RFecho
A Gateway to RFWorld

Wide Band Power Amplifier 0.8GHz~2.3GHz

Features

- Gain: 22dB Typical
- P1dB Output Power: +29dBm Typical
- Supply Voltage: +15V @ 350 mA
- 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	0.8		2.3	GHz
Gain	20	22		dB
Gain Flatness		±1.0	±2.0	dB
Gain Variation Over Temperature (-40ºC ~ +85ºC)		±1.0		dB
Input Return Loss	10	15		dB
Output Return Loss		15		dB
Output 1dB Compression Point (P1dB)	28	29		dBm
Saturated Output Power (Psat)		30		dBm
Isolation S12		-60		dB
Supply Current (Vcc=+15V)		350	500	mA
Efficiency at P1dB		20		%

Weight	2.12 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Nickel Plated	Package Sealing	Epoxy Sealing (Standard)
			Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+16V@25ºC
RF Input Power (RFIN)	+18 dBm@25ºC

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +15V biasing

Power OFF Procedure

Step 1	Turn off +15V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

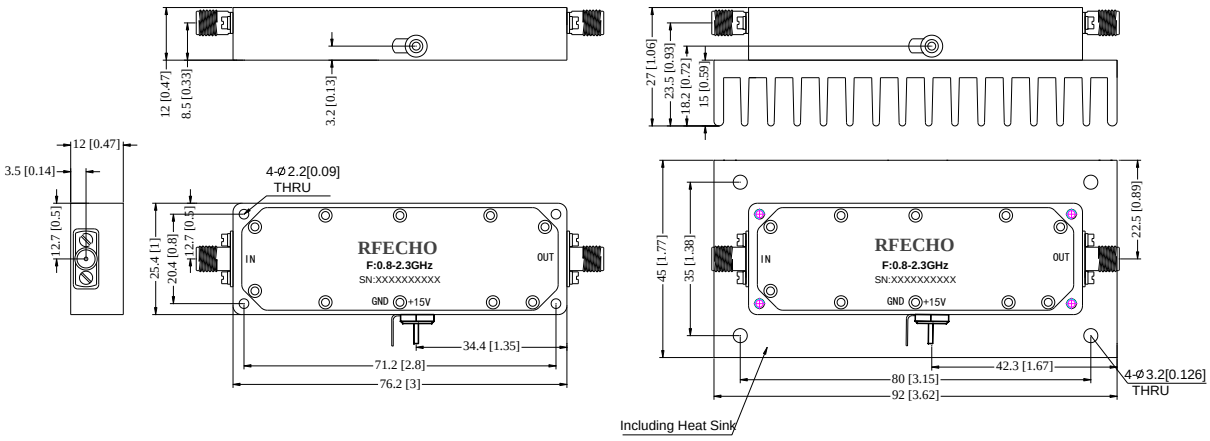
Environmental Specifications

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 35c, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

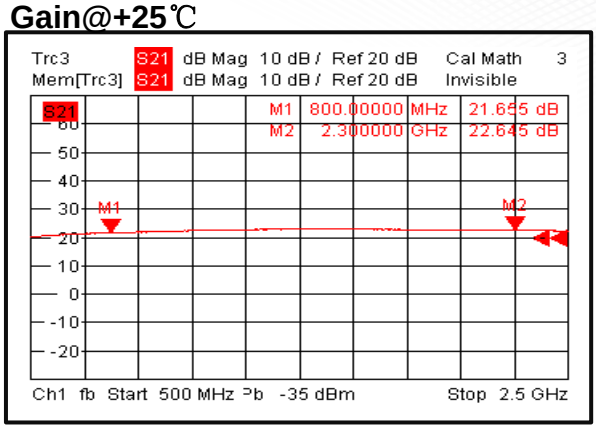
Outline Drawing:

All Dimensions in mm (inches)

