Wide Band Solid State Power Amplifier 0.03GHz~2.5GHz

Features

- Gain: 38dB Typical
- Output power +38dBm Typical
- High P1dB: +32dBm Full Band
- Supply Voltage: +28V @ 650mA

Typical Applications

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

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.03		2.5	GHz
Gain	35	38		dB
Gain Flatness		±1.5	±2.5	dB
Gain Variation Over Temperature(-40ºC~+85ºC)		±1.5		dB
Input VSWR		1.6	2.0	dB
Output Power for 1 dB Compression (P1dB)	32	34		dBm
Saturated Output Power (Psat)		38		dBm
3rd order intermodulation product (IM3) @P1dB		-25		dBc
DC Current (Vcc=+28V) at Pout=P1dB		650	900	mA
Efficiency at Psat (RF Output Power / DC Power Consumption)		33		%
Isolation S12		-55		dB

Weight	10 ounces (Max.)	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	copper
Finish	Nickel Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Optional)

Absolute Maximum Ratings

Operating Voltage	+32V
RF Input Power (RFIN)	+8dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +28V biasing

Power OFF Procedure

Step 1	Turn off +28V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

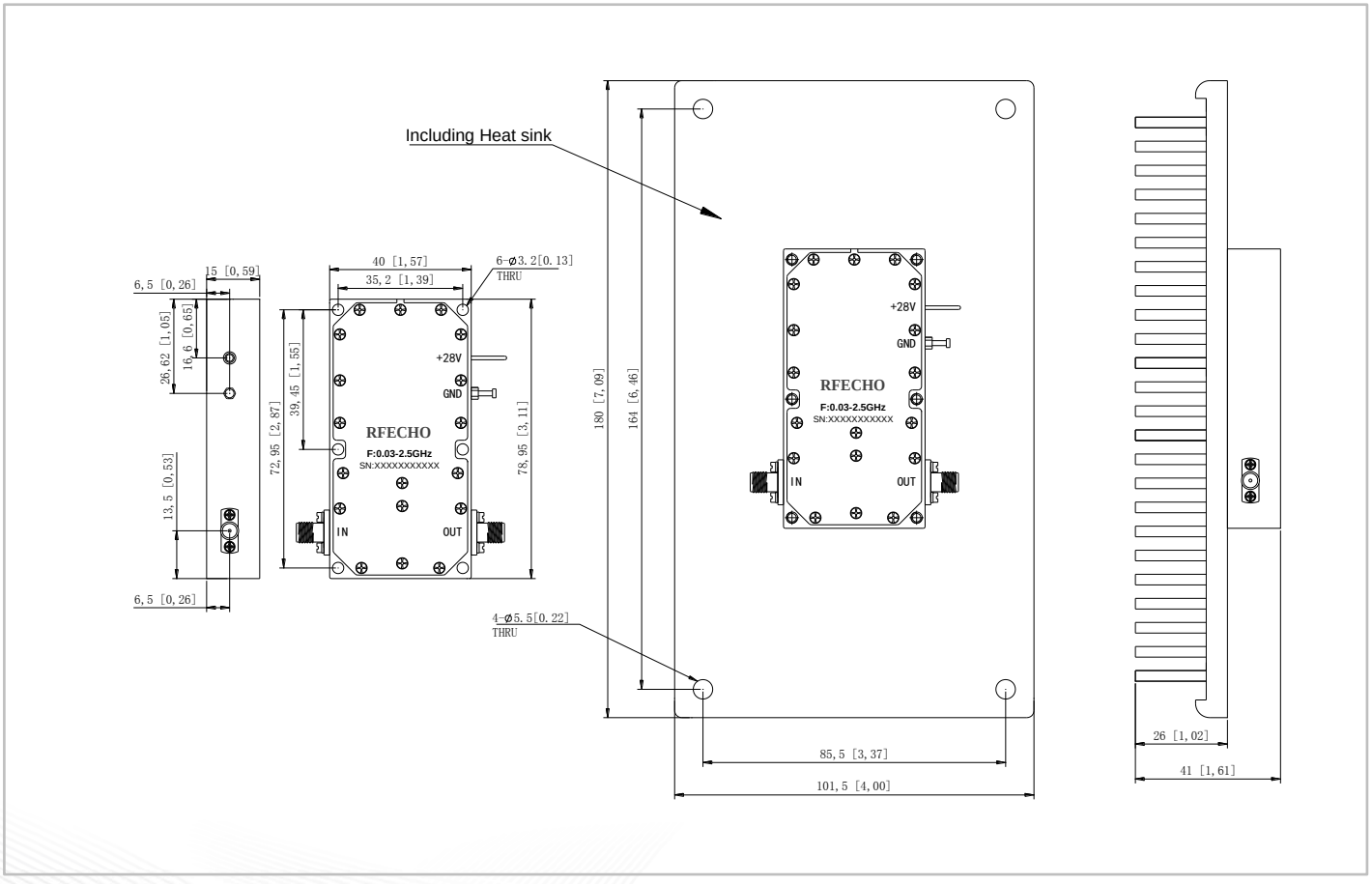
Environmental Specifications

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

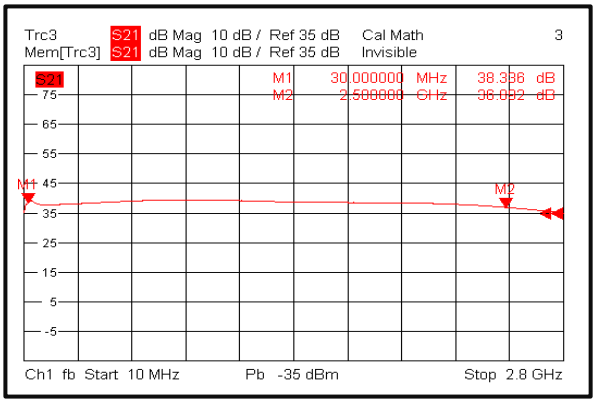
Outline Drawing:

All Dimensions in mm (inches)

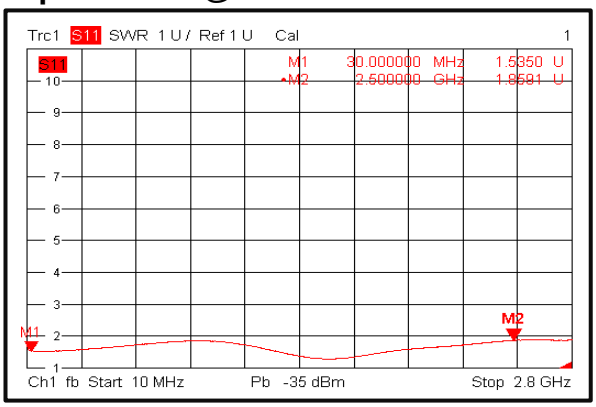
Heat Sink required during operation(Sold Separately)



