



Low Noise Amplifier 15GHz~27GHz

Features

- Gain: 38dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +28dBm
- Supply Voltage: +12V @ 450mA
- 50 Ohm Matched Input / Output



Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.
Frequency Range	15	21	27	GHz
Gain	31	41		dB
Gain Flatness		±2		dB
Gain Variation Over Temperature (-40°C~+85°C)		±1.0		dB
Noise Figure		2.5	3.5	dB
Input VSWR		1.8	2.3	: 1
Output VSWR		2.0		: 1
Output 1dB Compression Point (P1dB)	25	28		dBm
Saturated Output Power (Psat)	26.5	29		dBm
Output Third Order Intercept (OIP3)		36		dBm
Isolation S12	-55	-65		dB
Supply Current (Idd) (Vcc=+12V)		450	500	mA

Weight	3.5 ounces (Max.)	Impedance	50 ohms
Input /Output Connectors	SMA-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)	+3dBm

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

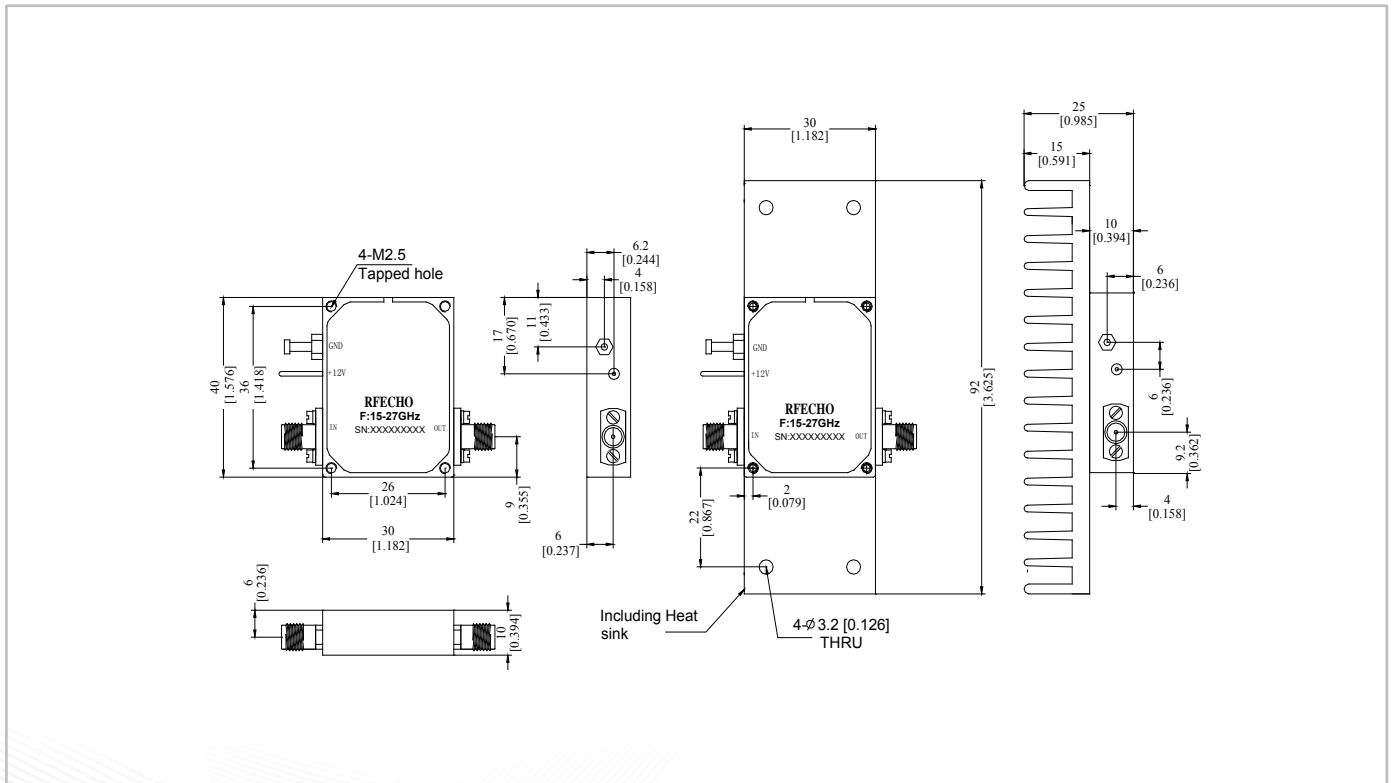
Environmental Specifications

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:

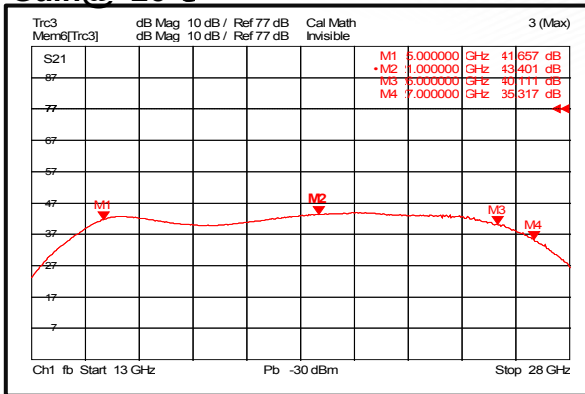
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

