Ultra Broadband RF Microwave 110V/220V System Benchtop Amplifier 0.01GHz~65GHz

RoHS Compliant

Features

- Output power +22dBm typical
- Low Noise Figure 5.5dB typical.
- No External Matching Required
- Applicable for base stations and repeaters
- Aerospace and military applications
- LMDS multi-carrier operation
- High peak to average handling capability
- All specifications can be modified upon request

Electrical Specifications, T_A=25 ℃

Parameter	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	0.01 ~ 30			30 ~ 65			GHz
Gain	38	40	45	20	35	41	dB
Gain Variation Over Temperature		0.5	0.8		0.5	0.8	dB
Noise Figure	3.5	4.5	5.5	3.5	5	6.5	dB
Input VSWR		1.3			1.5		: 1
Output VSWR		1.38			1.38		: 1
Saturated Output Power (Psat)	23	23.5	24	21	22	23	dBm
Power Supply 110 VAC / 220V AC		110/220			110/220		V
Maximum Input Power	P1dB - Gain			P1dB - Gain			dBm
Weight	1105						g
Impedance	50						Ohms
Input /Output Connectors	1.85-Female						
Finishing	Gold plating						
Material	Aluminum/copper						

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Absolute Maximum Ratings	
Supply Voltage	240 VAC
RF Input Power (RFin)	Psat - Gain
Storage Temperature (°C)	-50 to +125

Note: Maximum RF input power is defined to protect the amplifier from damage.
Input power may be increased at the users own risk to achieve the full output power of the amplifier. Please reference gain and power curves and monitor the temperature.

Biasing Up Procedure	
Step 1	Connect input and output with 50 Ohm source and load with in band return loss better than 10dB.
Step 2	Connect AC Plug
Step 4	Flip switch to "ON" position
Power OFF Procedure	
Step 2	Flip switch to "OFF" position
Step 3	Remove AC Plug
Step 4	Remove RF Connection

Environmental Specifications	
Operational Temperature (°C)	-45 ~ +85 (Case Temperature below 85)
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 40°c
Shock	20G for 11msec half sine wave, 3 axis both directions

Ordering Information	
Part No.	Description
RAMP00M65GA	0.01GHz ~ 65GHz Low Noise Amplifier

Amplifier Use

Ensure that the amplifier input and output ports are safely terminated into a proper 50 ohm load before turning on the power. Never operate the amplifier without a load. A proper 50 ohm load is defined as a load with impedance less than 1.9:1 or return loss larger than 10dB relative to 50 Ohm within the specified operating band width.

Power Supply Requirements
Power supply must be able to provide adequate current for the amplifier. Power supply should be able to provide 1.5 times the typical current or 1.2 times the maximum current (whichever is greater).

In most cases, RF - Lambda amplifiers will withstand severe mismatches without damage. However, operation with poor loads is discouraged. If prolonged operation with poor or unknown loads is expected, an external device such as an isolator or circulator should be used to protect the amplifier.

Ensure that the power is off when connecting or disconnecting the input or output of the amp.

Prevent overdriving the amplifier. Do not exceed the recommended input power level.

Adequate heat-sinking required for RF amplifier modules. Please inquire.

Amplifiers do not contain Thermal protection, Reverse DC polarity or Over voltage protection with the exception of a few models. Please inquire.

Proper electrostatic discharge (ESD) precautions are recommended to avoid performance degradation or loss of functionality.

What is not covered with warranty?

Each RF - Lambda amplifier will go through power and temperature stress testing.
Since the die, ICs or MMICs are fragile, these are not covered by warranty. Any damage to these will NOT be free to repair.

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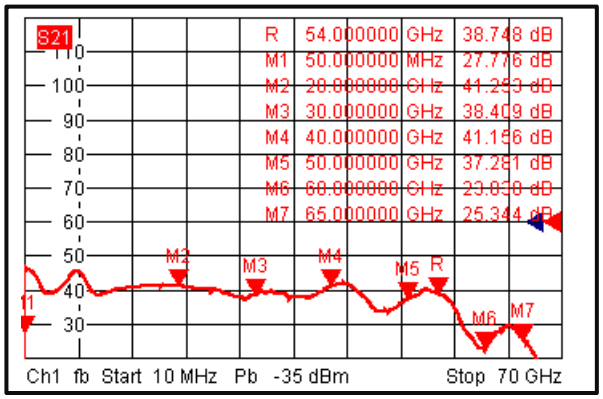
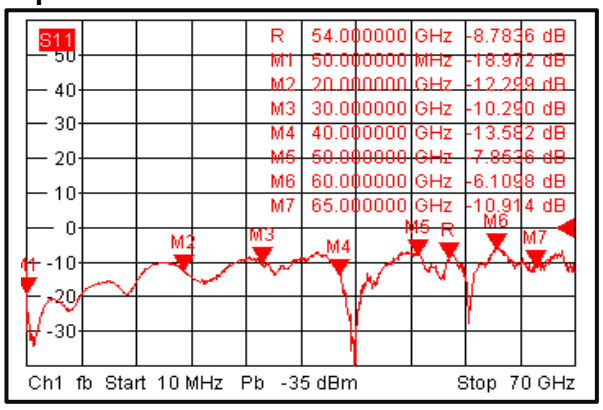
S-Parameters