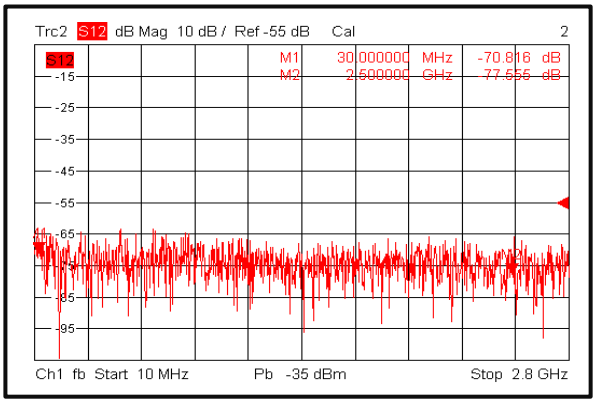
Gain@+25℃



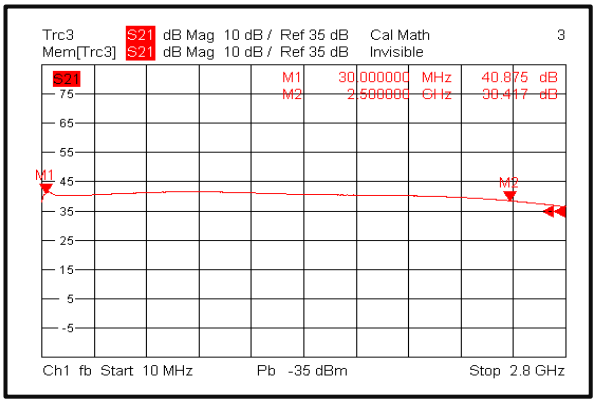
Input VSWR @+25℃



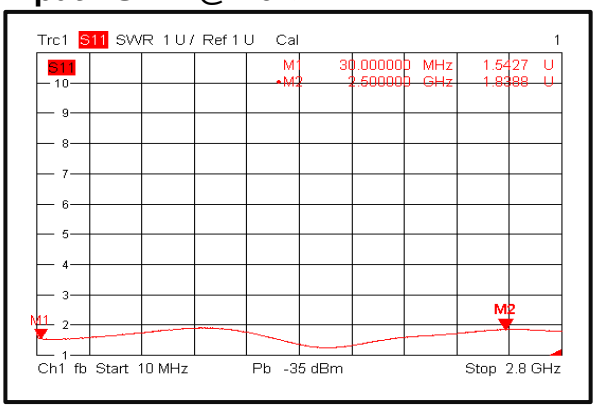
Isolation@+25℃



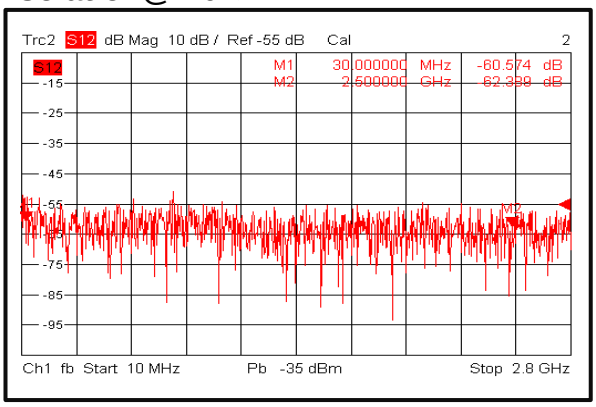
Gain@-40℃



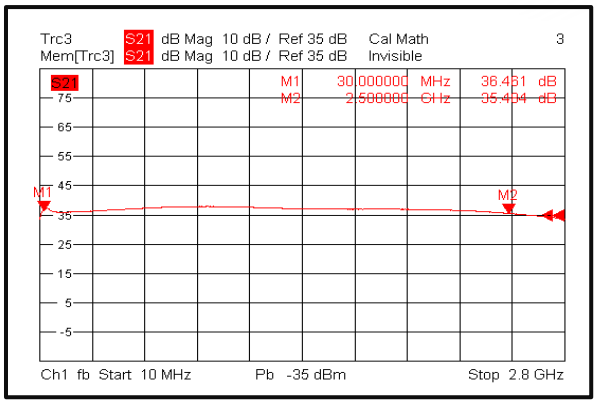
Input VSWR @-40℃



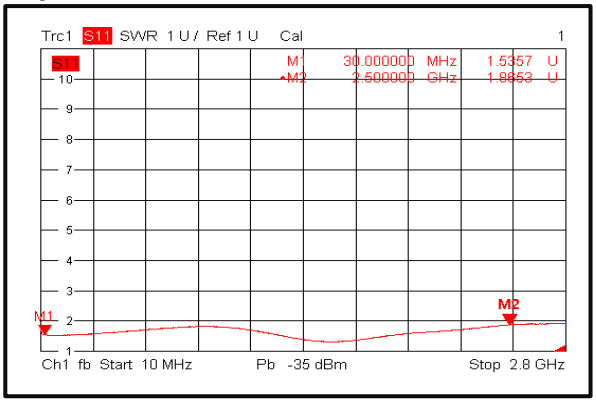
