



Wide Band Low Noise Amplifier 180MHz~660MHz

Features

- Gain: 26dB Typical
- Noise Figure: 0.6dB Typical
- P1dB Output Power: +23dBm
- Supply Voltage: +5V @ 115mA



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	180		400	400		660	MHz
Gain	25	27	28	23	25	27	dB
Gain Flatness		±0.5	±1.0		±1.0	±1.5	dB
Gain Variation Over Temperature (-40°C~+85°C)		±0.5			±0.5		dB
Noise Figure		0.3	0.8		0.4	0.8	dB
Input VSWR		1.8	2.2		1.5	2.0	: 1
Output VSWR		1.8	2.2		1.6	2.0	: 1
Output Power for 1 dB Compression (P1dB)	20	23		20	23		dBm
Saturated Output Power (Psat)		24			24		dBm
Output Third Order Intercept (OIP3)		36			36		dBm
Supply Current (Vcc=+5V)		115	150		115	150	mA
Isolation S12		-30			-30		dB

Net weight	0.35(Max) .ounces	Impedance	50ohms
Weight (Including Heat sink)	0.92(Max). ounces	Material	Aluminum
Input / Output Connectors	SMA-Female	Package Sealing	Epoxy Sealed (Standard)
Finish	Gold Plated		Hermetically Sealed (Optional)



