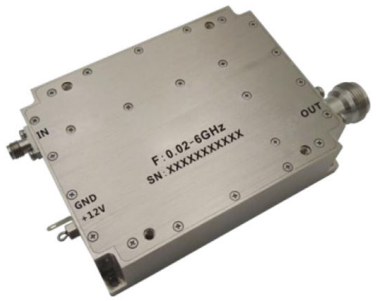
Wide Band Power Amplifier 0.02GHz~6GHz

Features

- Gain: 35dB Typical
- P1dB Output Power: 30dBm Min
- 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.	Units
Frequency Range	0.02		6	GHz
Gain	33	35		dB
Gain Flatness		±2.0	±3.0	dB
Gain Variation Over Temperature (-40℃~+85℃)		±2.0		dB
Input VSWR		1.5		: 1
Output Power 1dB Compression Point (P1dB)	30	31		dBm
Saturated Output Power (Psat)		34		dBm
2nd Harmonic @P1dB		-15		dBc
Supply Voltage	10	12	15	V
Supply Current (Vcc=+12V)		450	2000	mA
Power Added Efficiency		20		%
Isolation S12		-55		dB
Output Mismatch, all phase angles	VSWR = 6:1, No Device Damage			

Weight	11.5 Max. Ounces	Impedance	50 ohms
Input / Output Connectors	SMA-Female /N-Female	Material	Aluminum
Finish	Nickel Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Optional)

