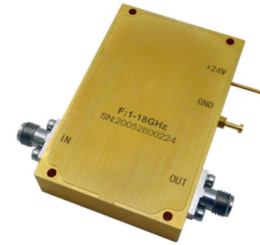




# Ultra Wide Band Power Amplifier 1GHz~18GHz

## Features

- Gain: 33dB Typical
- Output Power: +30dBm Typical
- Supply Voltage: +24V @ 800mA
- 50 Ohm Matched Input / Output



## Typical Applications

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

RF Microwave & VSAT  
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	1		12	12		18	GHz
Gain	32	33		30	32		dB
Gain Flatness		±2.0			±1.0		dB
Gain Variation Over Temperature (-40°C~+85°C)		±1.5			±2.5		dB
Input VSWR		1.3	1.6		1.4	1.8	:1
Output Power for 1 dB Compression (P1dB)	28	31		29	30		dBm
Saturated Output Power (Psat)		33			32		dBm
Supply Current (I <sub>dd</sub> ) (V <sub>cc</sub> =+24V)		800	1200		800	1200	mA
Isolation S12		-65			-65		dB

Weight	6.0Ounces (Max.)	Impedance	50ohms
Input / Output Connectors	2.92mm-Female	Material	copper
Finish	Glod Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)



### Absolute Maximum Ratings

Operating Voltage	+28V@+25°C
RF Input Power (RFIN)	+2 dBm@+25°C

### Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +24V biasing

### Power OFF Procedure

Step 1	Turn off +24V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

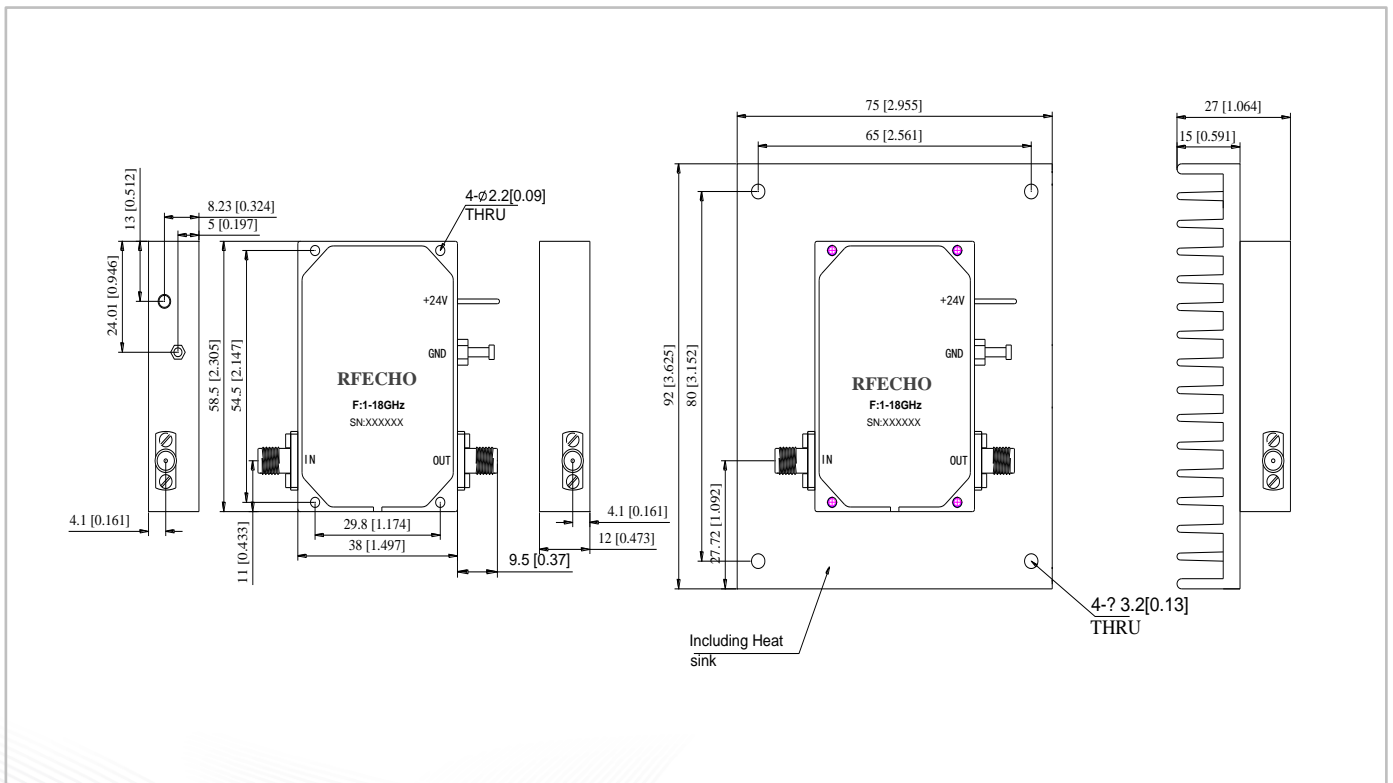
### Environmental Specifications

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:

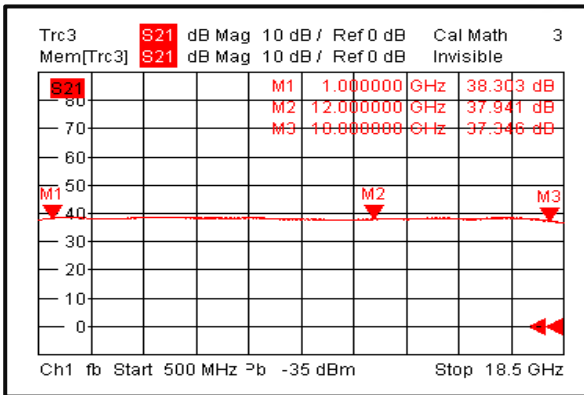
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

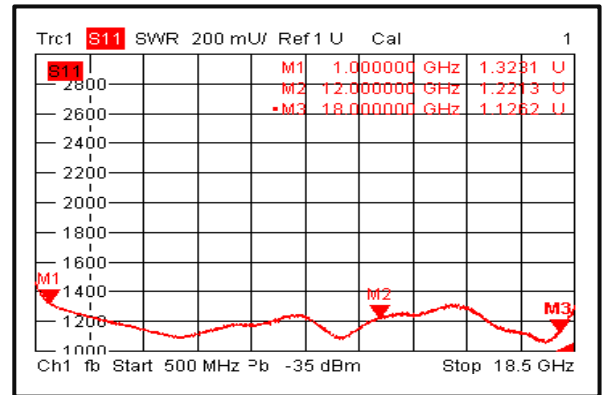




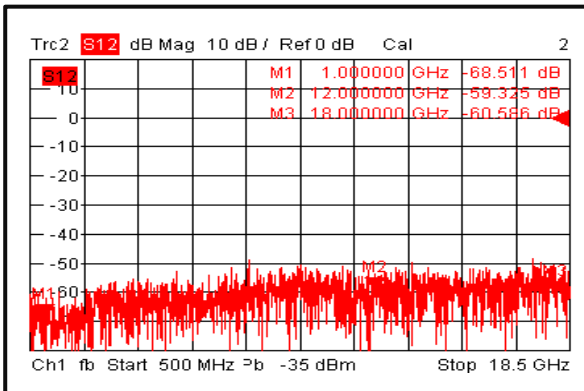
### Gain@+25°C



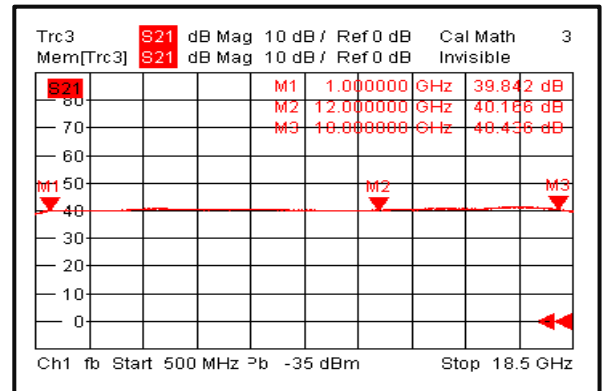
### Input VSWR@+25°C



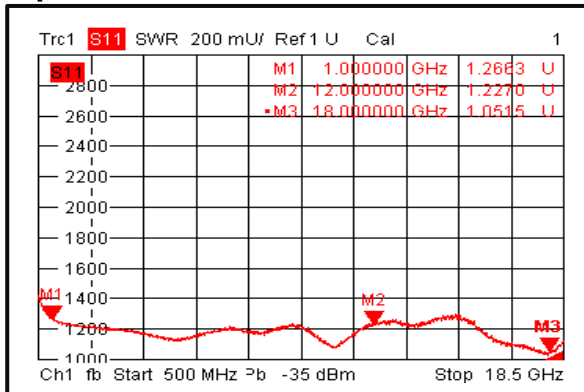
### Isolation@+25°C



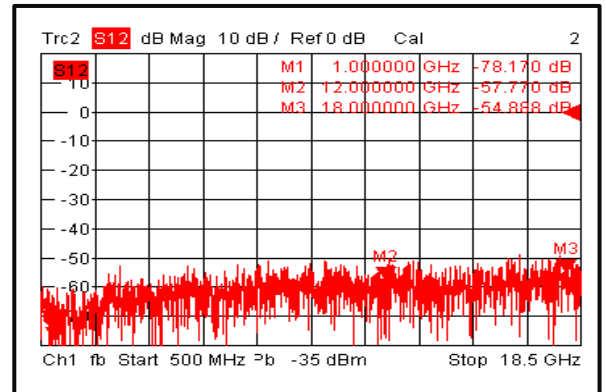