Absolute Maximum Ratings

Operating Voltage	+6V
RF Input Power(RFIN)	+18dBm

Biassing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +5V biasing

Power OFF Procedure

Step 1	Turn off +5V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

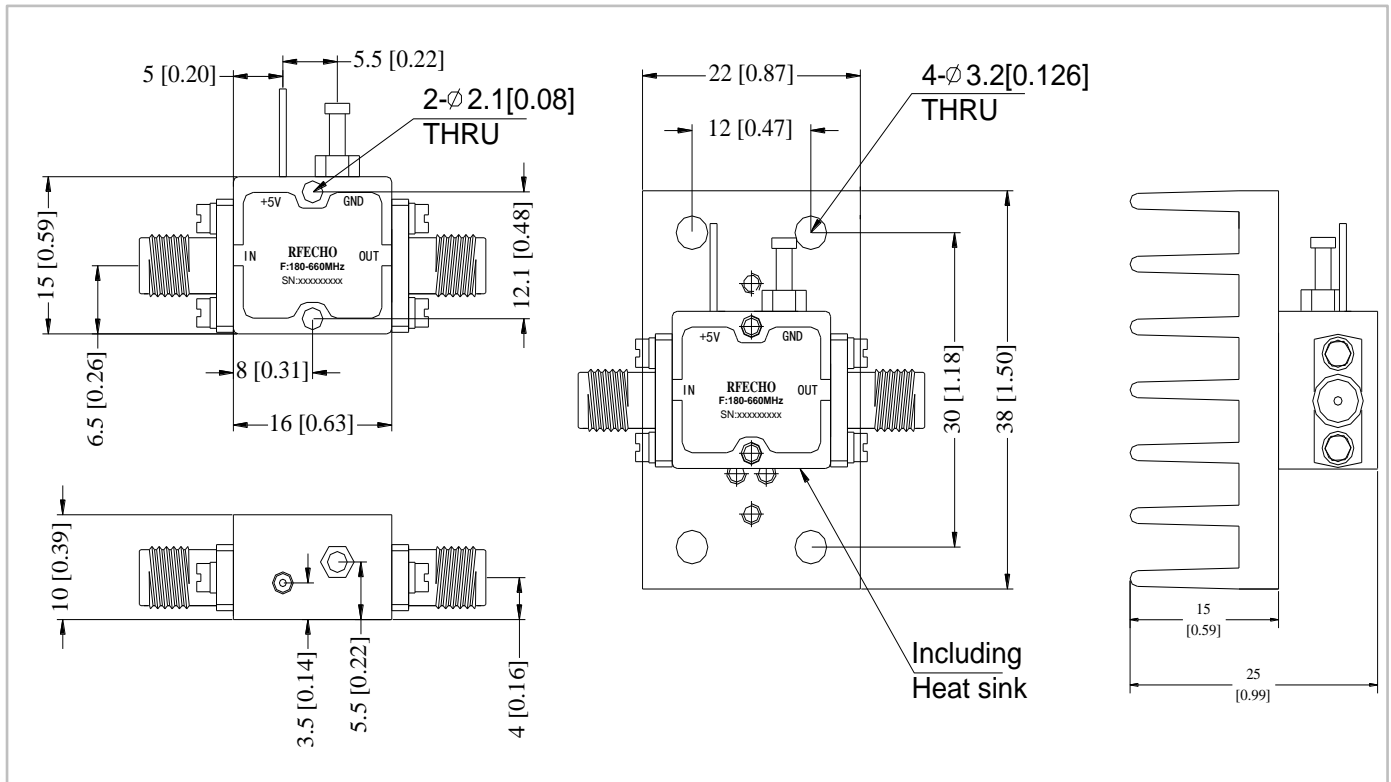
Environmental Specifications

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:

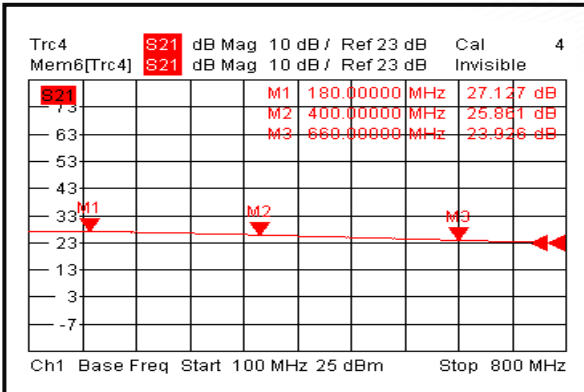
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

