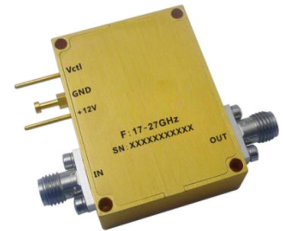




Wide Band Variable Gain Low Noise Amplifier 17GHz~27GHz

Features

- Gain: 38dB Typical
- Noise Figure: 2.2dB Typical
- Output P1dB : +23dBm Typical
- PSAT Output Power: 25dBm
- Supply Voltage: +12V
- 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	17		21	21		27	GHz
Gain	35	38	42	35	38	42	dB
Gain Adjustable Range		15			15		dB
Gain Flatness		±2.0			±2.0		dB
Gain Variation Over Temperature (-40°C~+85°C)		±1.0			±1.0		dB
Noise Figure		2.2	3.5		2.5	3.2	dB
Input VSWR		1.6			1.6		: 1
Output VSWR		1.6			1.6		: 1
Output 1dB Compression Point (P1dB)	20	23		19	23		dBm
Saturated Output Power (Psat)		25			25		dBm
Output Third Order Intercept (OIP3)		28			30		dBm
Isolation S12		-60			-60		dB
Supply Current (Vcc=+12V, Vctl= -4.5 to -1V)		200	270		200	270	mA

Weight	1.4 Max. ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Optional)



Absolute Maximum Ratings

Operating Voltage	+15V
Vg Control Voltage	-5 to 0V
RF Input Power (@25°C, 50Ω)	-15dBm

Biassing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Step 4	Connect Vctl Control
Step 5	Turn on +12V biasing
Step 6	Turn on Vctl Control

Power OFF Procedure

Step 1	Turn off Vctl Control
Step 2	Turn off +12V biasing
Step 3	Remove RF connection
Step 4	Remove Ground.

