



Wide Band Power Amplifier 0.02GHz~3GHz

Features

- Gain: 35dB Typical
- P1dB Output Power: 30dBm Min
- Supply Voltage: +12V



Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.02		3	GHz
Gain	33	35		dB
Gain Flatness		±1.5	±2.0	dB
Gain Variation Over Temperature (-40°C ~ +85°C)		±2		dB
Input VSWR		1.5		: 1
Output Power for 1 dB Compression (P1dB)	30	31.5		dBm
Saturated Output Power (Psat)		34		dBm
3rd order intermodulation product (IM3) @P1dB		-25		dBc
Supply Current (Vcc=+12V) Low Voltage Shutdown (Vcc<+8.5V)		1000	2000	mA
Efficiency at Psat (RF Output Power / DC Power Consumption)		20		%
Isolation S12		-60		dB
Ruggedness: Output Mismatch, all phase angles	VSWR = 6:1, No Device Damage			

Weight	10.93 Ounces	Impedance	50 ohms
Input / Output Connectors	SMA-Female /N-Female	Material	Aluminum
Finish	Nickel Plated	Package Sealing	Epoxy Sealing (Standard)
			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

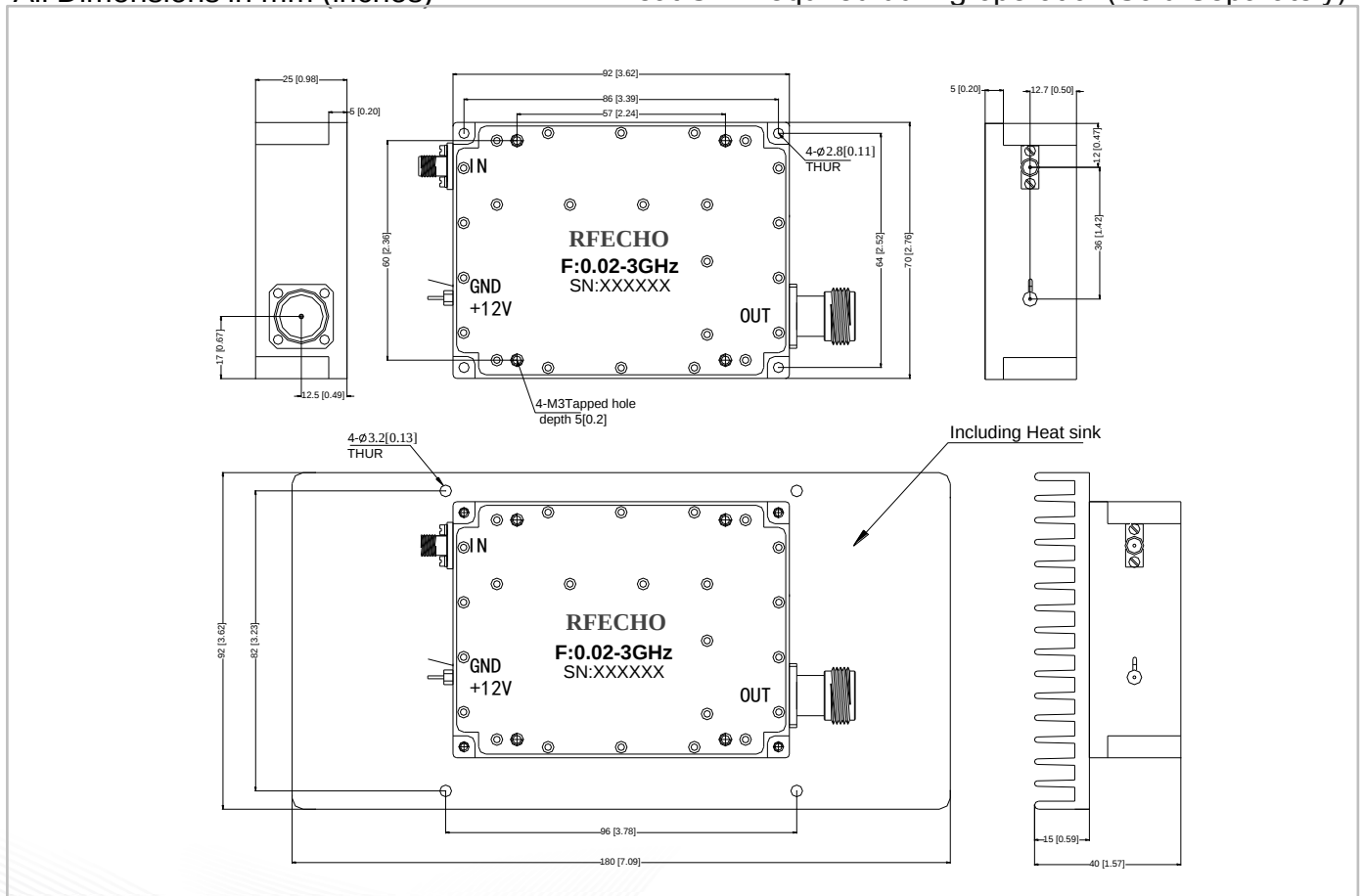
Environmental Specifications

Operational Temperature	-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:

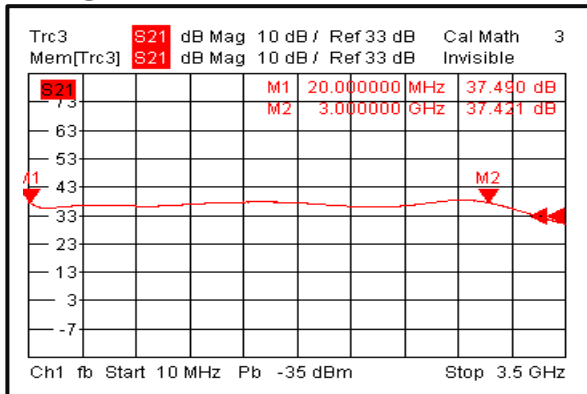
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