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

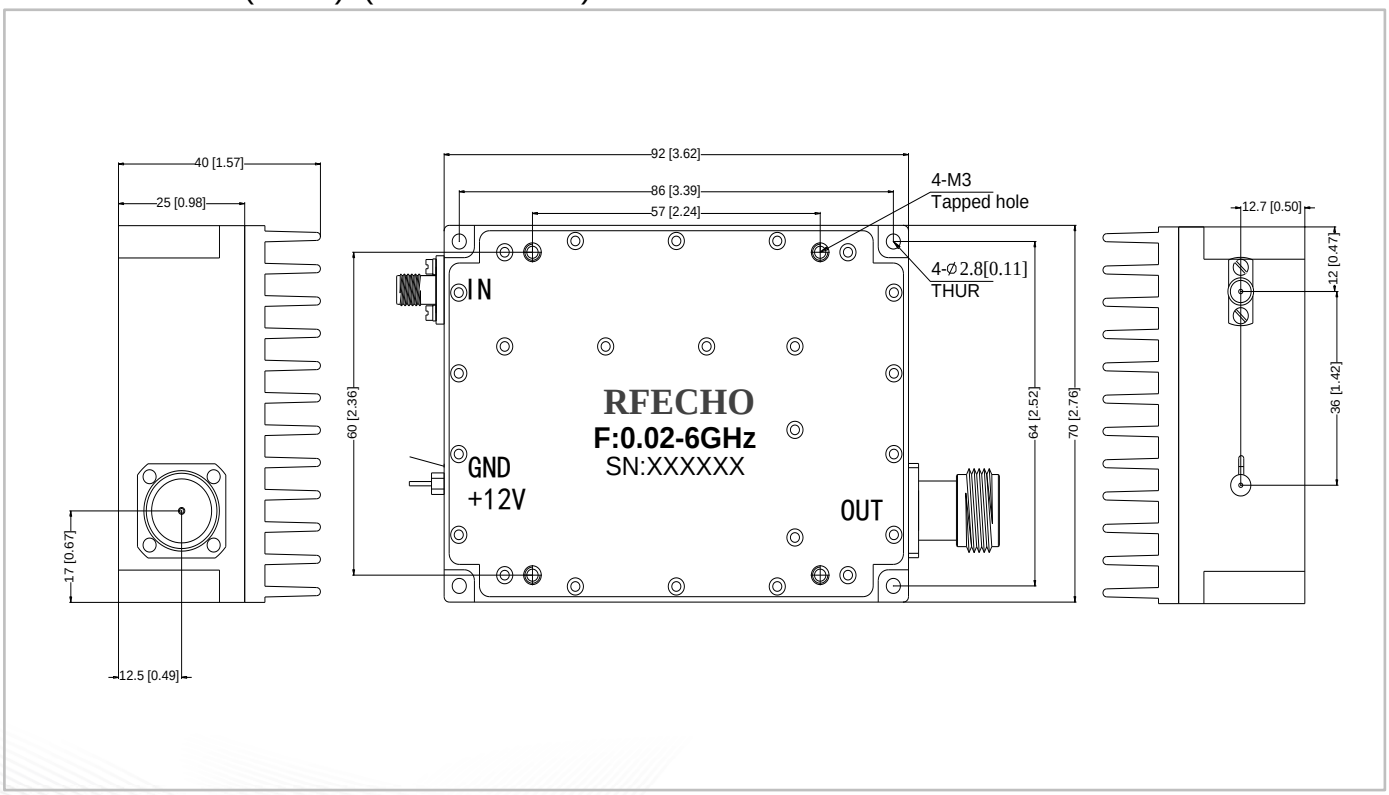
Environmental Specifications

Operational Temperature	-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

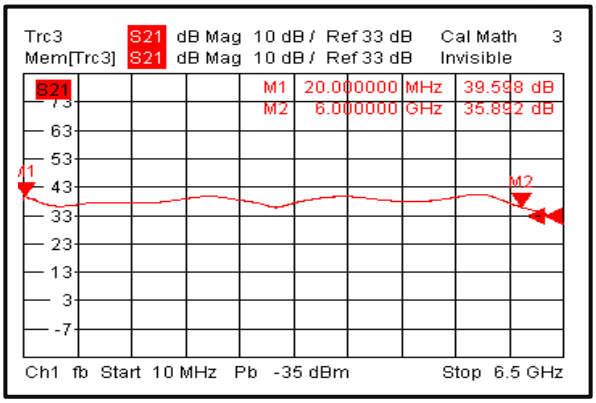
Outline Drawing:

All Dimensions in mm (inches)
Tolerances ±0.2 (0.008) (Excl Heat Sink)

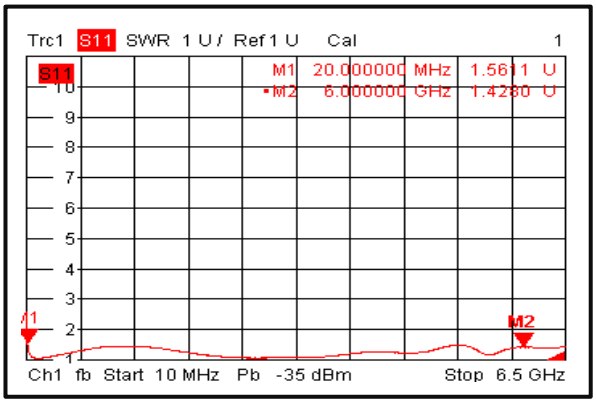
Heat Sink required during operation(Sold Separately)