Isolation@-40℃



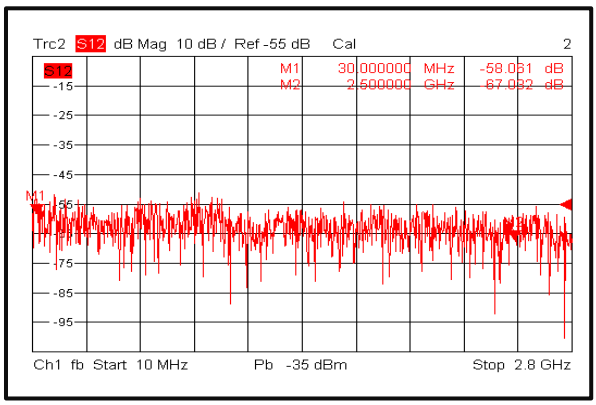
Gain@+85℃



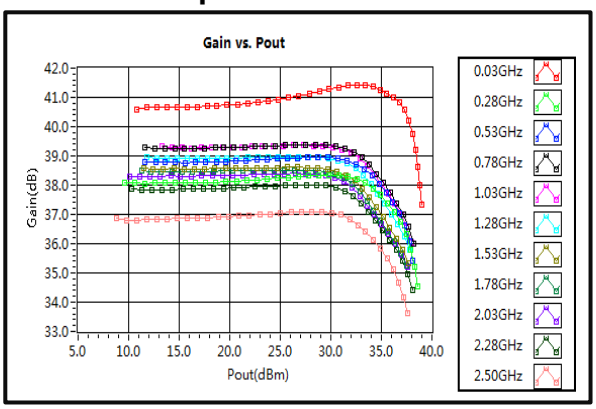
Input VSWR @+85℃



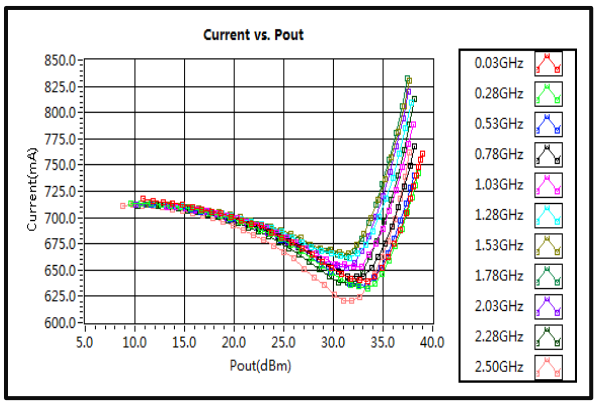
Isolation@+85℃



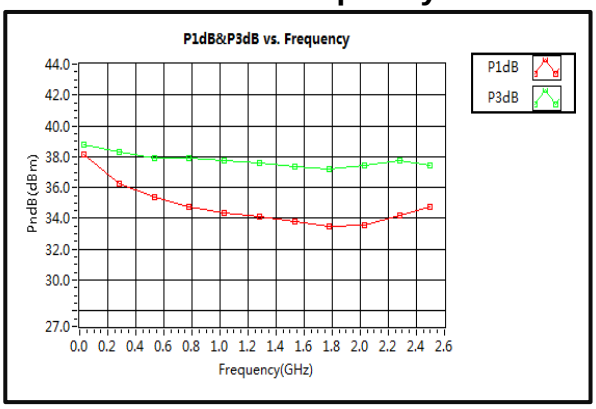
Gain vs. Output Power



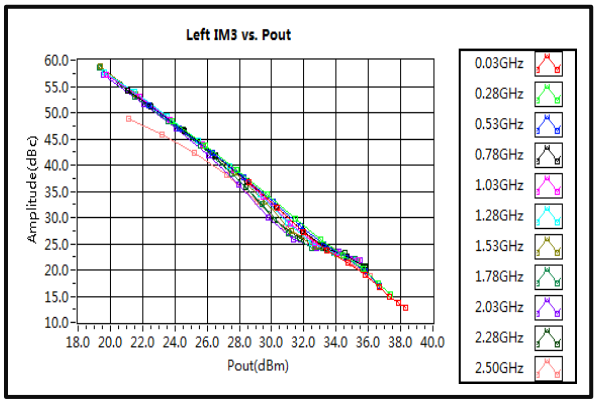
Current