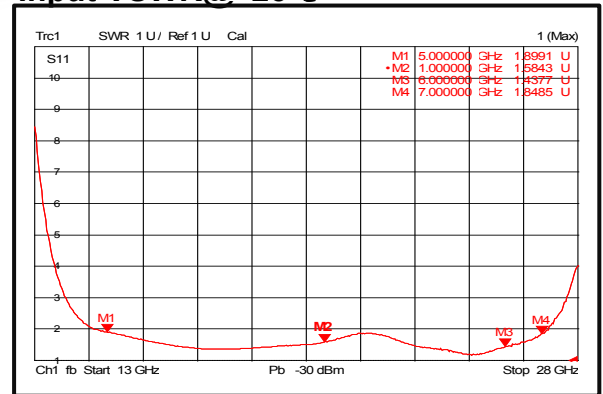




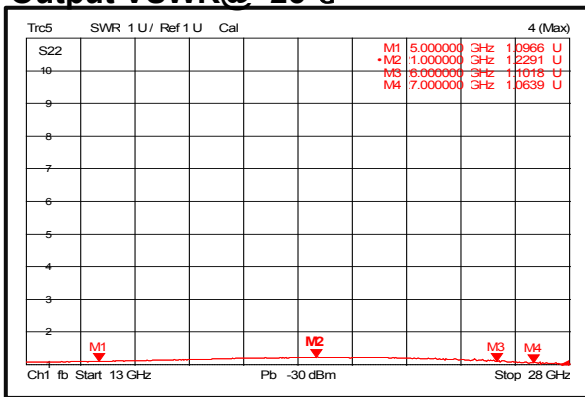
Gain@+25°C



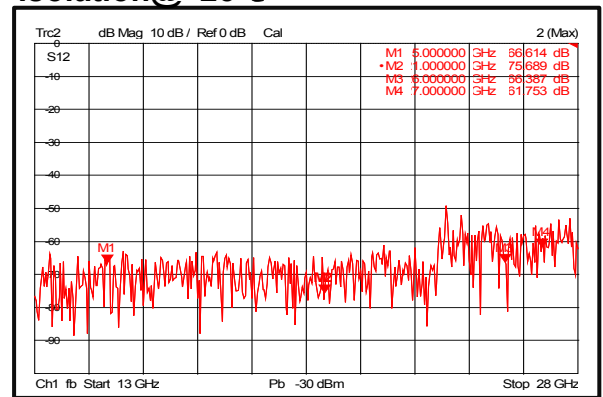
Input VSWR@+25°C



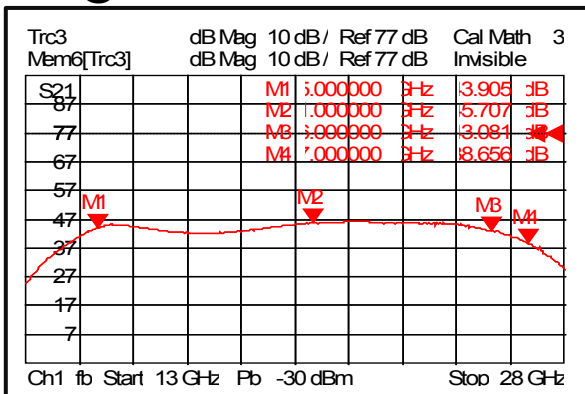
Output VSWR@+25°C



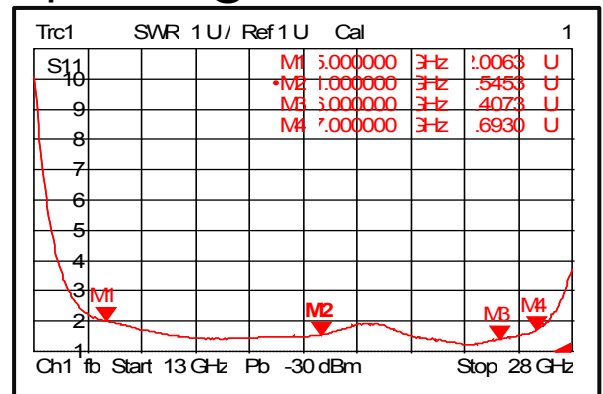
Isolation@+25°C