### Gain@-40°C



### Input VSWR@-40°C

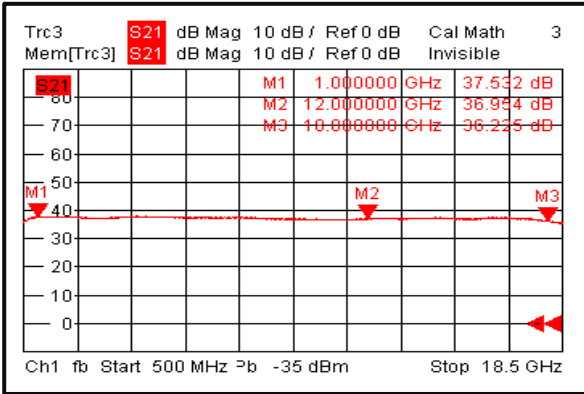


### Isolation@-40°C

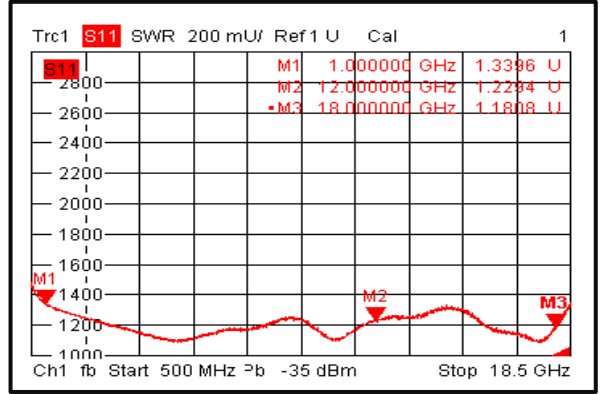




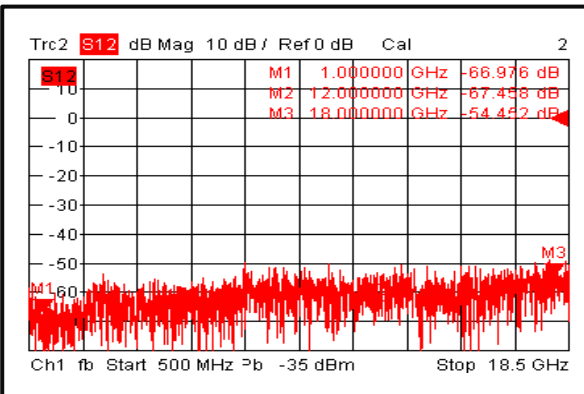
### Gain@+85°C



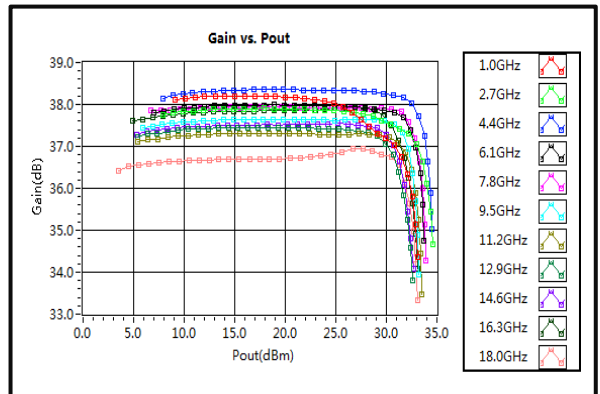
### Input VSWR@+85°C



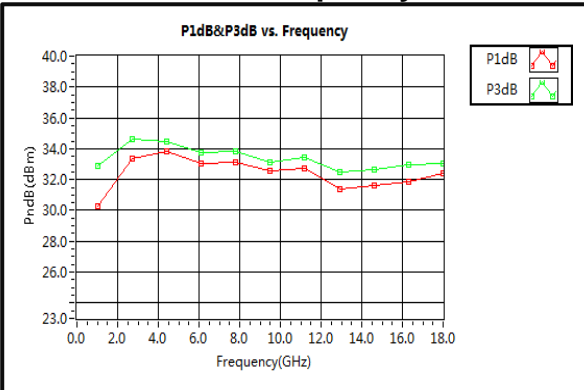
### Isolation@+85°C



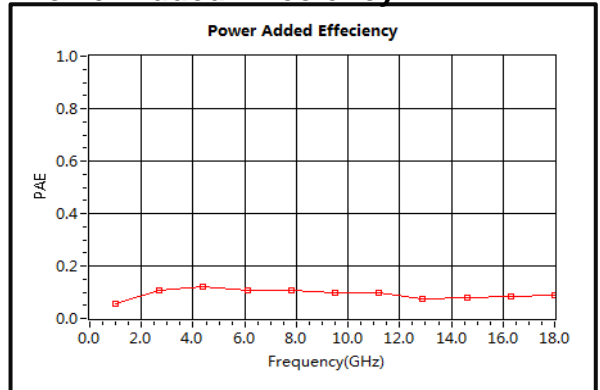
### Gain vs. Output Power



### P1dB&P3dB vs. Frequency

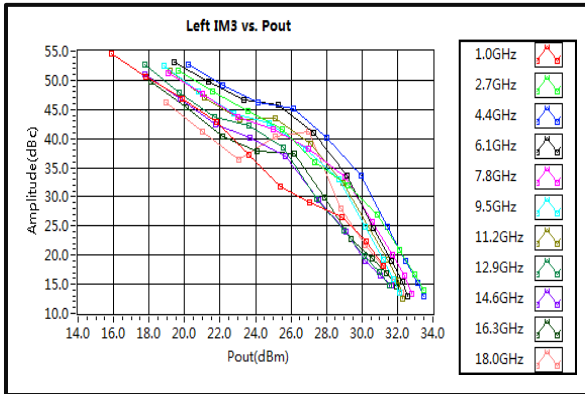