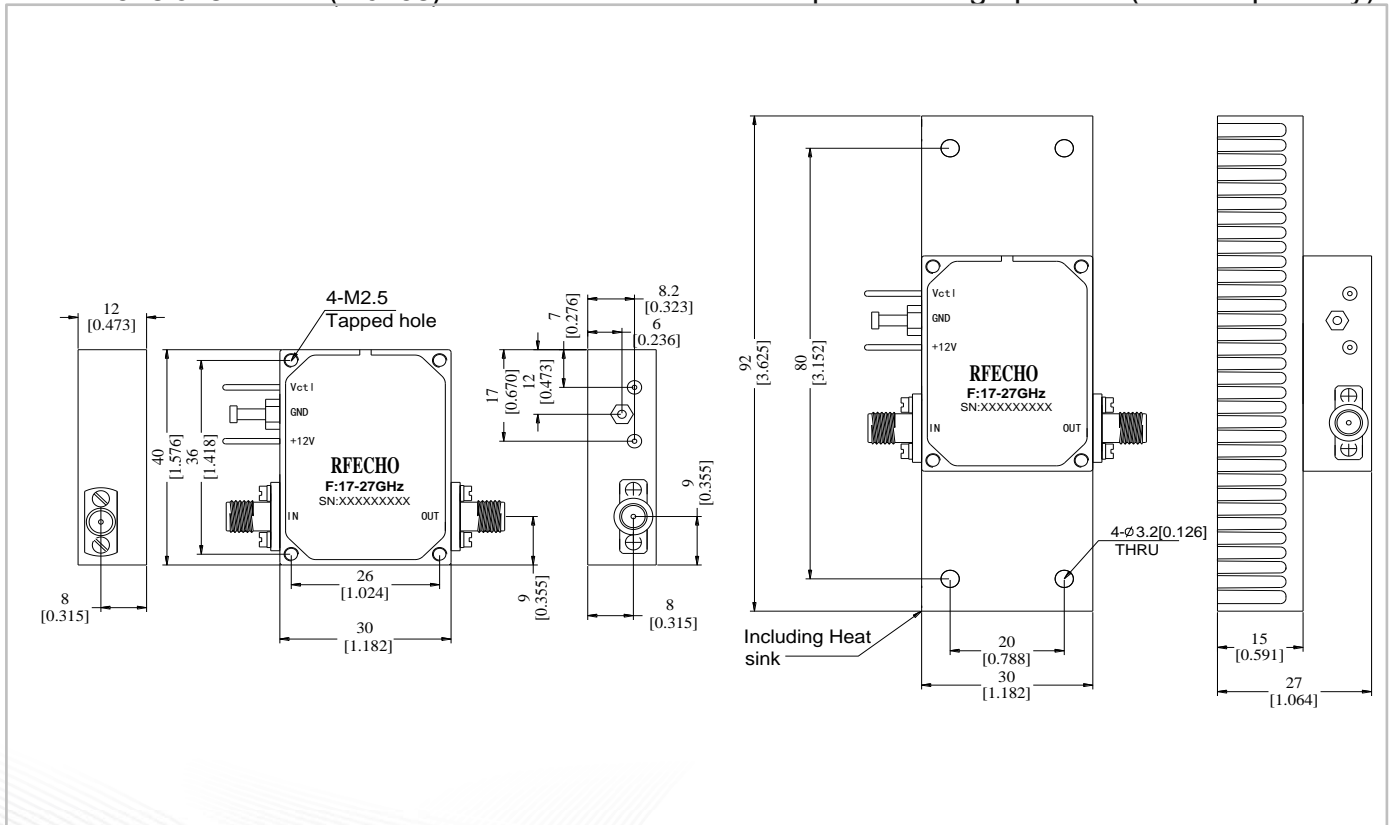
Environmental Specifications

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:

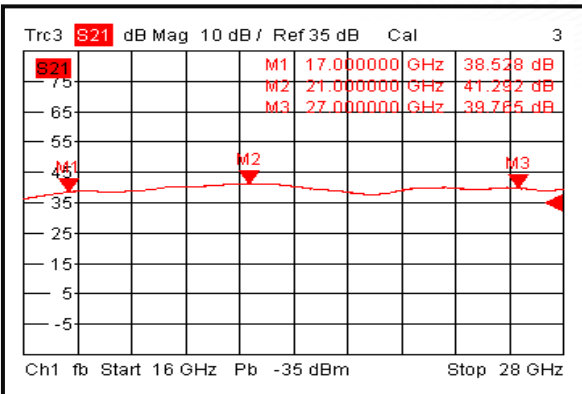
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