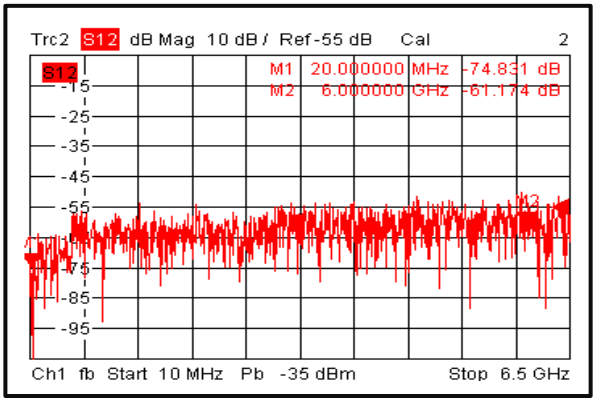
Gain@+25℃



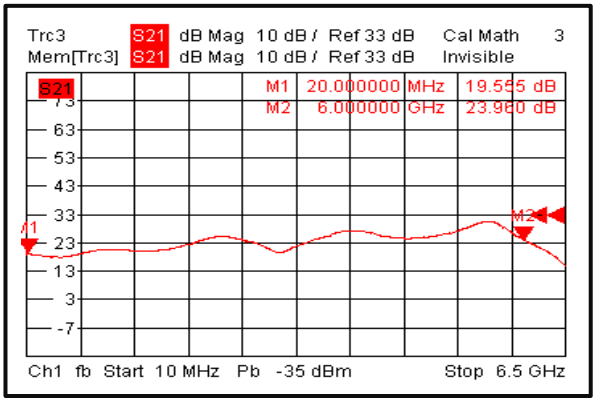
Input VSWR@+25℃



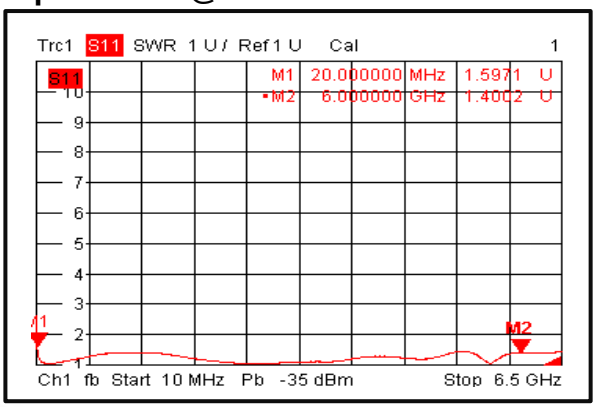
Isolation@+25℃



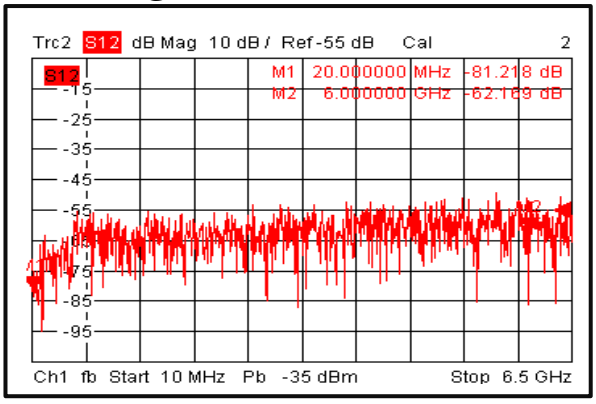
Gain@-40℃



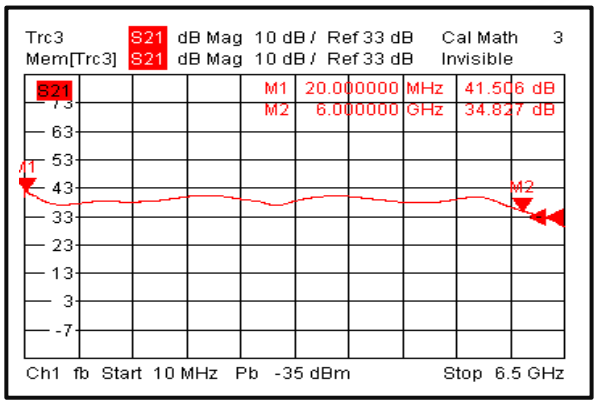
Input VSWR@-40℃



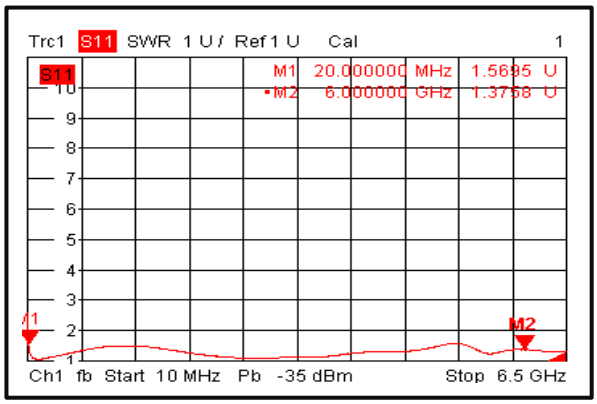