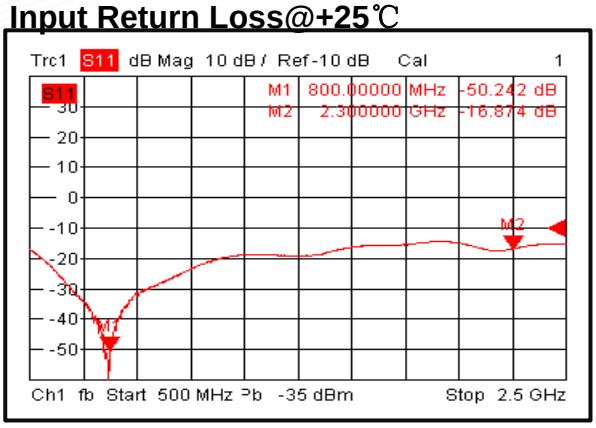
Heat Sink required during operation(Sold Separately)



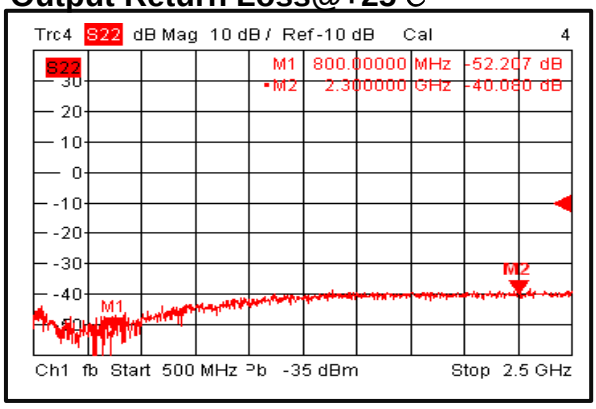
Gain@+25℃



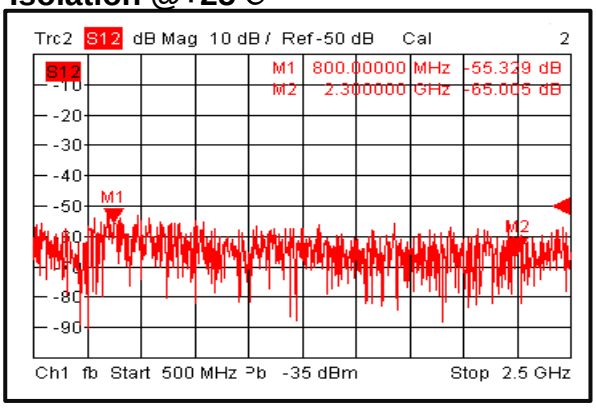
Input Return Loss@+25℃



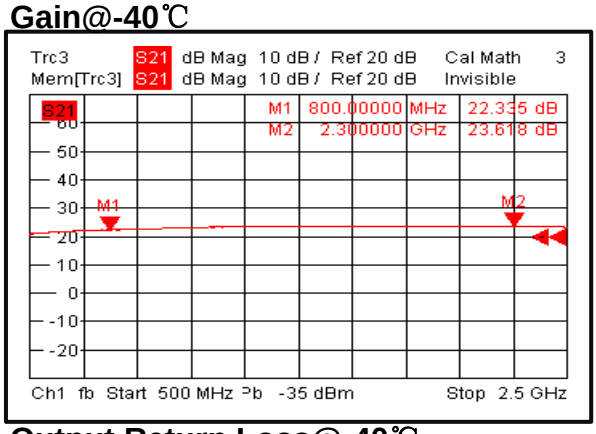
Output Return Loss@+25℃



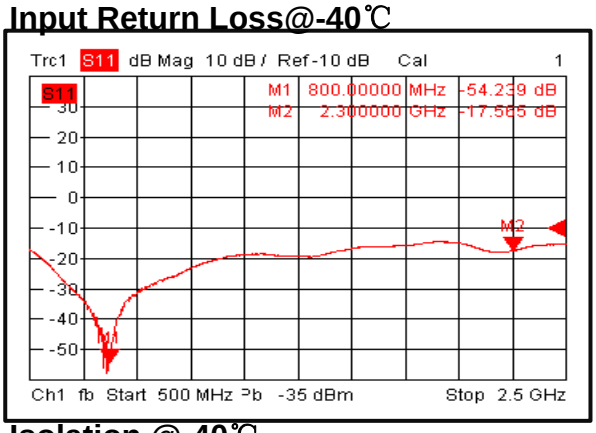