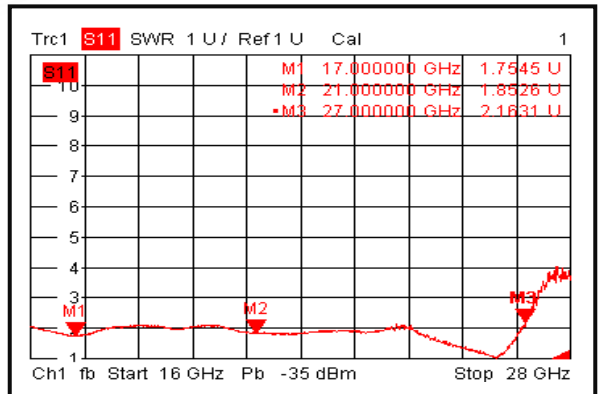




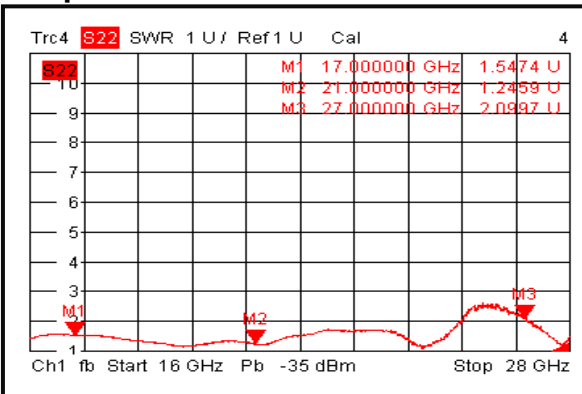
Gain @+25°C



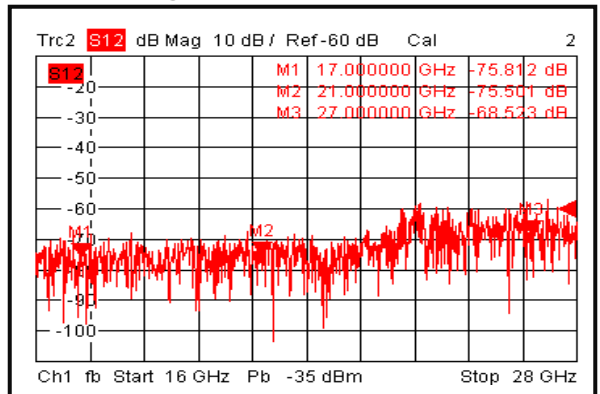
Input VSWR @+25°C



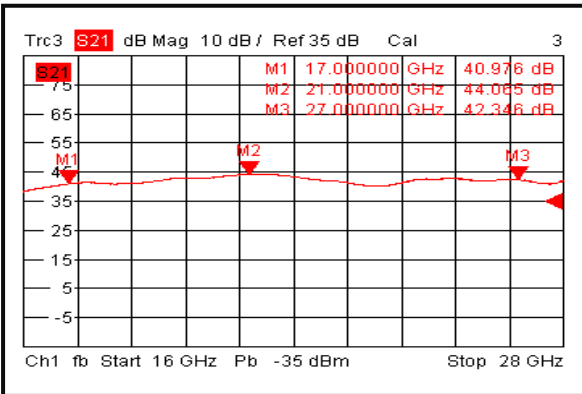
Output VSWR @+25°C



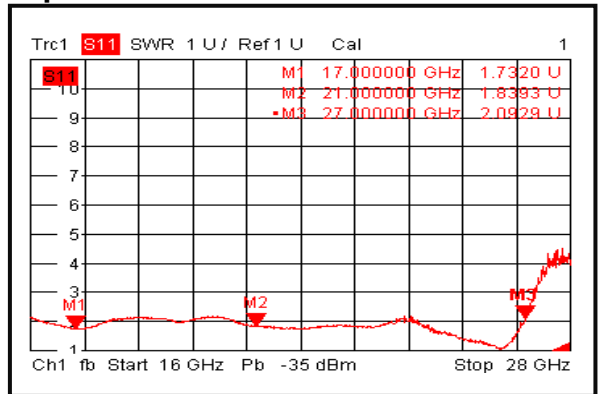
Isolation @+25°C



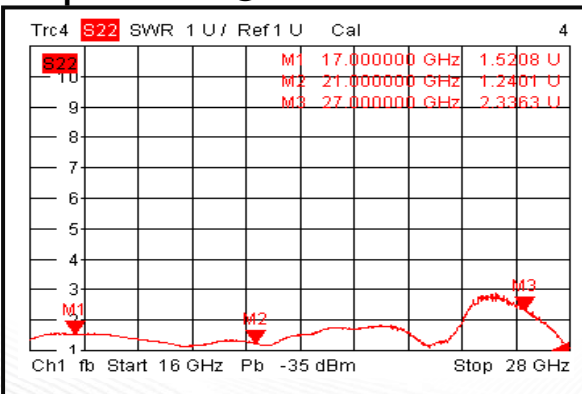
Gain @-40°C



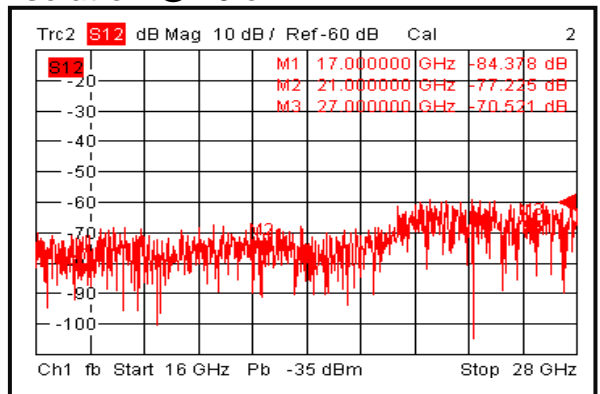