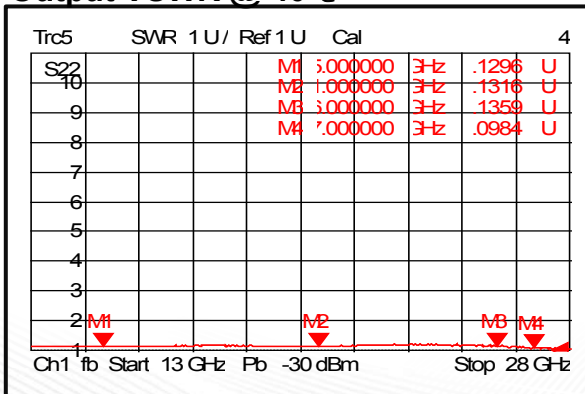
Gain@-40°C



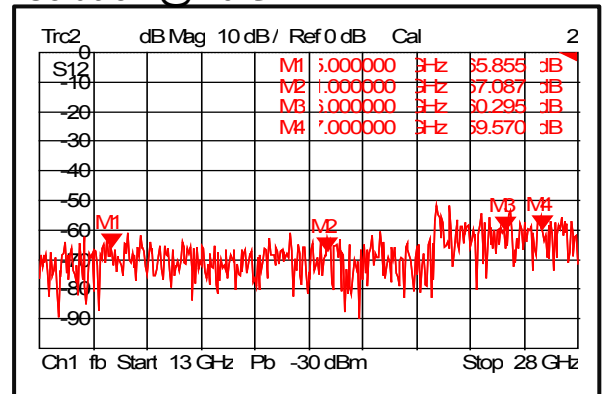
Input VSWR @-40°C



Output VSWR @-40°C

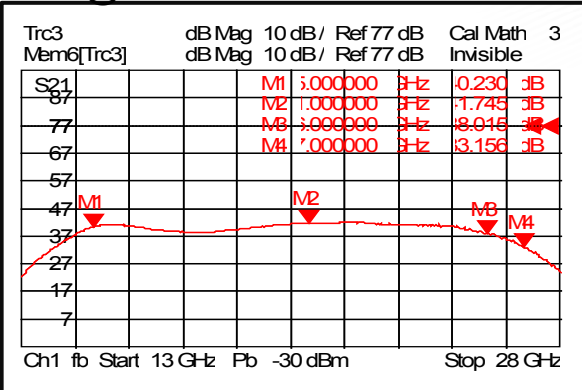


Isolation @-40°C

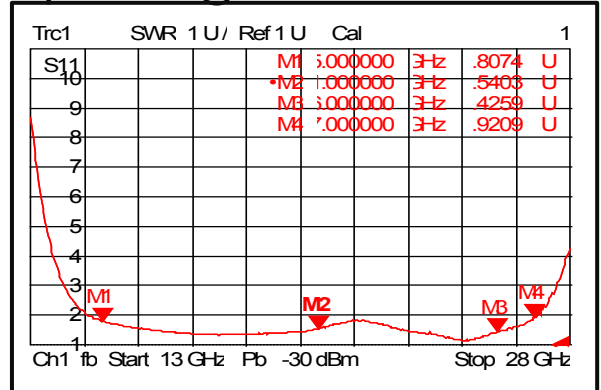




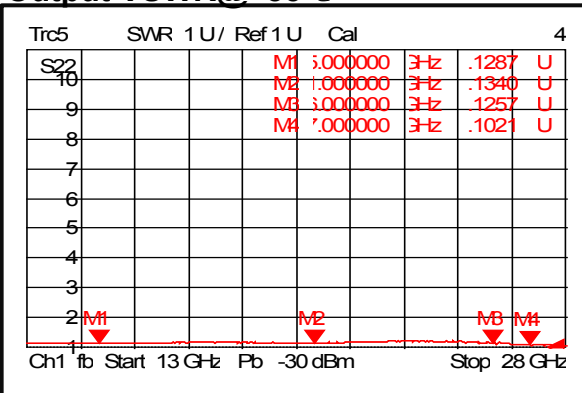