Isolation @+25℃



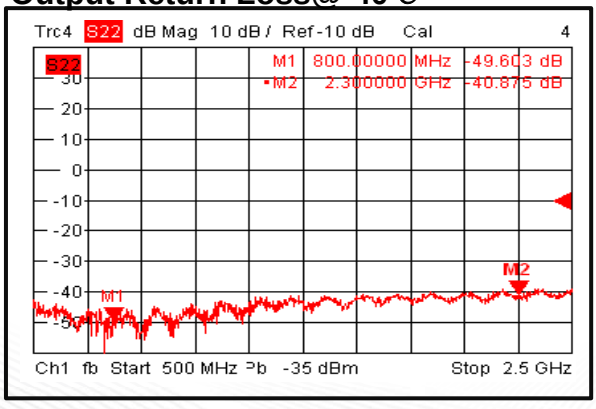
Gain@-40℃



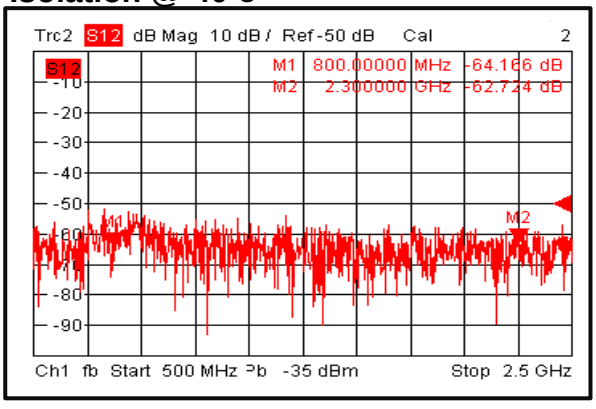
Input Return Loss@-40℃



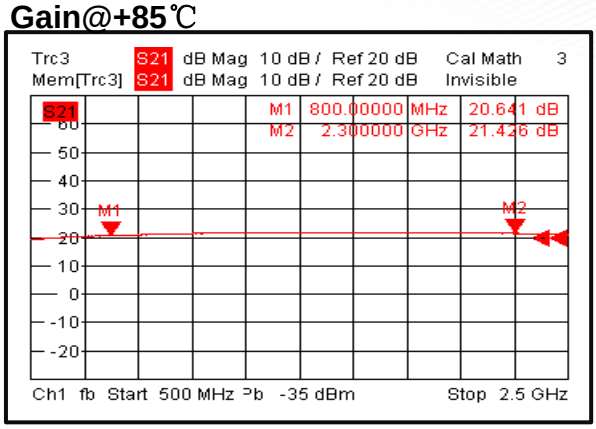
Output Return Loss@-40℃



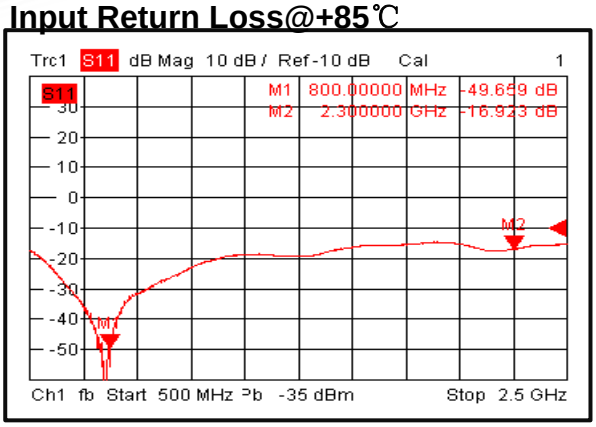
Isolation @-40℃



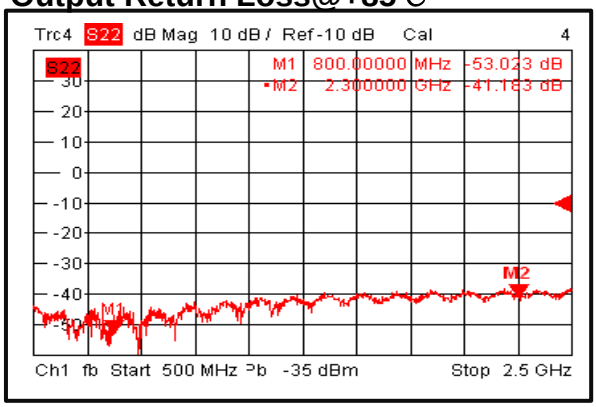
