Ultra Wide Band Low Noise Amplifier 50MHz~20GHz

Feature

- Gain: 28dB Typical
- Noise Figure: 1.8dB Typical
- P1dB Output Power: 16dBm Typical
- Supply Voltage: +12V @ 130mA
- 50 Ohm Matched Input / Output
- Size: 1.18” x 1.57” x0.39”

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.05		0.2	0.2		10	10		21	GHz
Gain	26	29		25	29		22	25		dB
Gain Flatness		±0.8	±1.0		±0.8	±1.0		±1.0	±1.5	dB
Gain Variation Over Temperature (-45 ~ +85)		±0.5			±0.8			±1.0		dB
Noise Figure		3.0	4.5		1.8	2.5		2.5	4.0	dB
Input VSWR		2.5			1.8	2		1.8	2	:1
Output VSWR		1.8	2		1.5	1.8		1.5	1.8	:1
Output Power for 1 dB Compression (P1dB)	16	18		15	17		13	15		dBm
Saturated Output Power (Psat)		19			18			16		dBm
Output Third Order Intercept (IP3)		26			27			25		dBm
Supply Current (Idd) (Vcc=+12V)		130	180		130	180		130	180	mA
Isolation S12	60	65			60	65	50	55		dB
Input Max Power(no damage)	0									dBm

Weight	5.5 ounces	Impedance	50ohms
Input /Output Connectors	SMA-Female	Material	Aluminum/copper
Finish	Standard: Gold 40 micron; Nickel 220 micron thickness	Package Sealing	Epoxy Sealing (Standard)
	Option: Gold 80 micron; Nickel 180 micron thickness		Hermetically Seal (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power (RFIN)	+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