Gain @+85°C



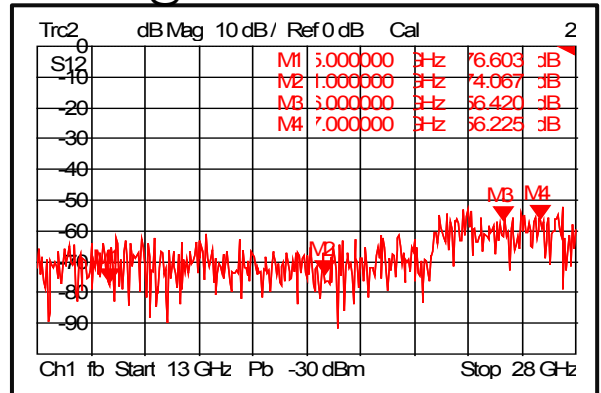
Input VSWR@+85°C



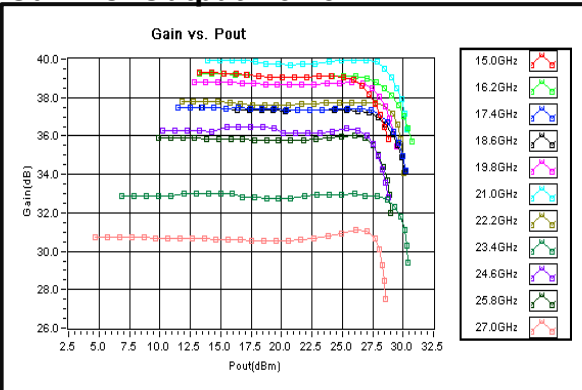
Output VSWR@+85°C



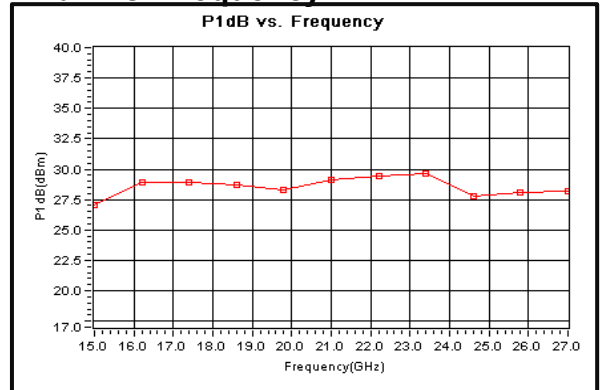
Isolation@+85°C



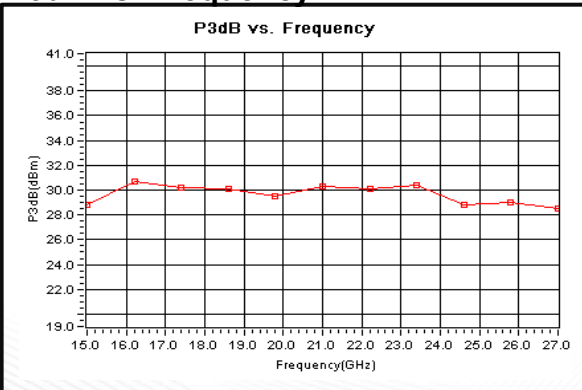
Gain vs. Output Power