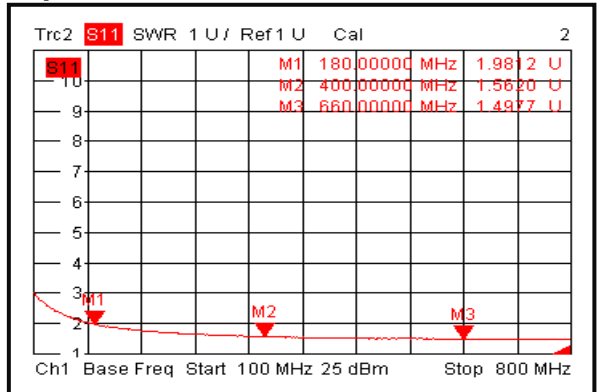




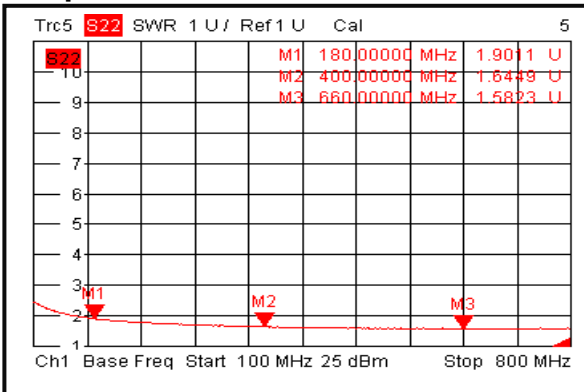
Gain @+25°C



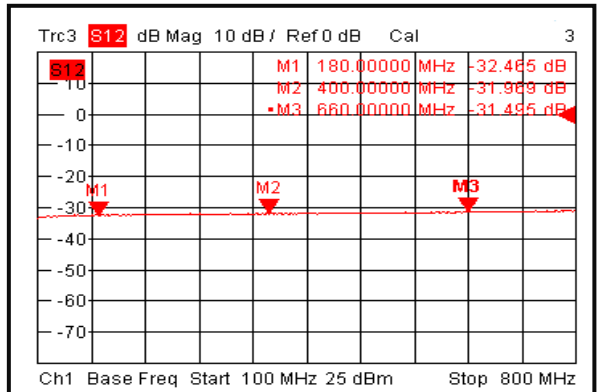
Input VSWR @+25°C



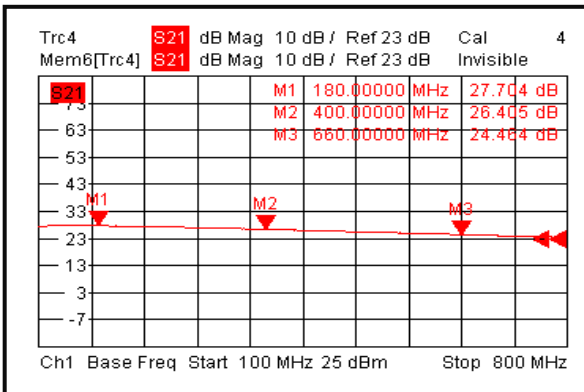
Output VSWR @+25°C



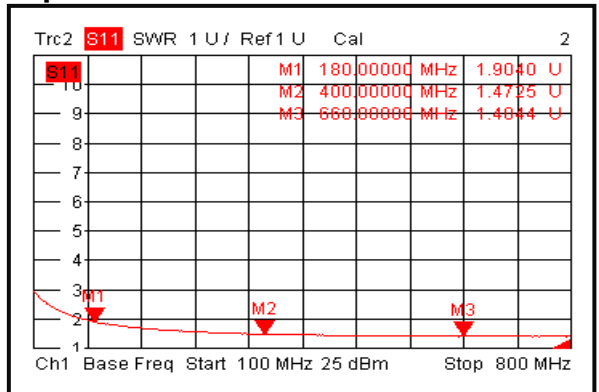
Isolation @+25°C



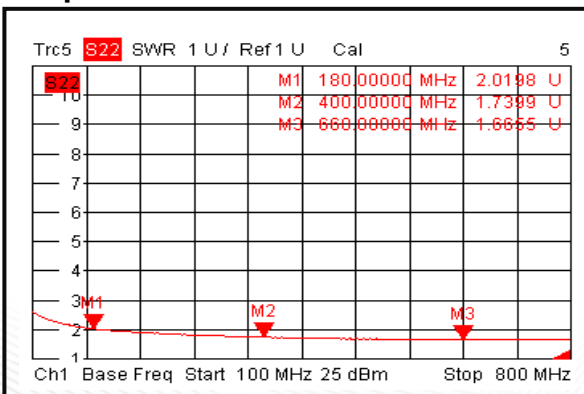
Gain @-40°C



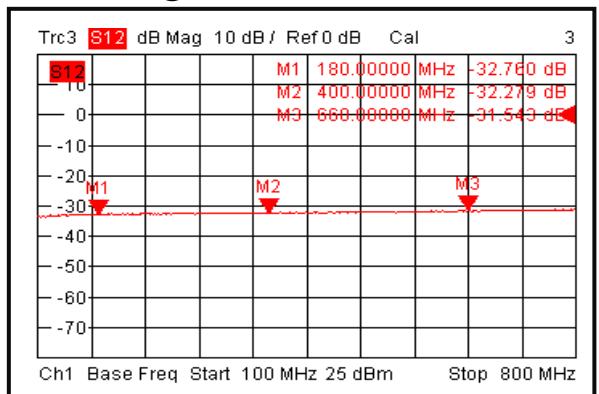