Input VSWR @-40°C



Output VSWR @-40°C

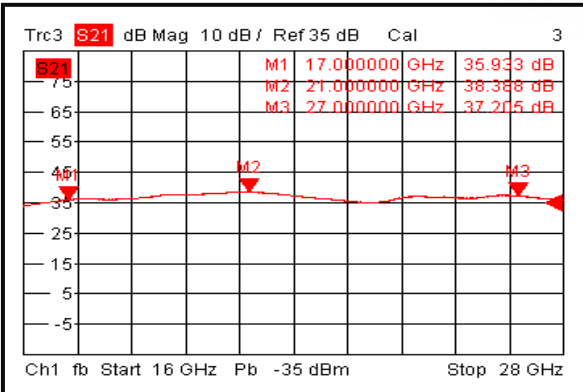


Isolation @-40°C

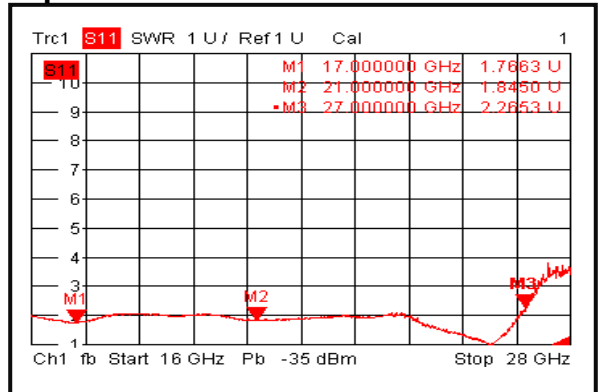




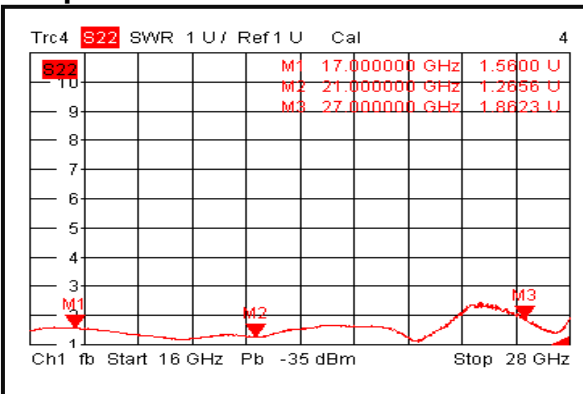
Gain @+85°C



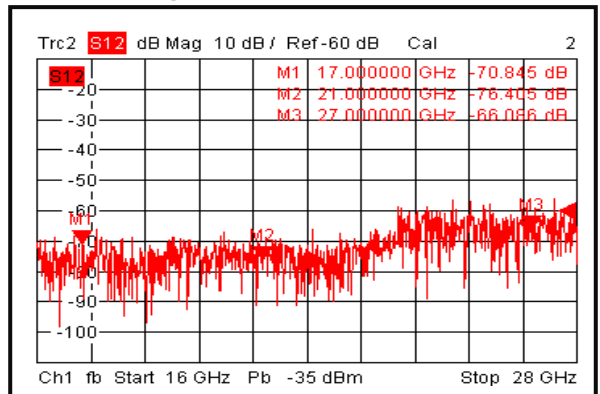
Input VSWR @+85°C



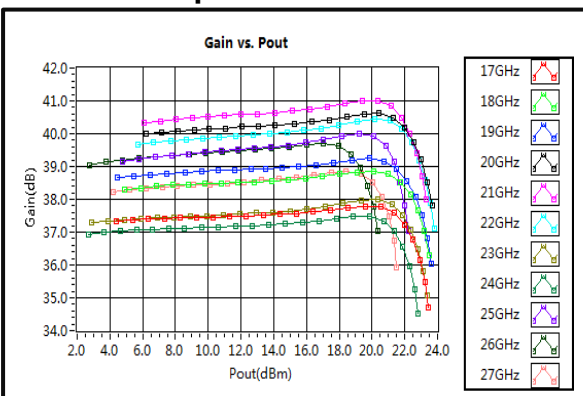
Output VSWR @+85°C



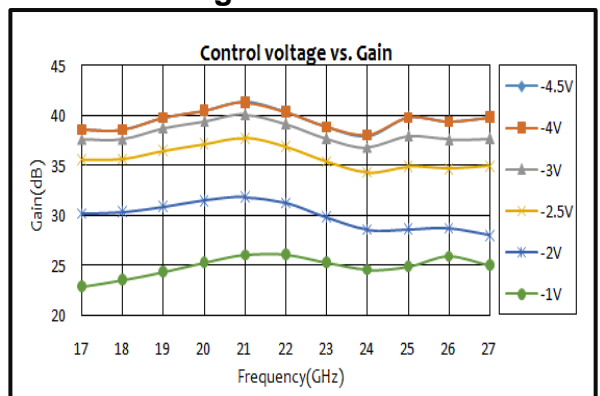
Isolation @+85°C