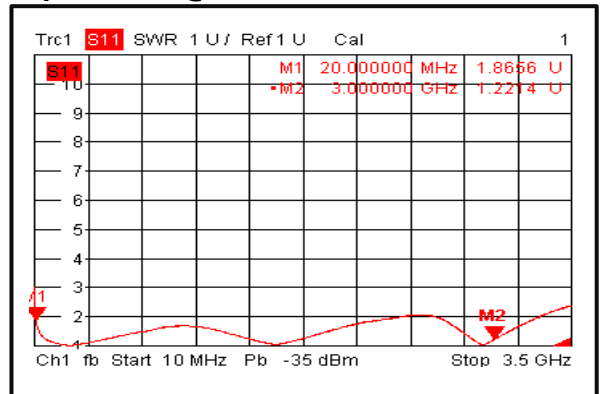




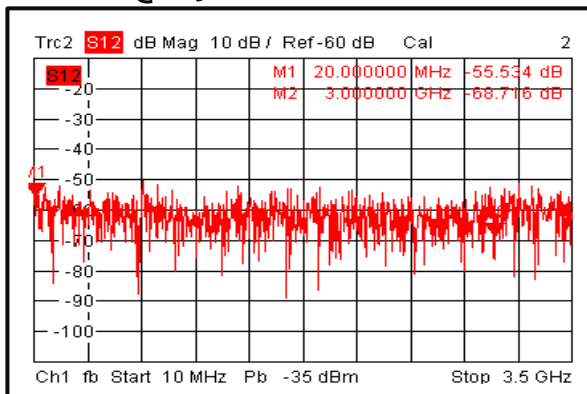
Gain@+25°C



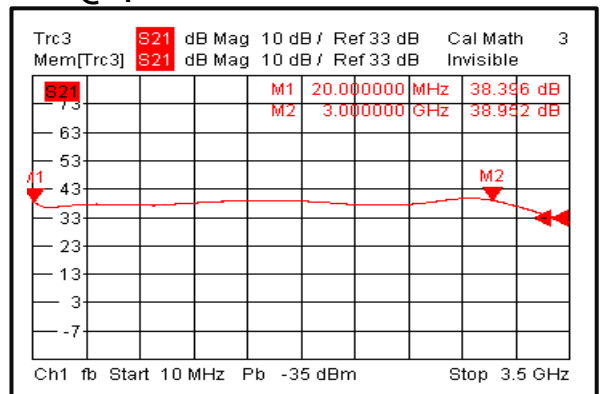
Input VSWR@+25°C



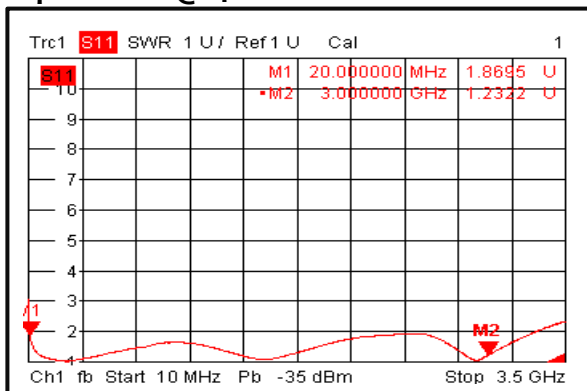
Isolation@+25°C



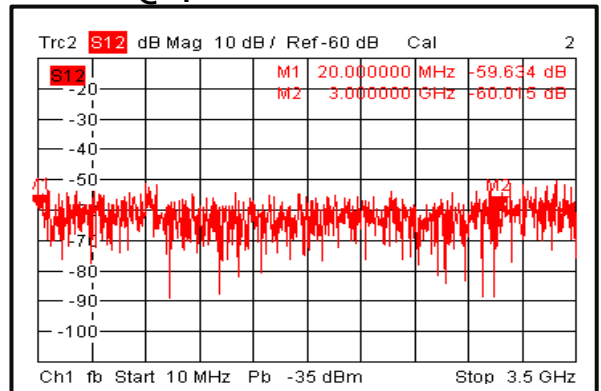
Gain@-40°C



Input VSWR@-40°C

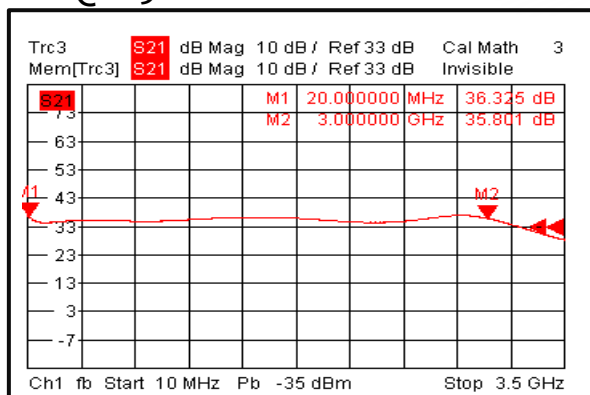


