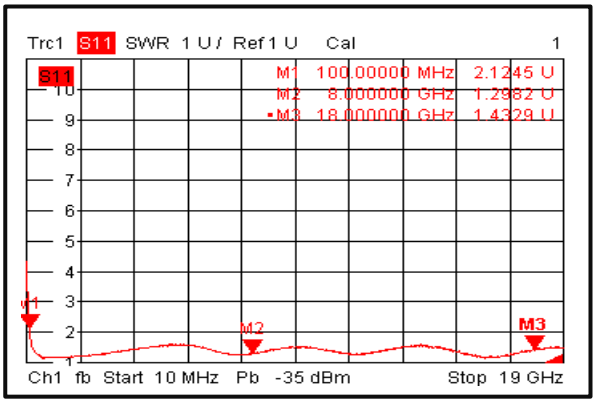
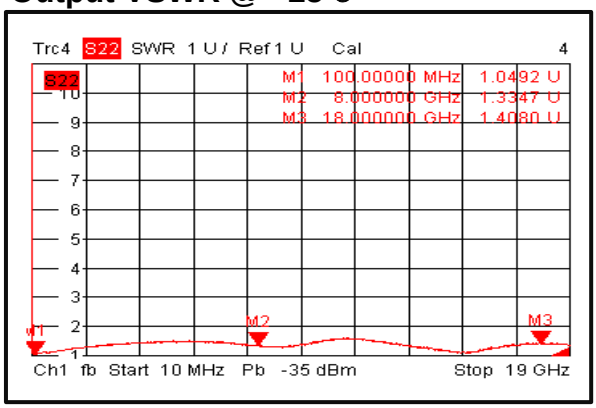
Gain @ +25℃