### Power Added Efficiency

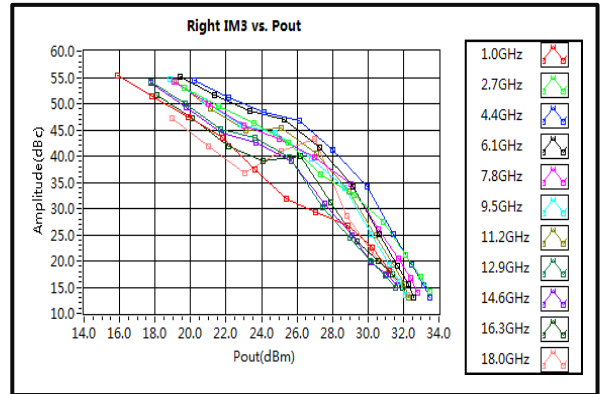




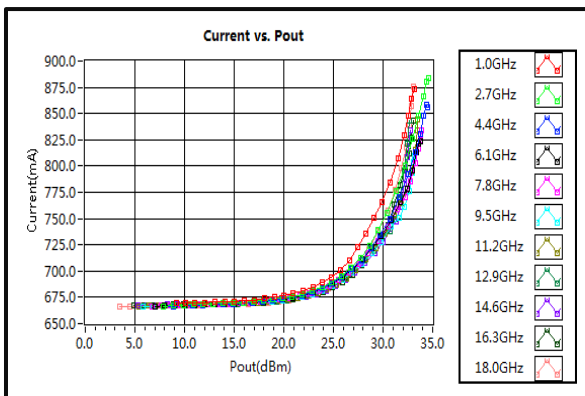
### Left IM3 vs. Pout



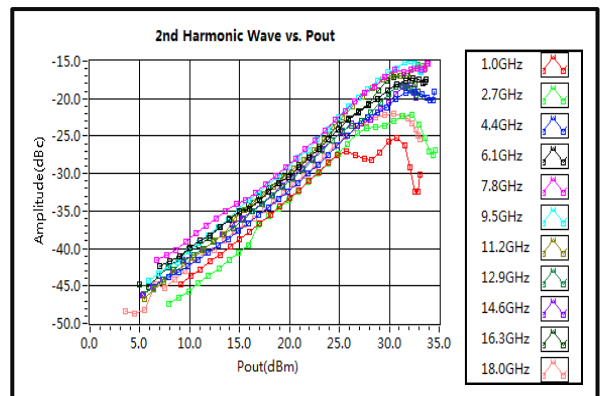
### Right IM3 vs. Pout



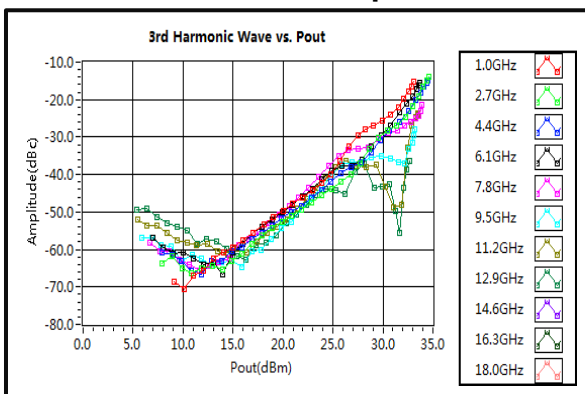
### Current



### 2nd Harmonic Wave Output Power



### 3rd Harmonic Wave Output Power



### 4th Harmonic Wave Output Power