Gain@+85℃



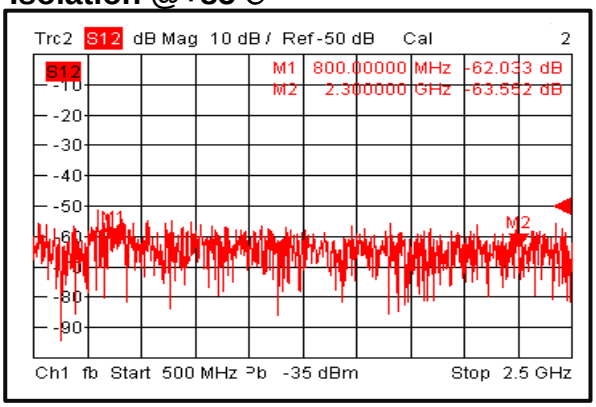
Input Return Loss@+85℃



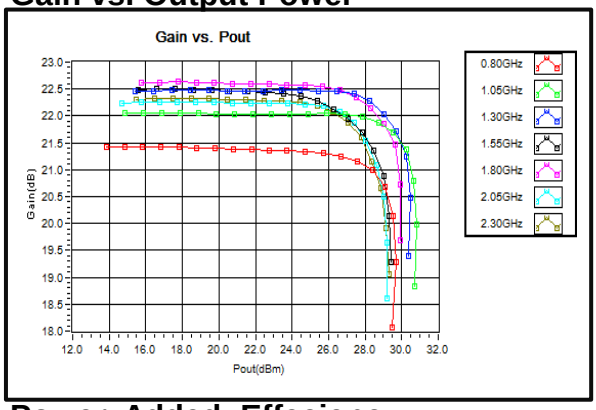
Output Return Loss@+85℃



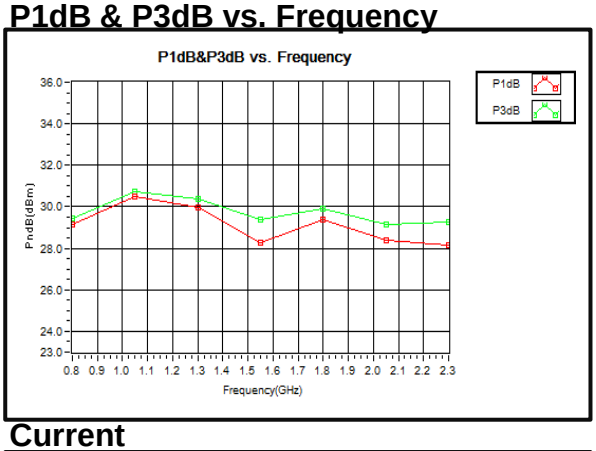
Isolation @+85℃



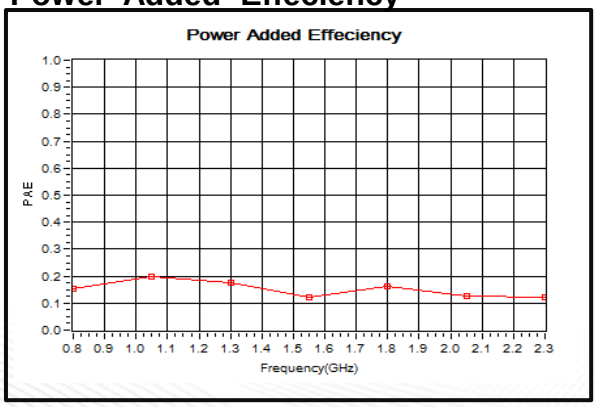
Gain vs. Output Power



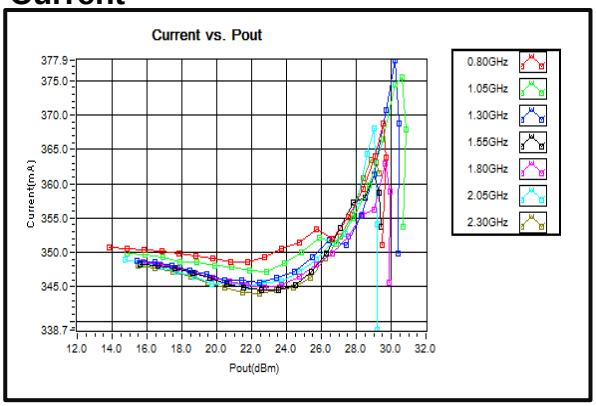