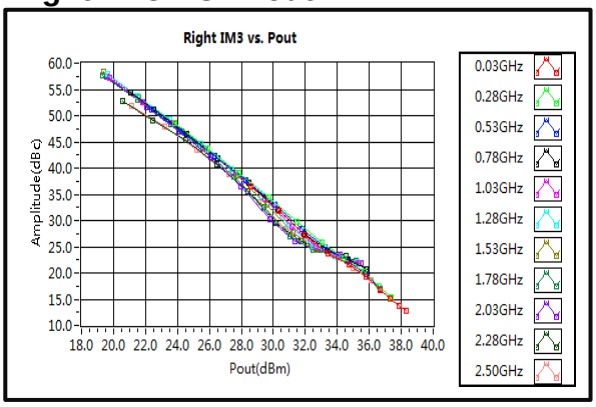
P1dB & P7dB vs. Frequency



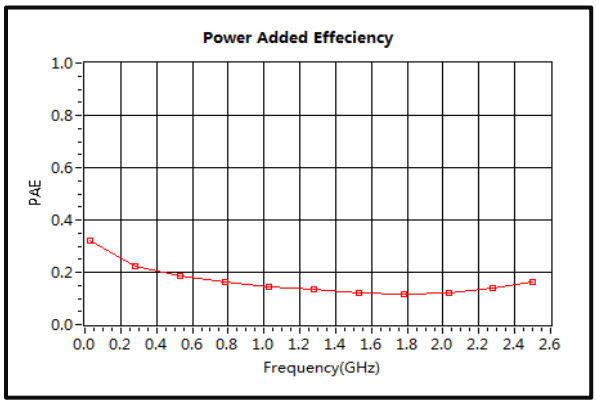
Left IM3 vs. Pout



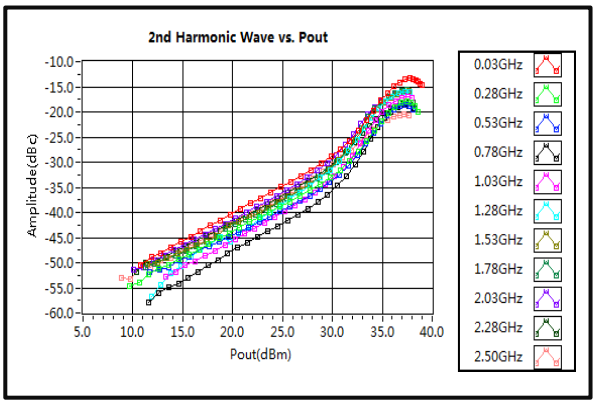
Right IM3 vs. Pout



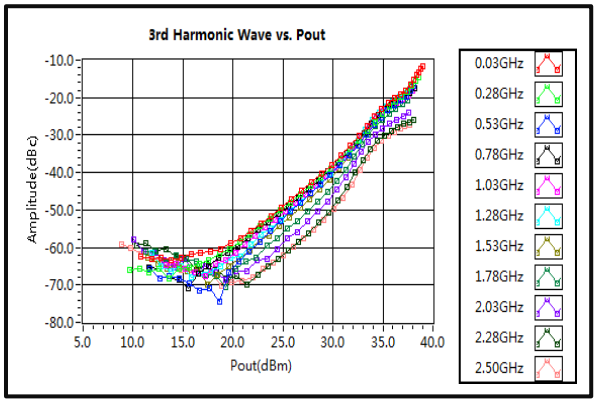
Power Added Effeciency



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power