Input VSWR @-40°C



Output VSWR @-40°C

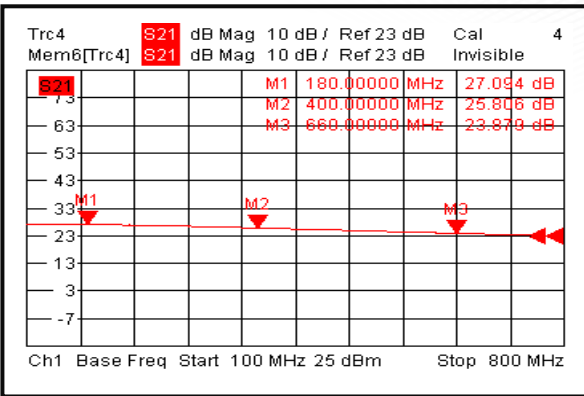


Isolation @-40°C

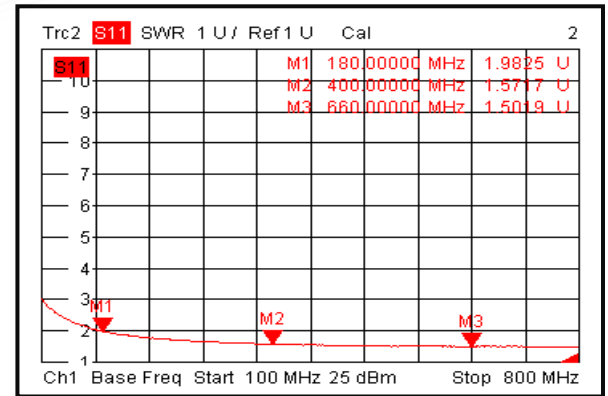




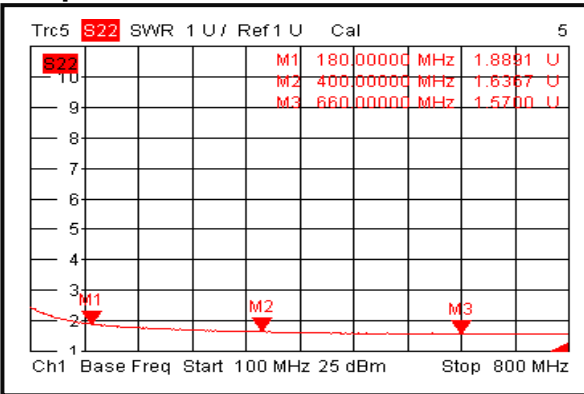
Gain @+85



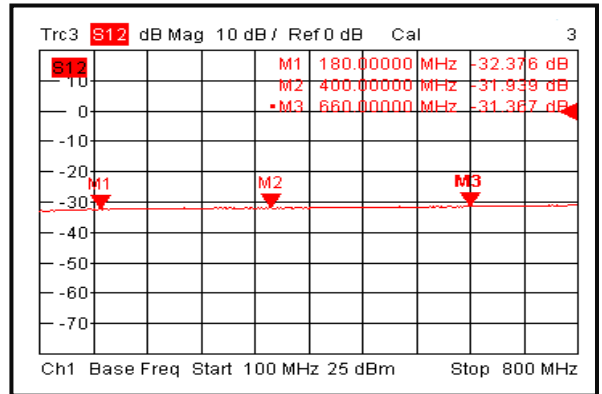
Input VSWR @+85°C



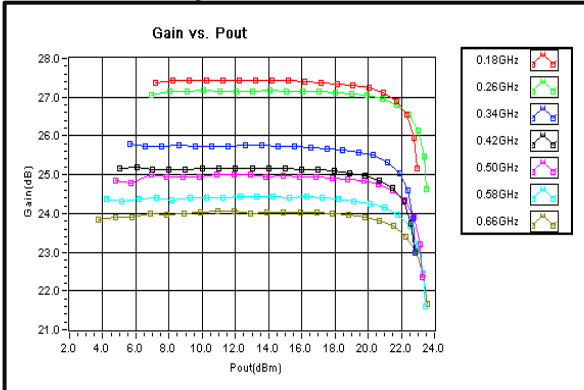
Output VSWR @+85°C



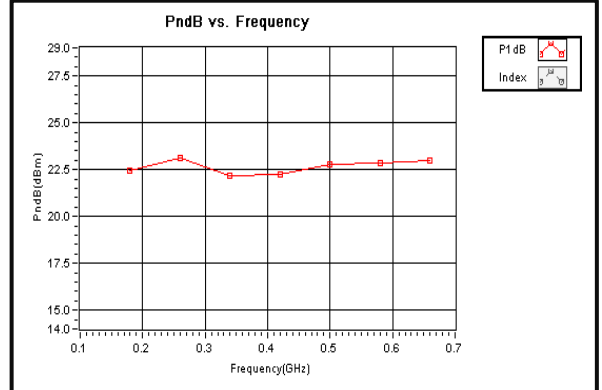
Isolation @+85°C