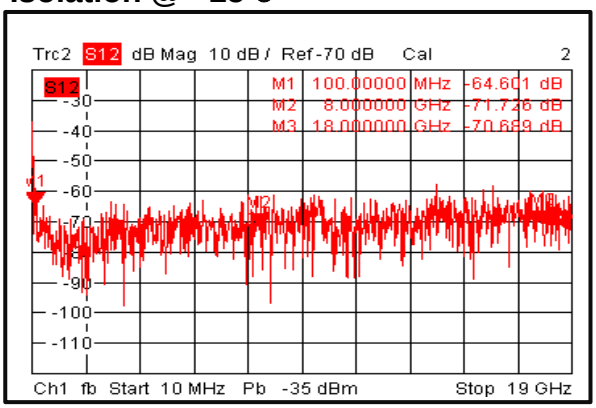
Input VSWR @ +25℃



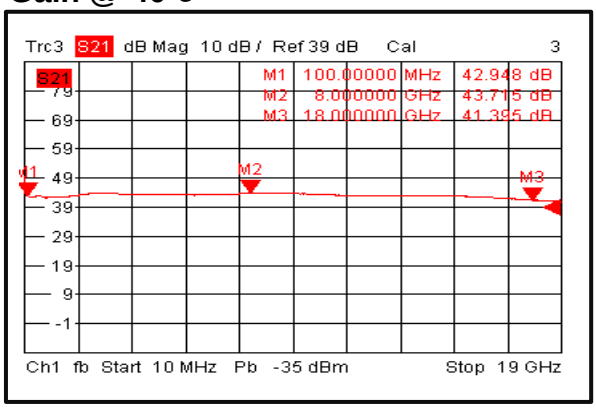
Output VSWR @ +25℃



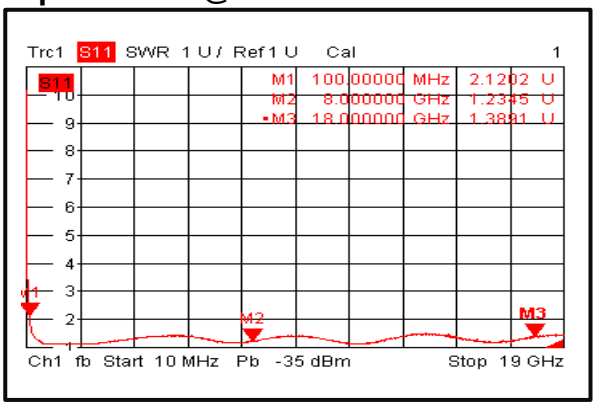
Isolation @ +25℃



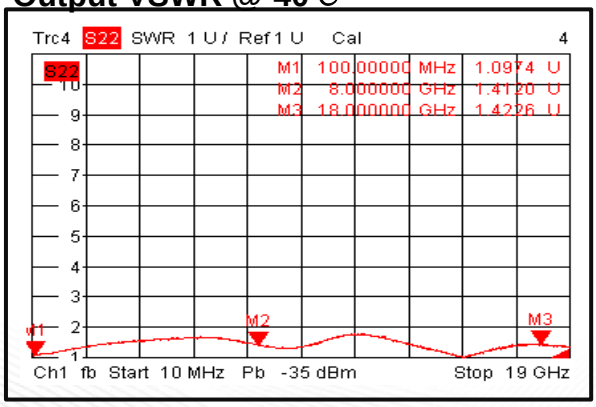
Gain @-40℃



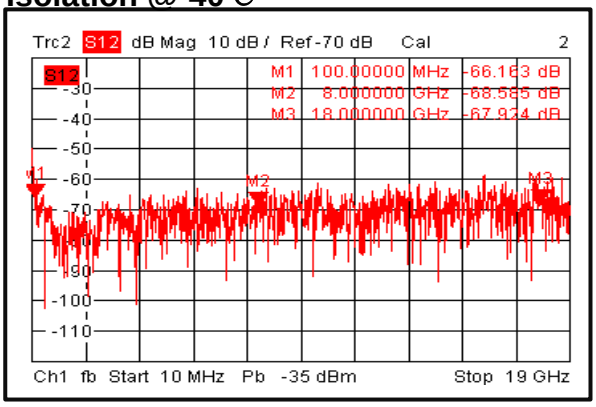
Input VSWR @-40℃



Output VSWR @-40℃



Isolation @-40℃



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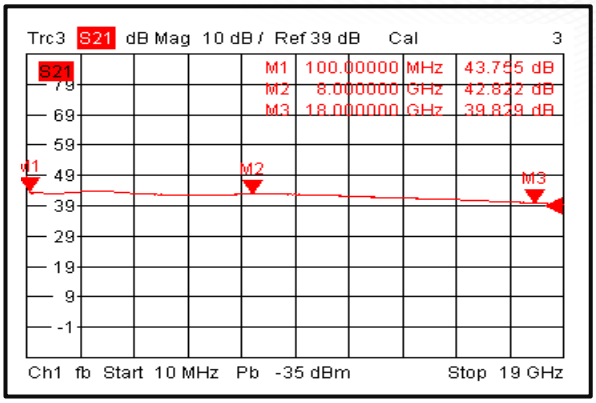
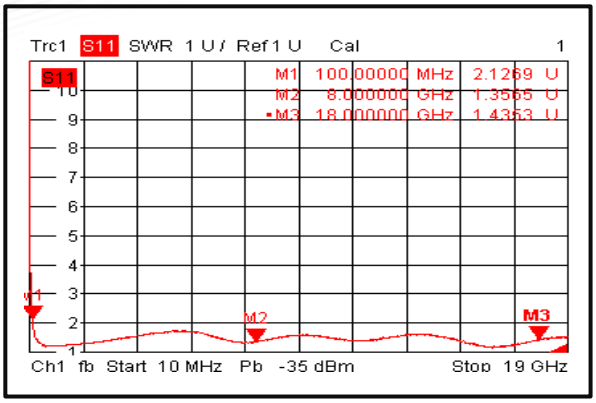
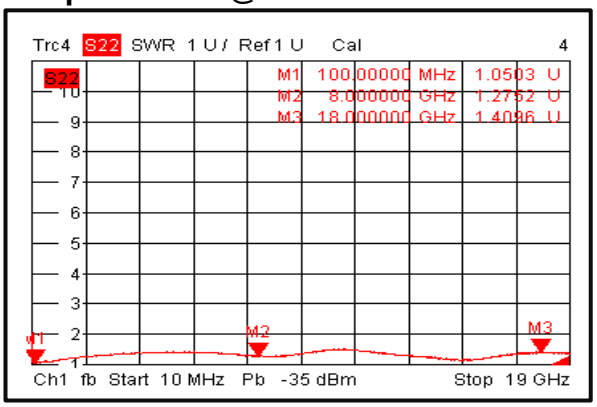
Gain @ +85℃



