



Low Noise Amplifier 17.2GHz~21.2GHz

Features

- Gain: 53dB Typical
- Noise Figure: 2.2dB Typical
- P1dB Output Power: +18dBm Typical
- Supply Voltage: +15V @ 250mA
- 50 Ohm Matched



Typical Applications

- Wireless Infrastructure
 - Military & Aerospace
 - Fiber Optics
- RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	17.2		21.2	17		26	GHz
Gain	49	53		47	52		dB
Gain Flatness		±0.5	±1.0		±2.0		dB
Gain Variation Over Temperature (-45°C~+85°C)		±2.0			±2.5		dB
Noise Figure		2.2			2.5		dB
Input VSWR		1.8			1.8		: 1
Output VSWR		2.0			2.0		: 1
Output 1dB Compression Point (P1dB)	16	20		15	18		dBm
Saturated Output Power (Psat)		22			20		dBm
Output Third Order Intercept (IP3)		25			24		dBm
Supply Current (Idd) (Vcc=+15V)		250	300		250	300	mA
Isolation S12		-60			-55		dB

Weight	14.81 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Standard: Gold 40 micron; Nickel 220 micron thickness	Package Sealing	Epoxy Sealing (Standard)
	Option: Gold 80 micron; Nickel 180 micron thickness		Hermetically Sealed (Option with extra charge)



