Wide Band Solid State Power Amplifier 0.1GHz~3GHz

Features

- Gain: 41dB Typical
- Output power +41dBm Typical
- Supply Voltage: +48V
- 50 Ohm Matched Input / Output

Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.1		3.0	GHz
Gain	35	41		dB
Gain Flatness		±2.5		dB
Gain Variation Over Temperature (-40ºC ~ +85ºC)		±3.0		dB
Input VSWR		2.0		:1
Output Power for 1 dB Compression (P1dB)	34	36		dBm
Saturated Output Power (Psat)		41		dBm
Isolation S12		-45		dB
DC Quiescent Current (No RF Input Power)		750	800	mA
DC Current (Vcc=+48V) at Pout=Psat		1.2	1.5	A
Efficiency at Psat (RF Output Power / DC Power Consumption)		21		%

Weight	13.76 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	copper
Finishing	Nickel Plated	Package Sealing	Epoxy Sealing (Standard) Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+50V
RF Input Power (RFIN)	+8dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +48V biasing

Power OFF Procedure

Step 1	Turn off +48V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

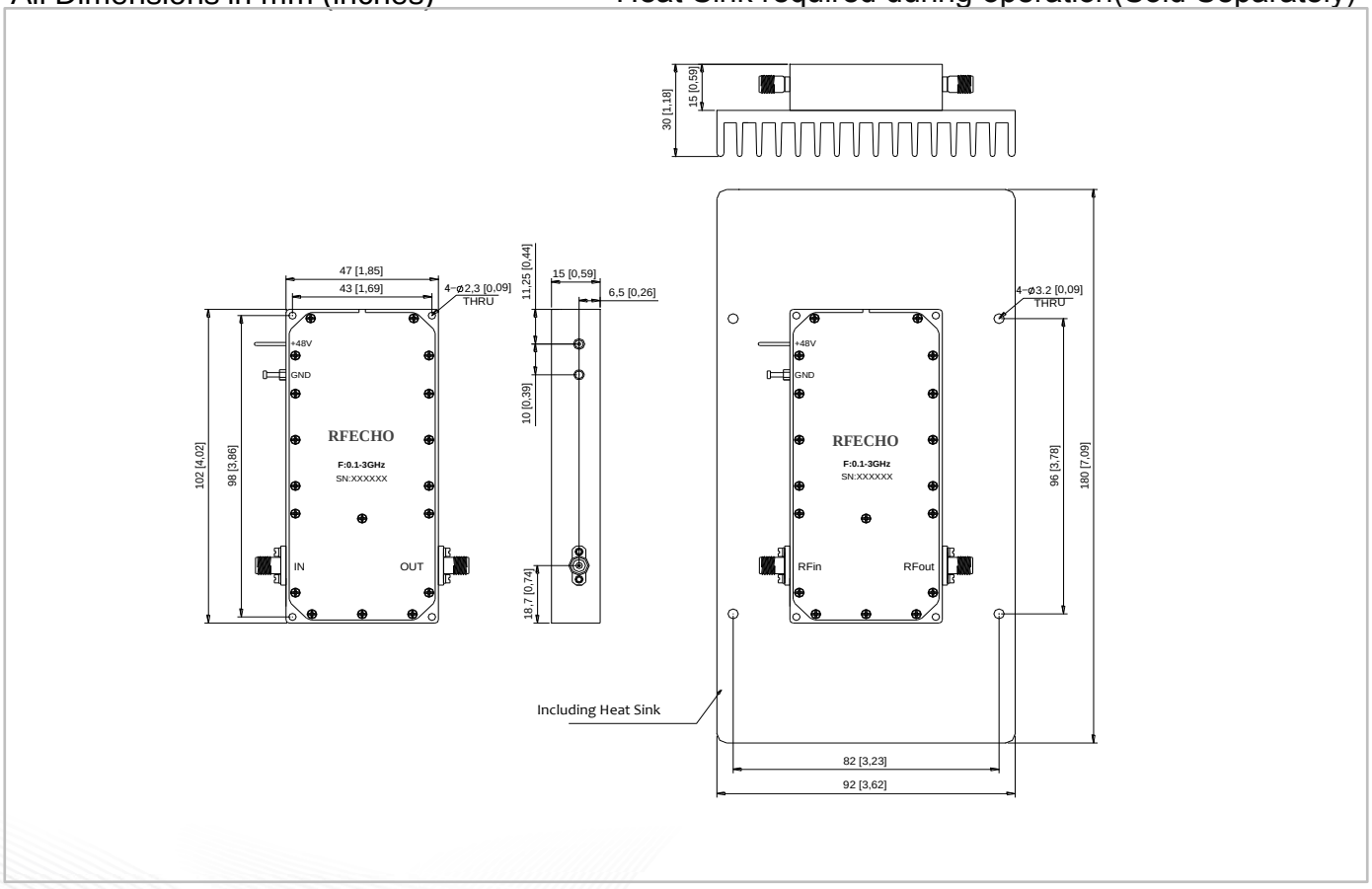
Environmental Specifications

Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
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 35ºc, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