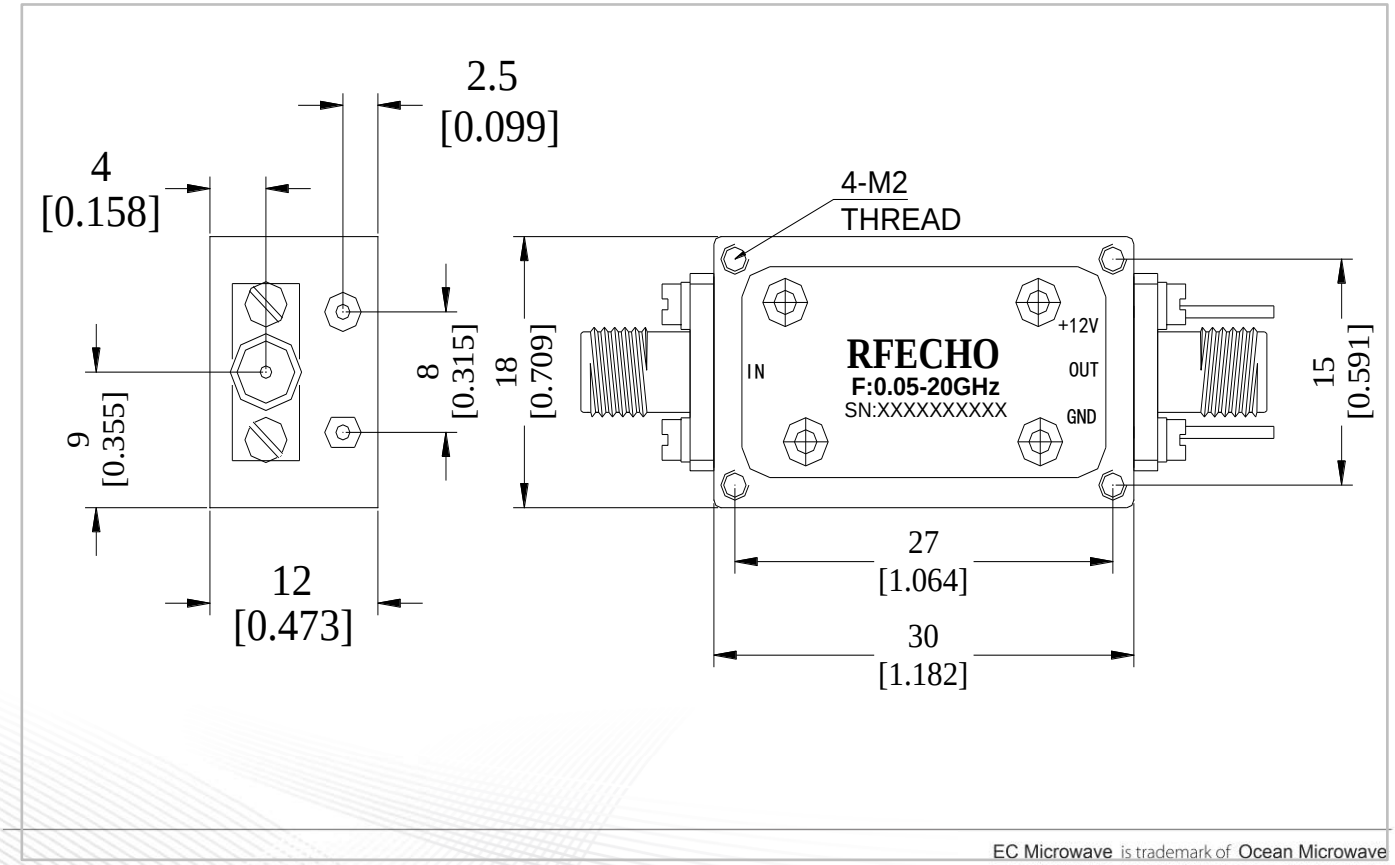
Environmental Specifications

Operational Temperature	-45ºC~+85ºC
Storage Temperature	-55ºC~+125ºC
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 35c, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

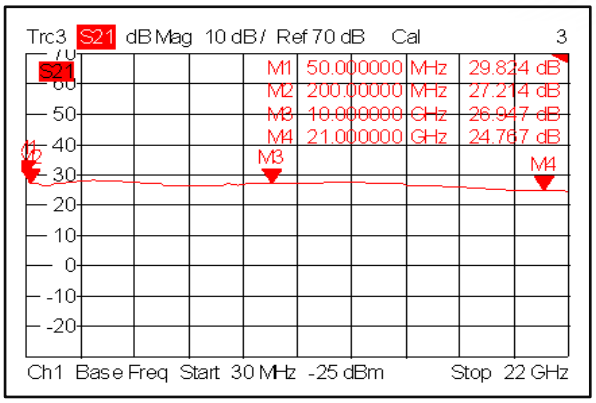
Outline Drawing:

All Dimensions in mm（inches）

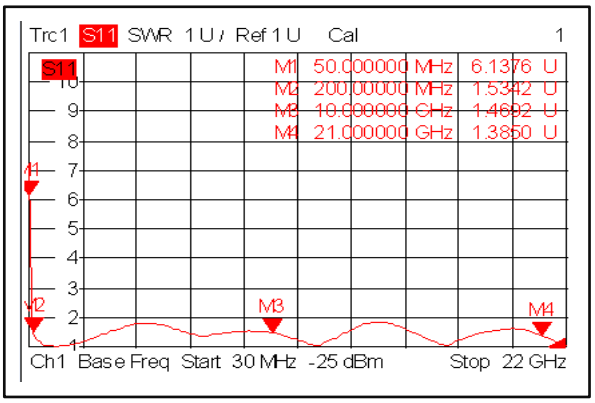
Heat Sink required during operation(Sold Seperately)