Isolation@-40℃



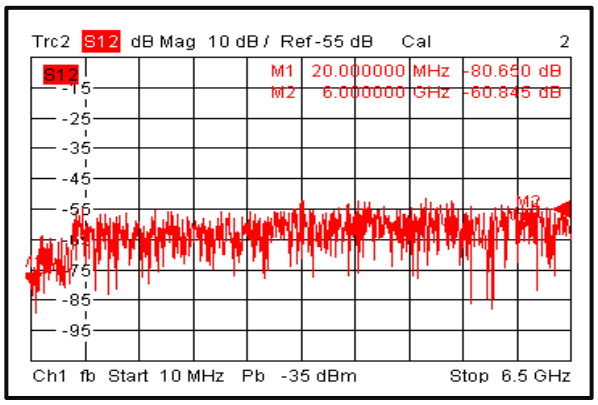
Gain@+85℃



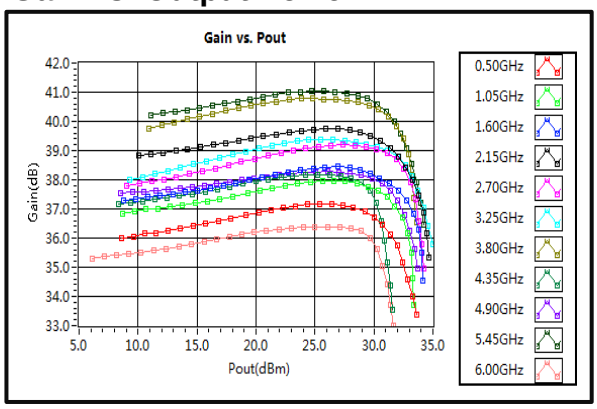
Input VSWR@+85℃



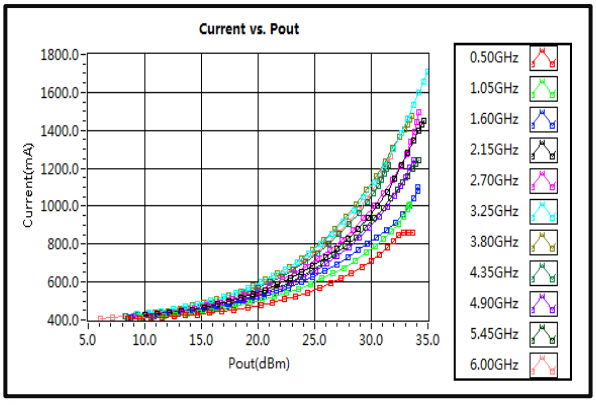
Isolation@+85℃



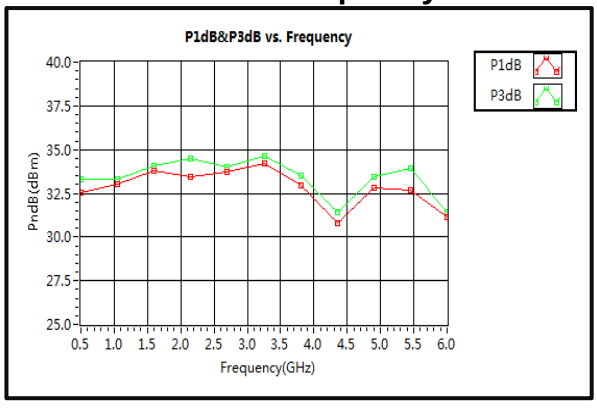
Gain vs. Output Power



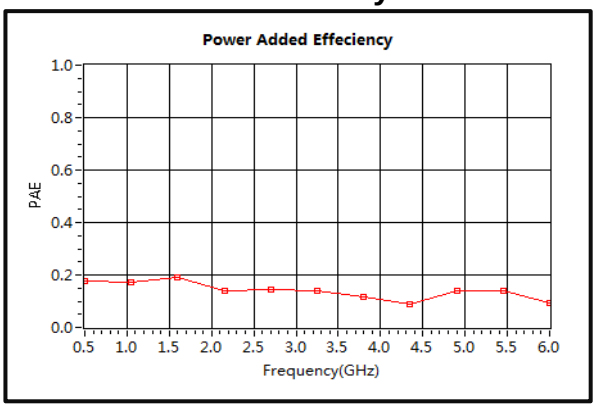
Current