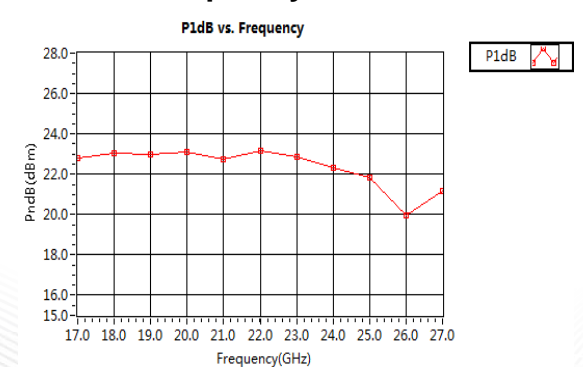
Gain vs. Output Power



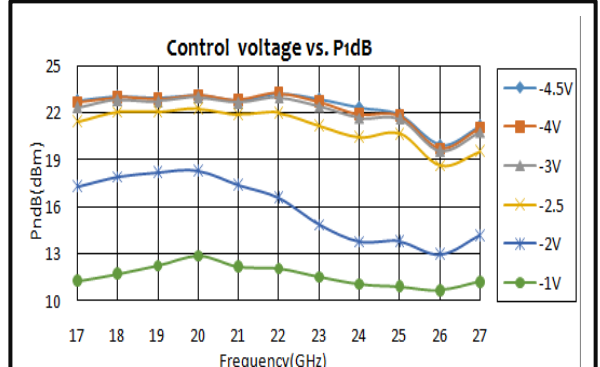
Control Voltage vs. Gain



P1dB vs. Frequency

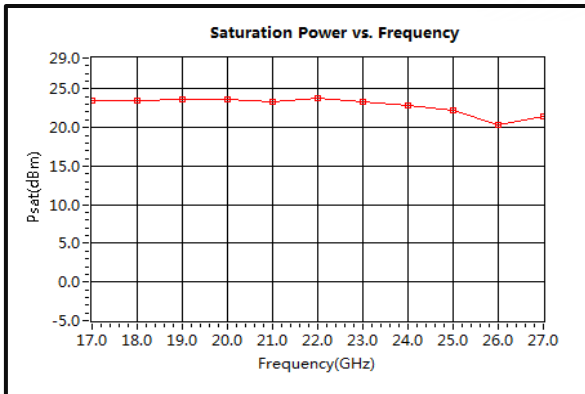


Control Voltage vs. P1dB

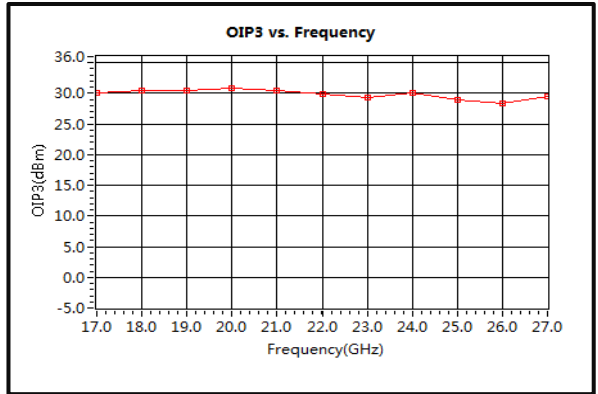




Saturation Power vs. Frequency



Output Third Order Intercept (OIP3)



Noise Figure



2nd Harmonic Wave Output Power