Isolation@-40°C

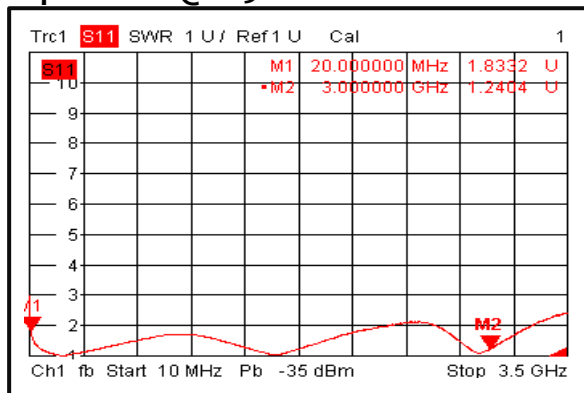




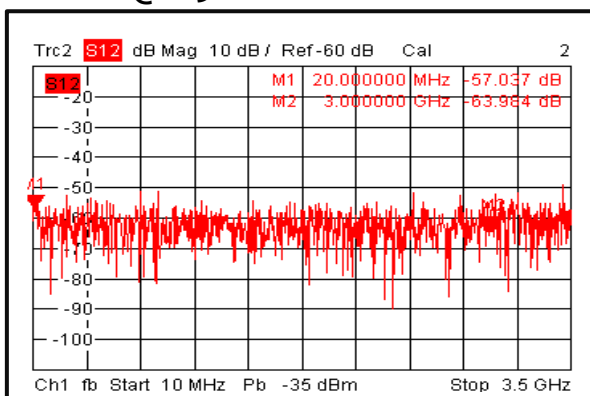
Gain@+85°C



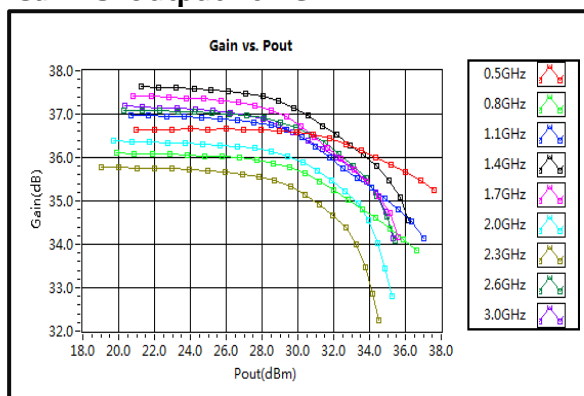
Input VSWR@+85°C



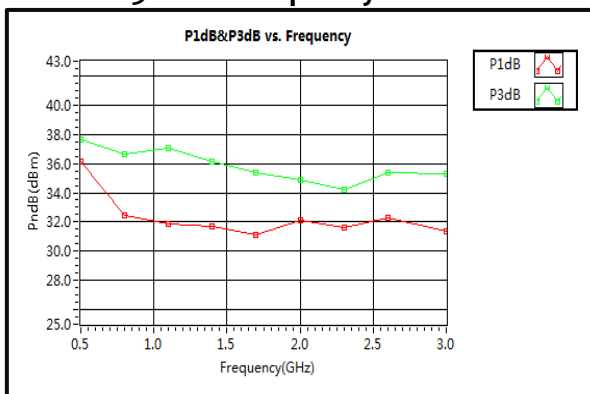
Isolation@+85°C



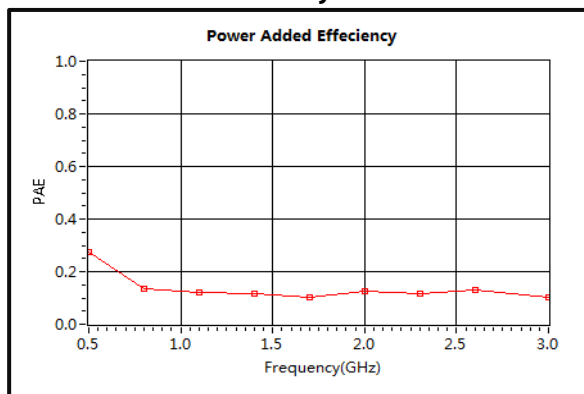
Gain vs. Output Power



P1dB & P3dB vs. Frequency