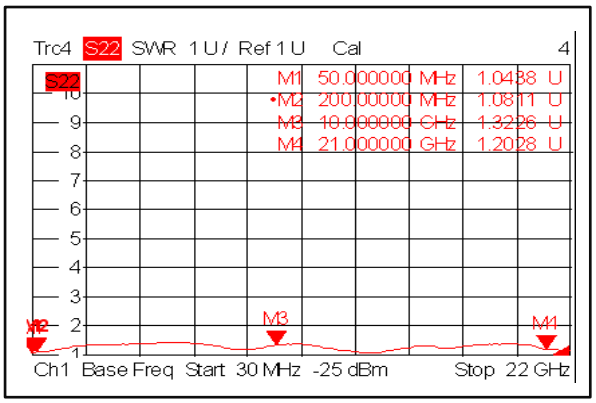
Gain



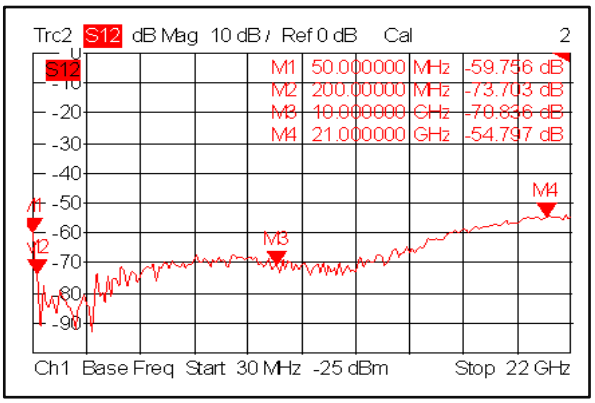
Input VSWR



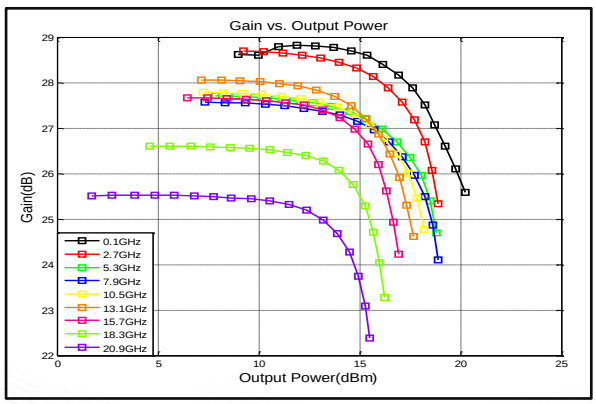
Output VSWR



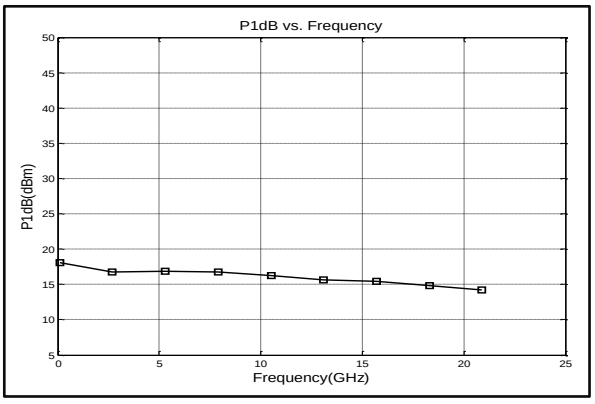
Isolation



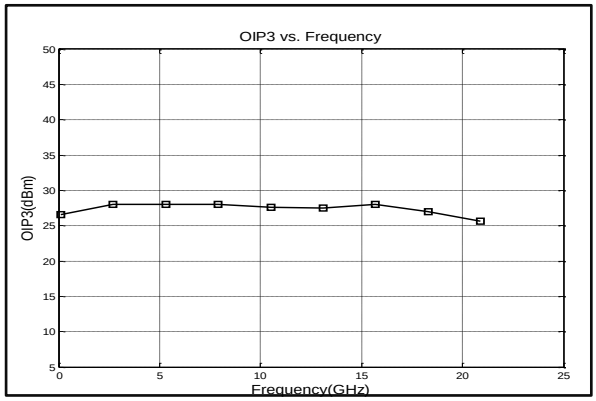
Cain vs. output power



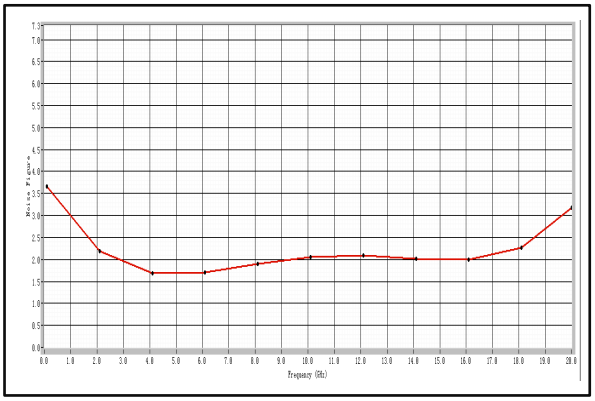
P1dB vs. Frequency



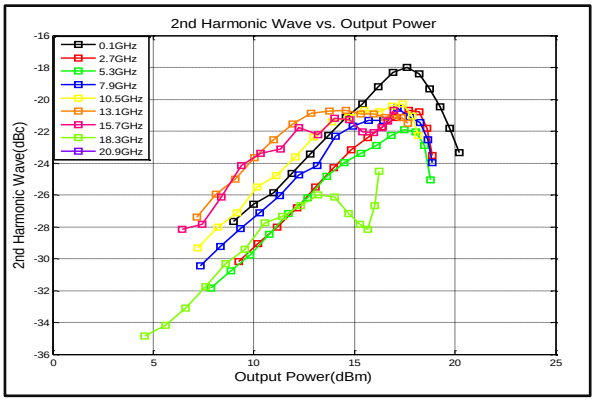
Output Third order Intercept (IP3)



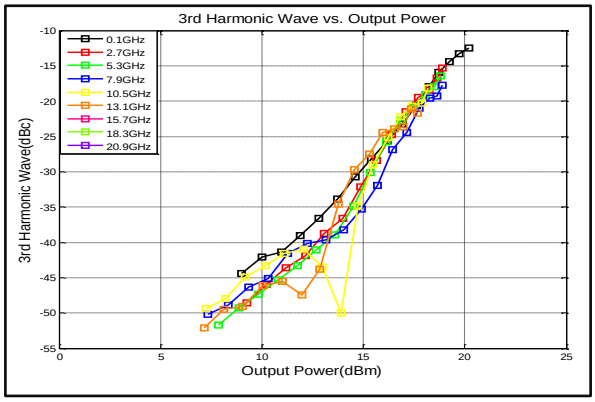
Noise Figure



2nd Harmonic wave output Power



3nd Harmonic wave output Power



4th Harmonic wave output Power