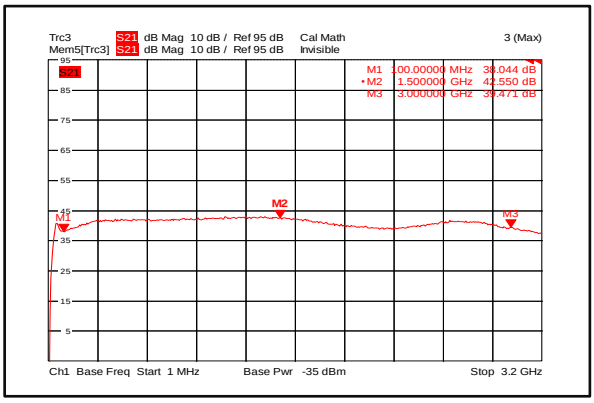
Outline Drawing:

All Dimensions in mm (inches)

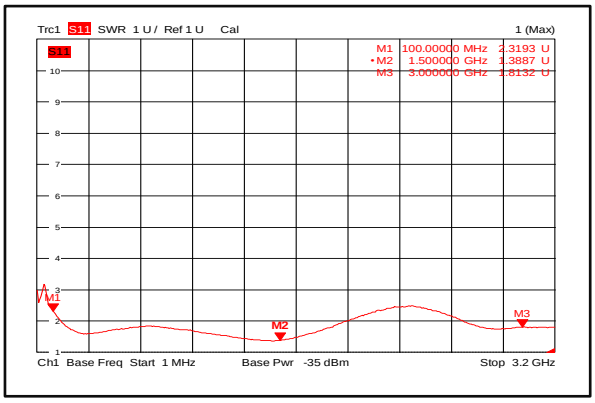
Heat Sink required during operation(Sold Separately)