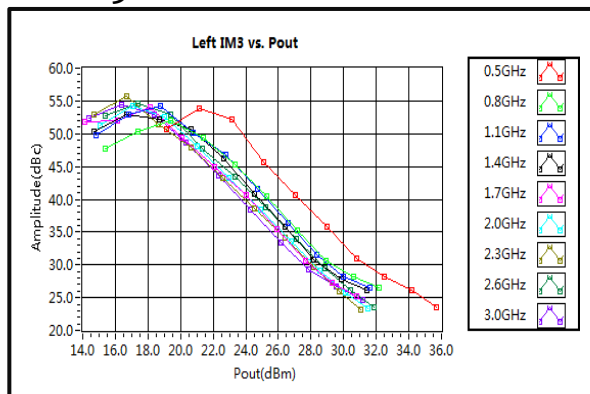


Power Added Efficiency

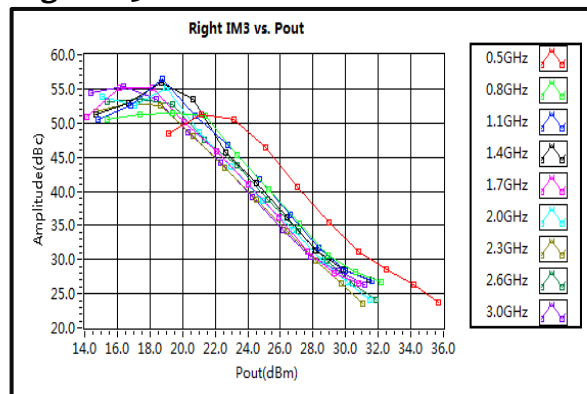




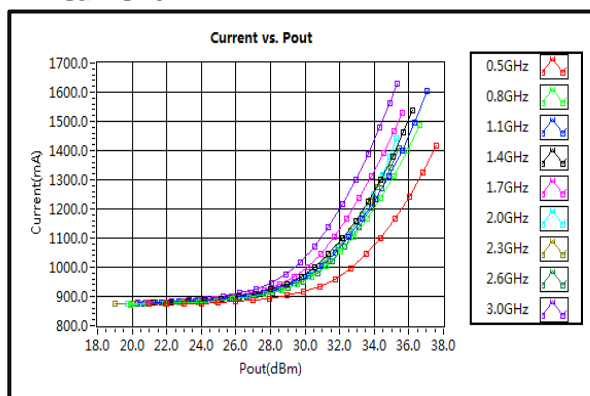
Left IM₃ vs. Pout



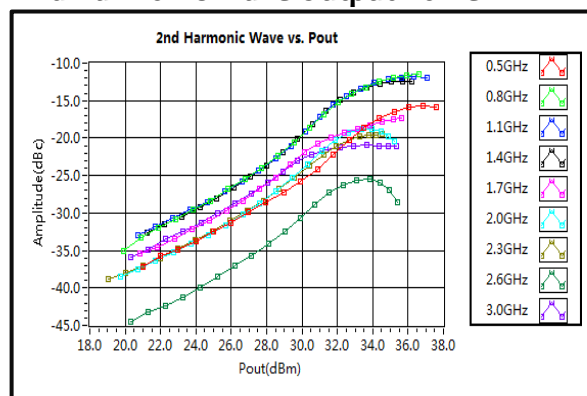
Right IM₃ vs. Pout



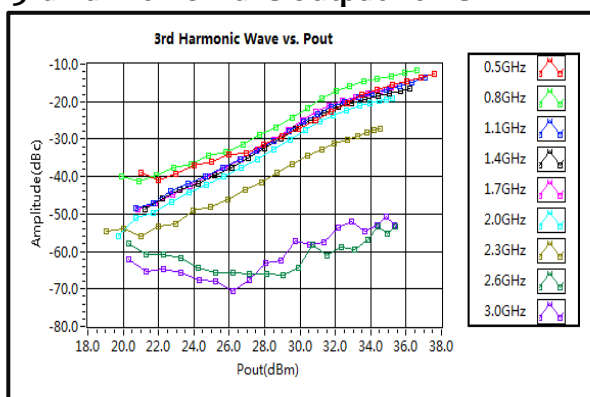
Current



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