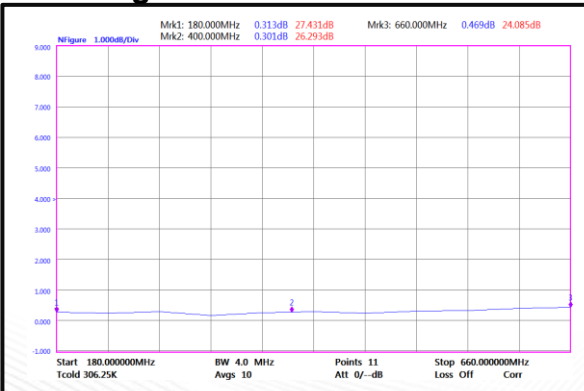
Gain vs. Output Power



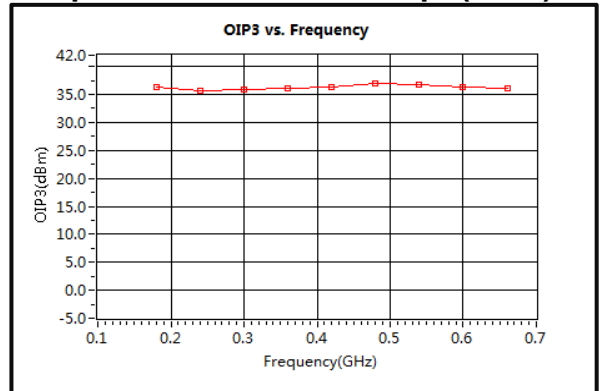
P1dB vs. Frequency



Noise Figure

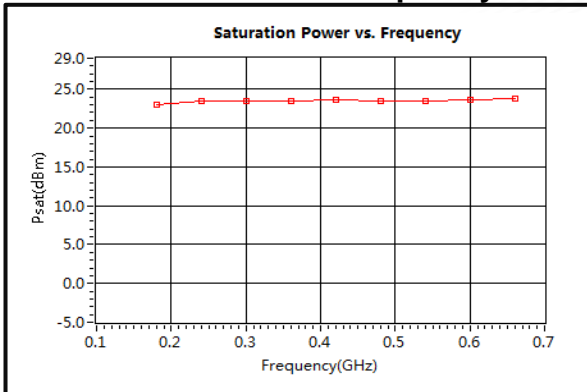


Output Third Order Intercept (OIP3)

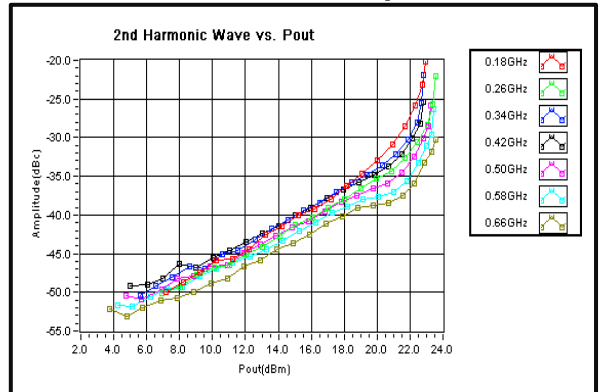




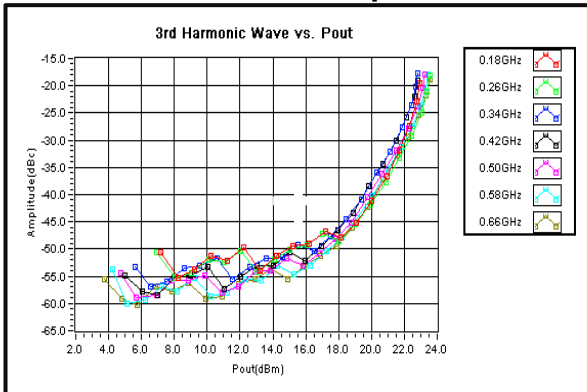
Saturation Power vs. Frequency



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