QOTANA TECHNOLOGIES

Low Noise Amplifier 17.2GHz~21.2GHz

Absolute Maximum Ratings

Operating Voltage	+15V ± 10%
RF Input Power (RFIN)	-25dBm

Biassing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +15V biasing

Power OFF Procedure

Step 1	Turn off +15V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

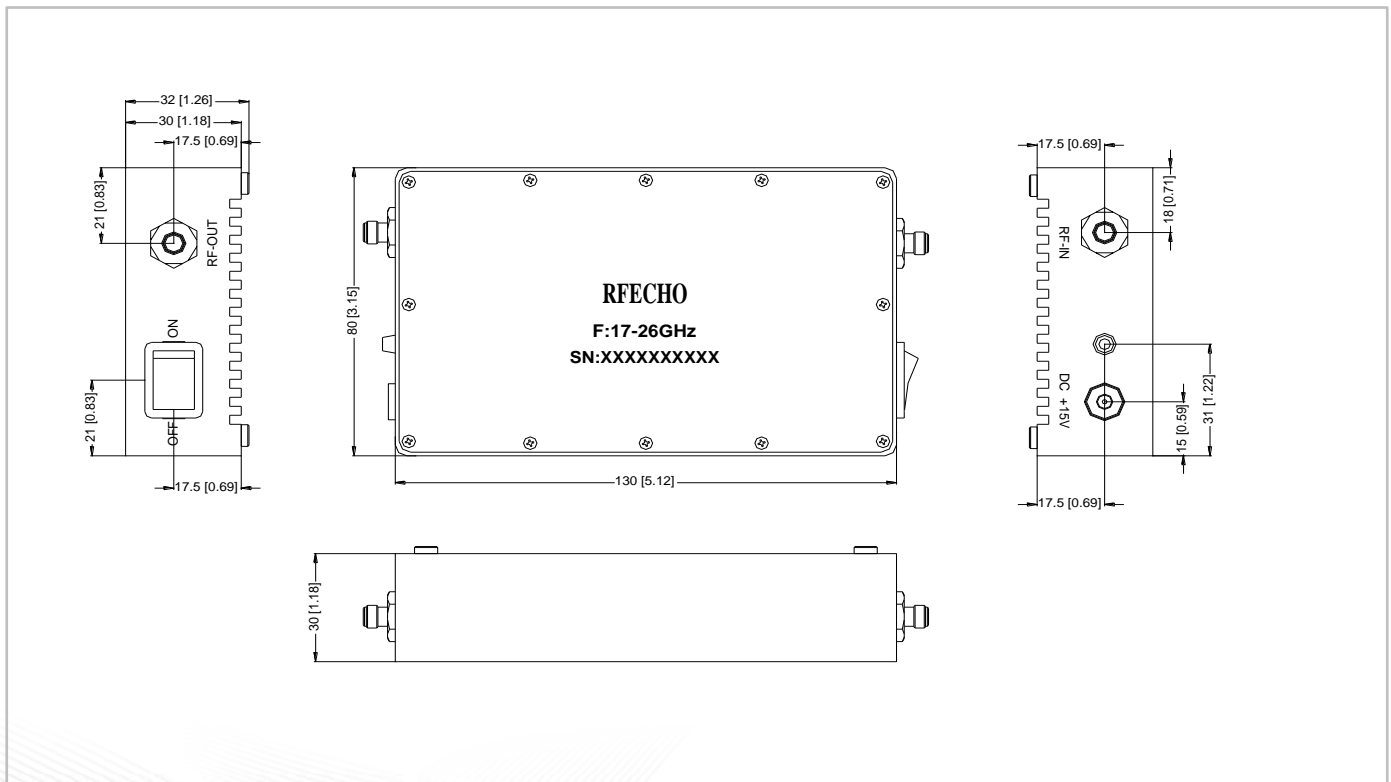
Environmental Specifications

Operational Temperature	-45°C~+85°C
Storage Temperature	-55°C~+125°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:

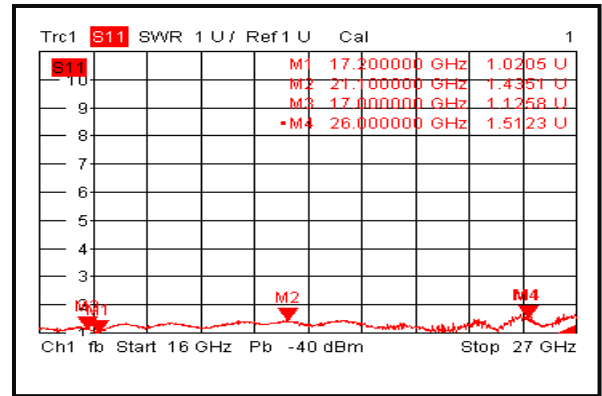
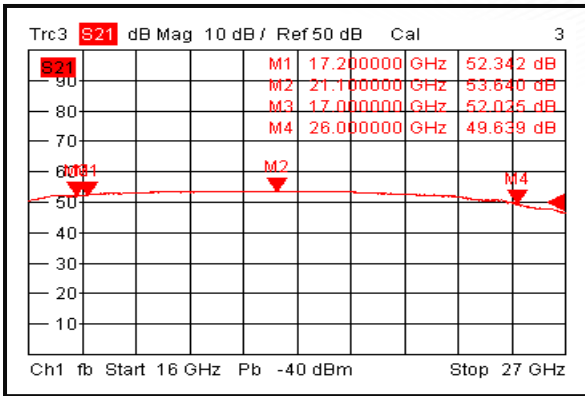
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