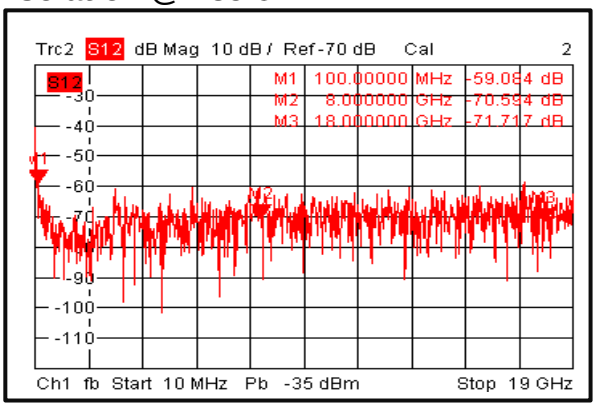
Input VSWR @ +85℃



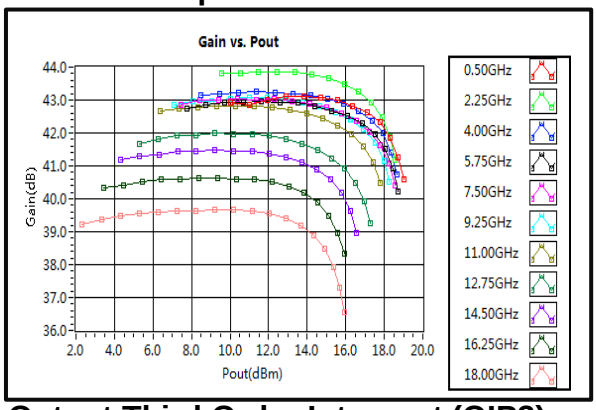
Output VSWR @ +85℃



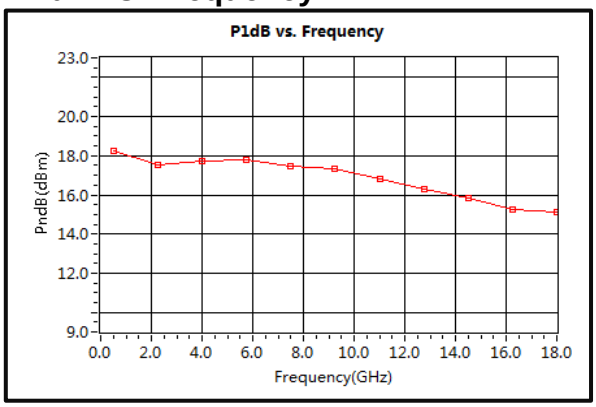
Isolation @ +85℃



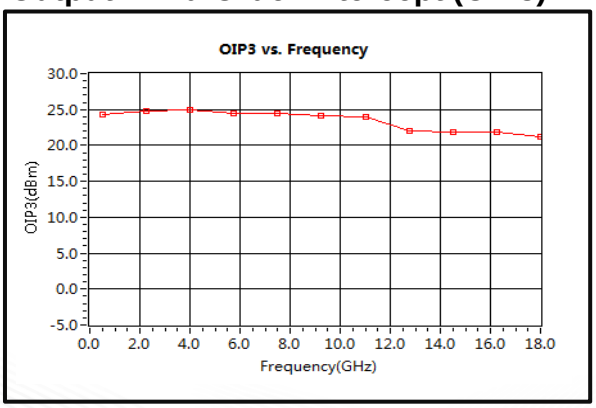
Gain vs. Output Power



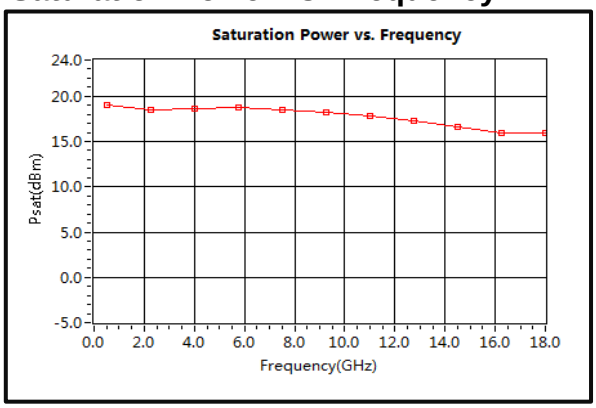
P1dB vs. Frequency



Output Third Order Intercept (OIP3)