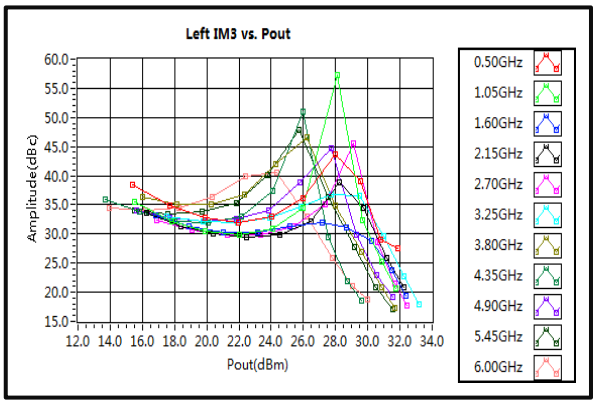
P1dB & P3dB vs. Frequency



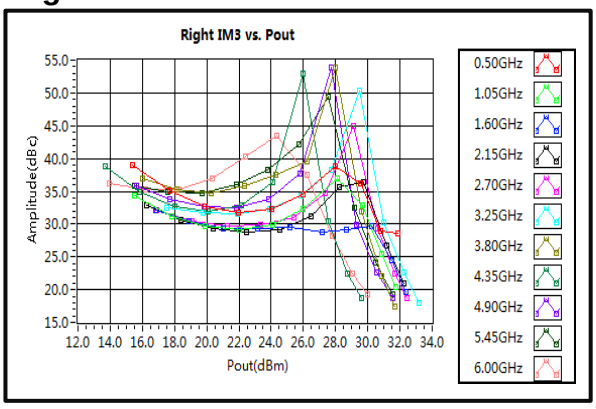
Power Added Efficiency



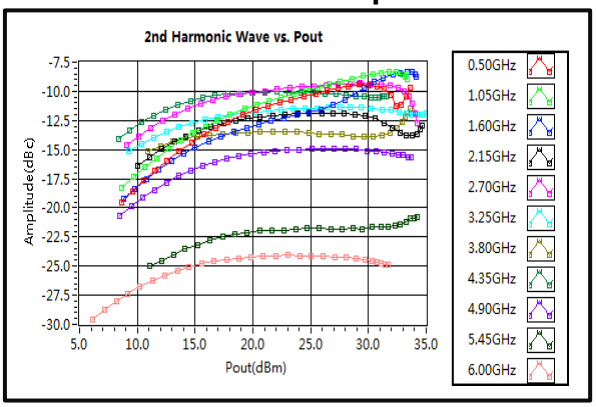
Left IM3 vs. Pout



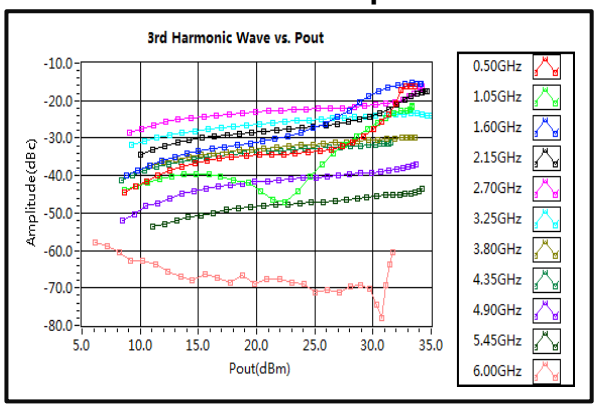
Right IM3 vs. Pout



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power