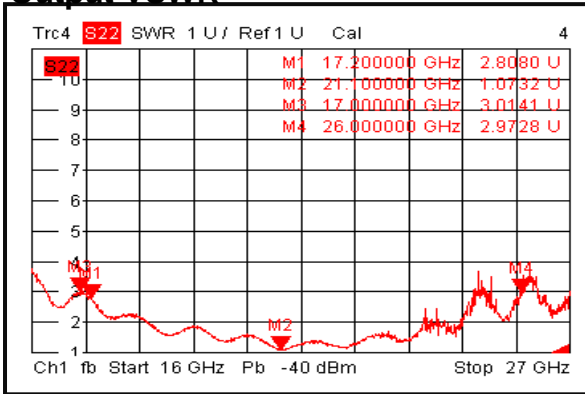




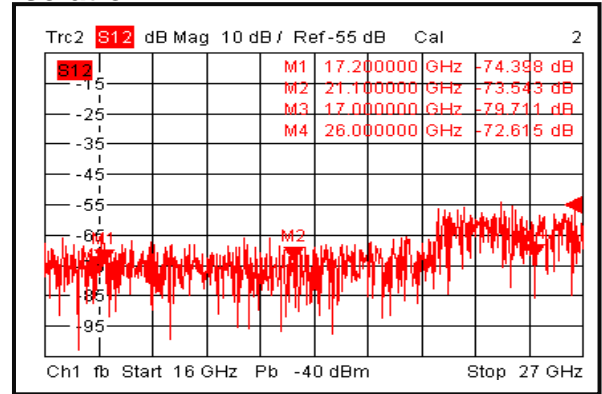
Gain



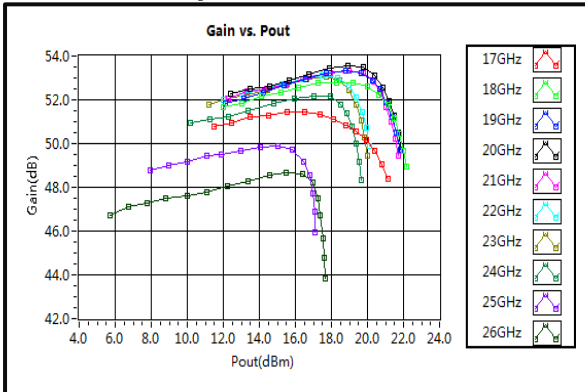
Output VSWR



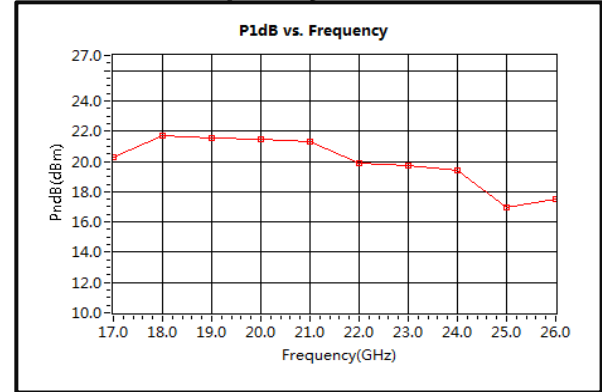
Isolation



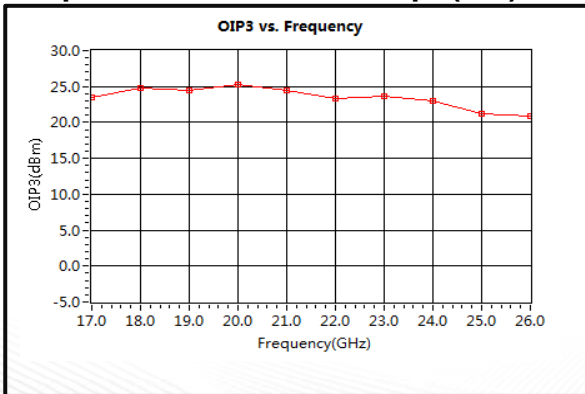
Gain vs. Output Power



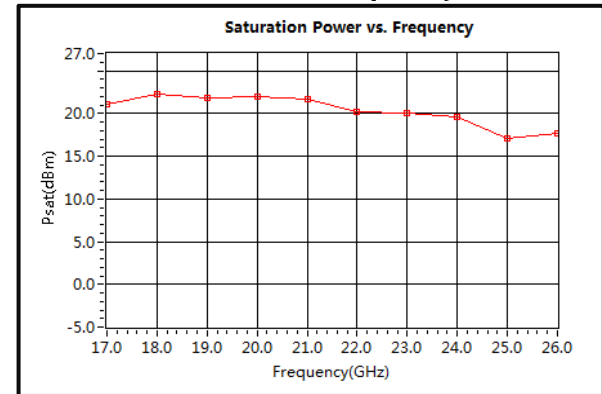
P1dB vs. Frequency



Output Third Order Intercept (IP3)

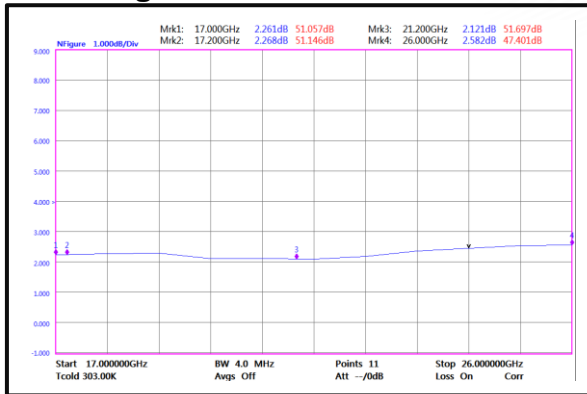


Saturation Power vs. Frequency





Noise Figure



2nd Harmonic Wave Output Power