Saturation Power vs. Frequency



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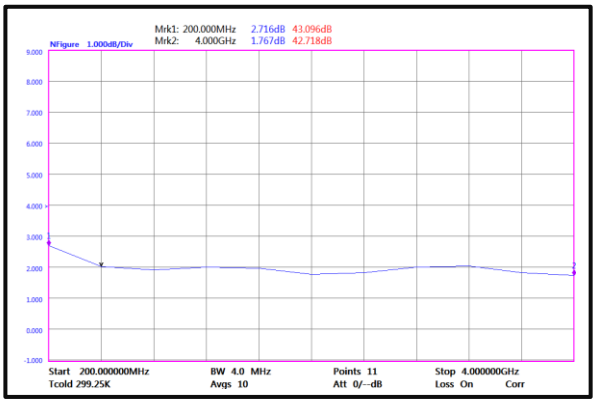
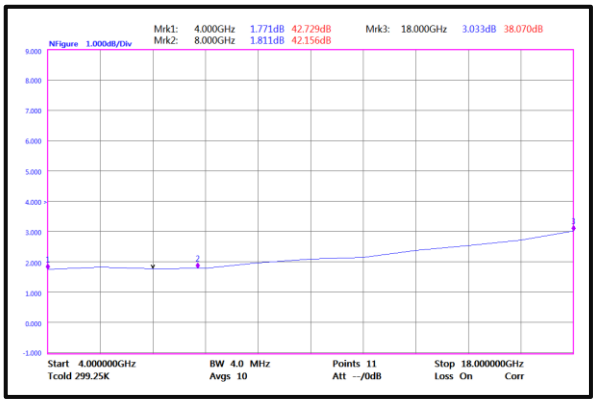
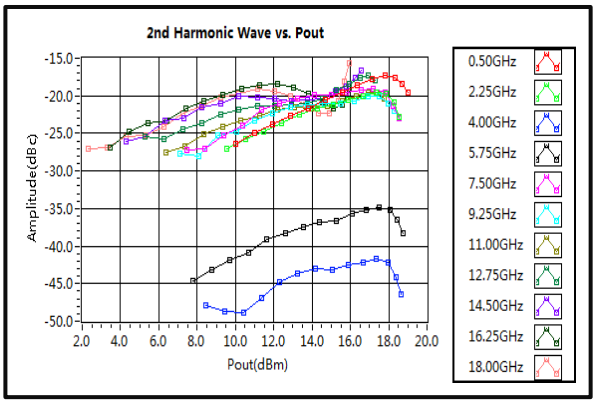
Noise Figure(0.2-4GHz)



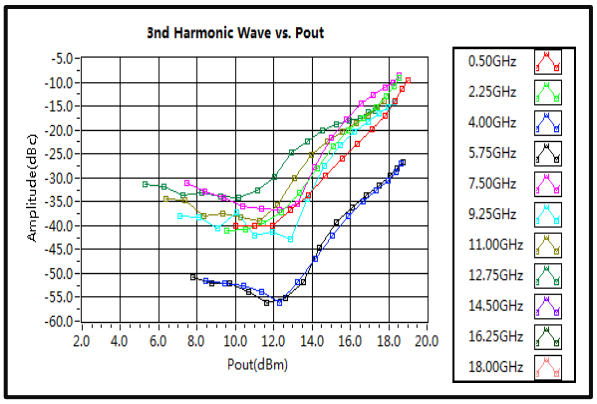
Noise Figure(4-18GHz)



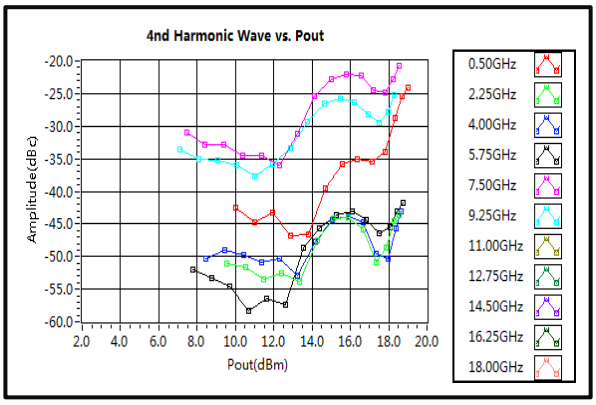
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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