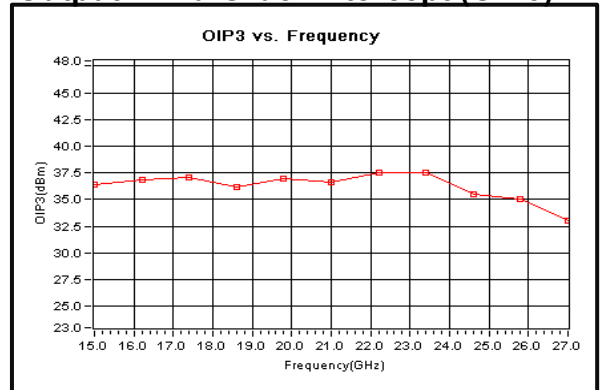
P1dB vs. Frequency



P3dB vs. Frequency

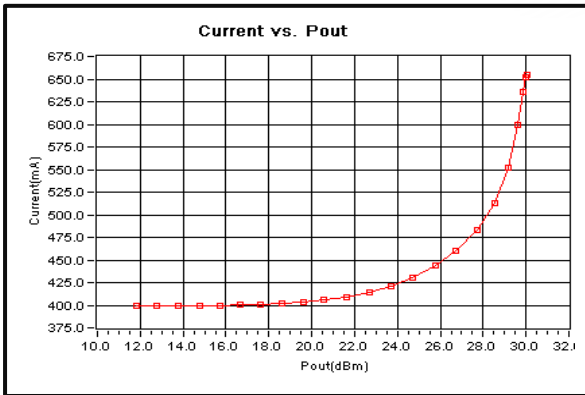


Output Third Order Intercept (OIP3)

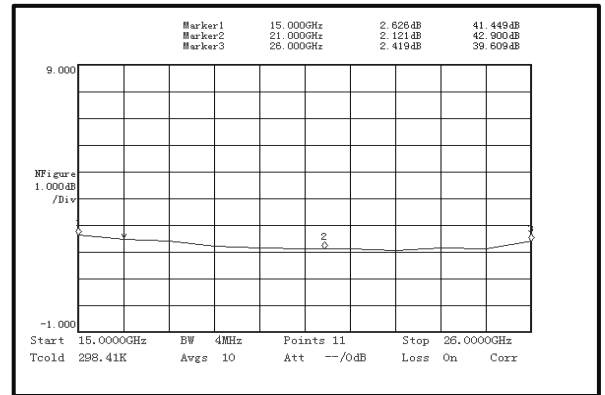




Current



Noise Figure



2nd Harmonic Wave Output Power