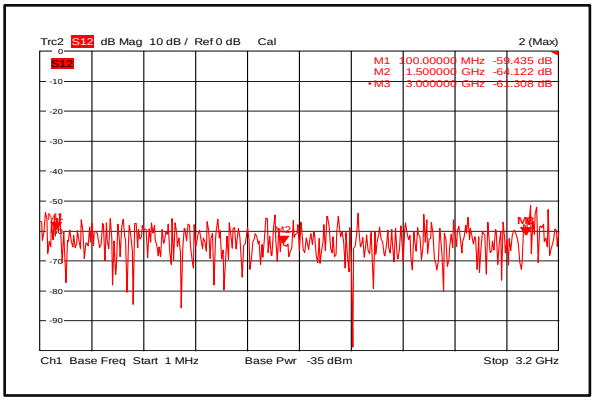
Gain



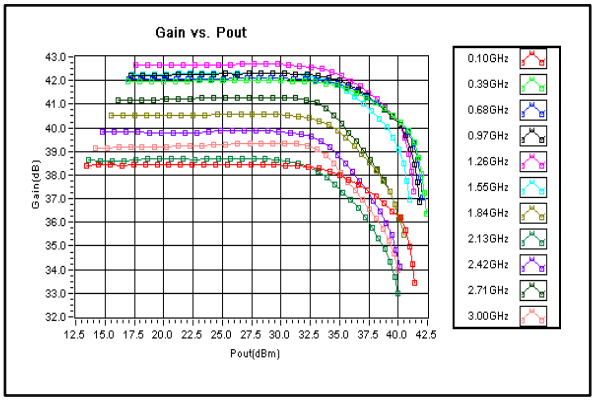
Input VSWR



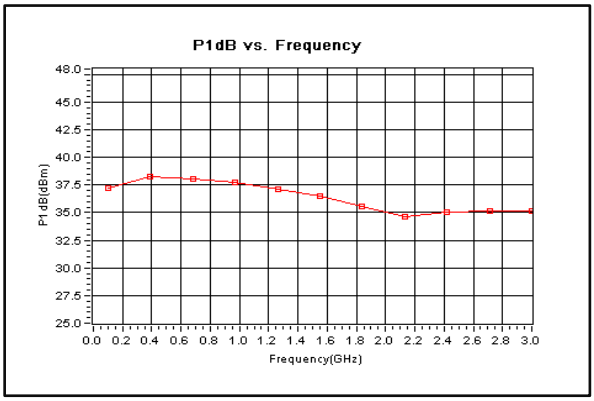
Isolation



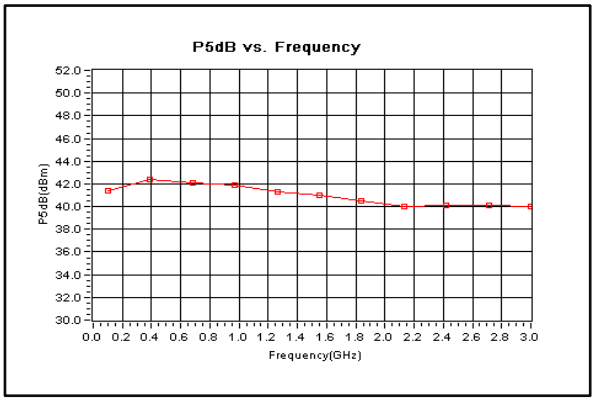
Gain vs. Output Power



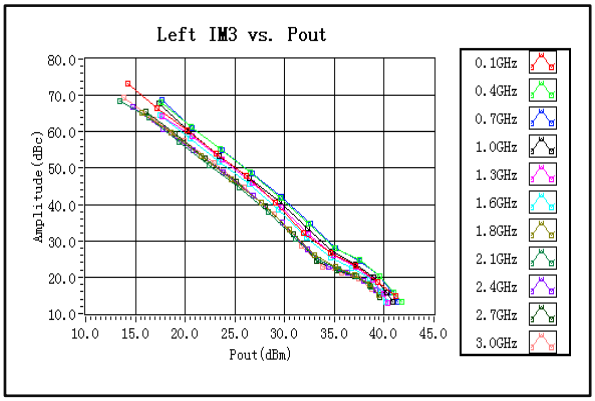
P1dB vs. Frequency



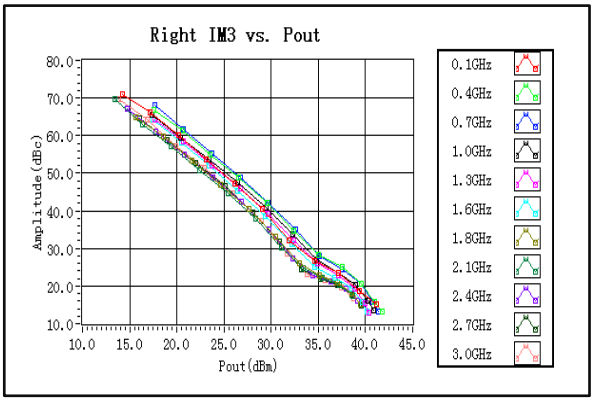
P5dB vs. Frequency



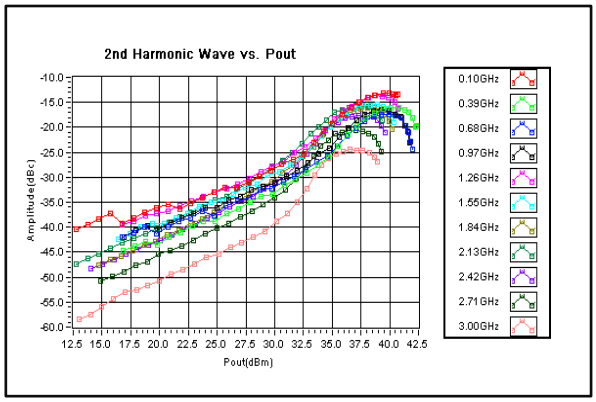
Left IM3 vs . Pout



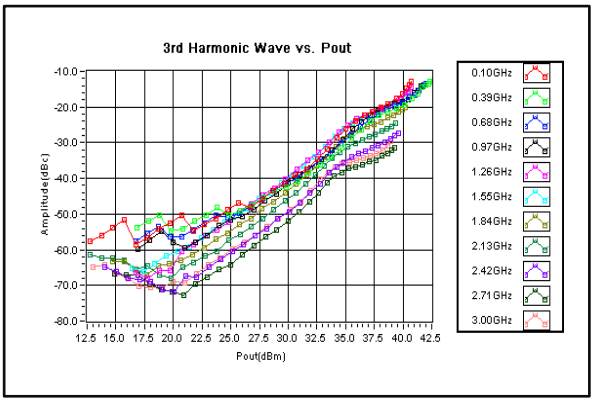
Right IM3 vs . Pout



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power