P1dB & P3dB vs. Frequency



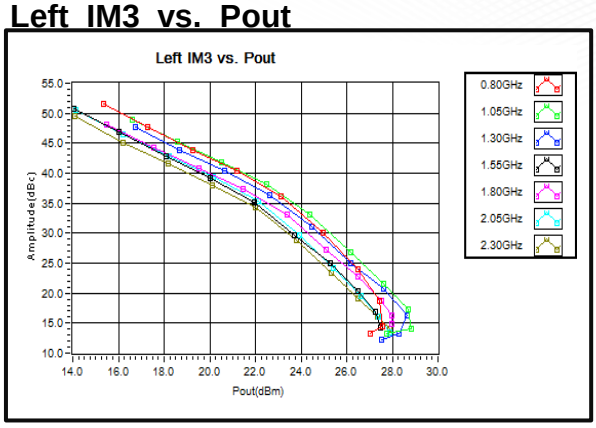
Power Added Effeciency



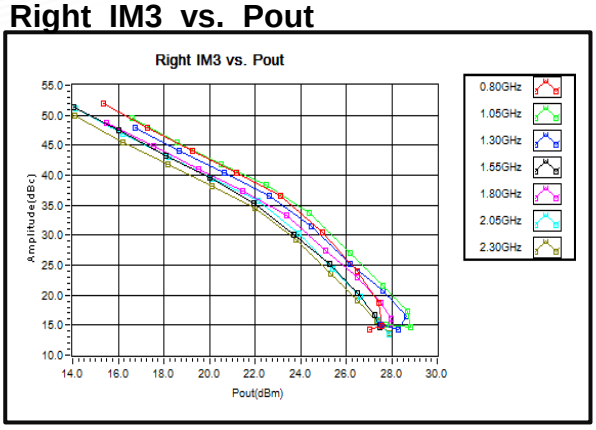
Current



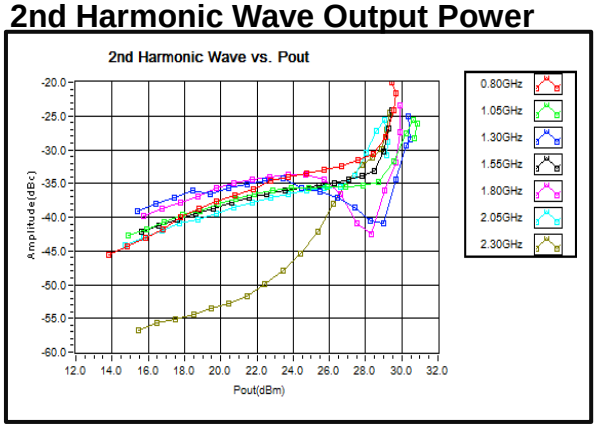
Left IM3 vs. Pout



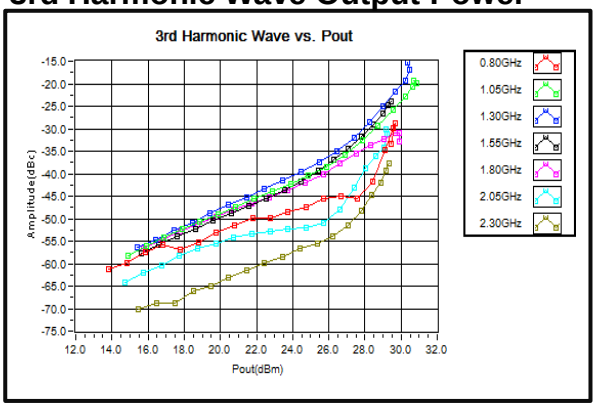
Right IM3 vs. Pout



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power