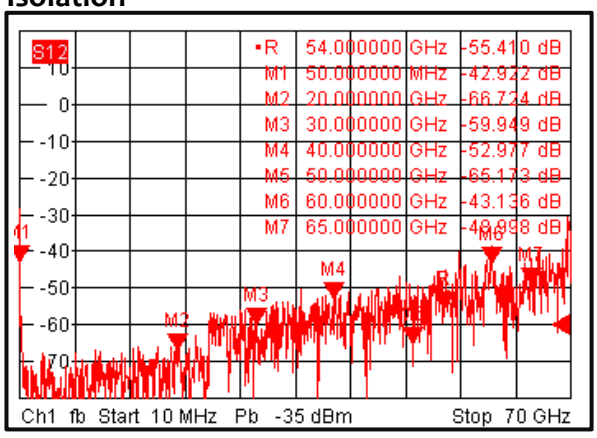
Gain



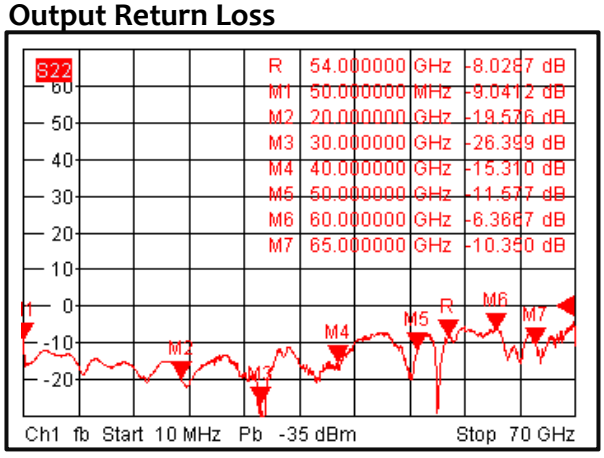
Input Return Loss

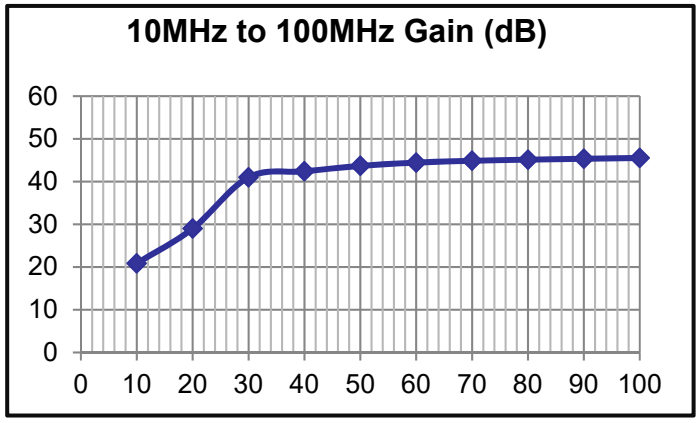


Isolation



Output Return Loss





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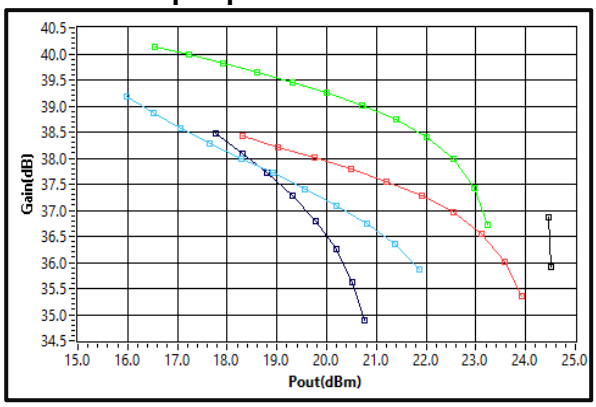
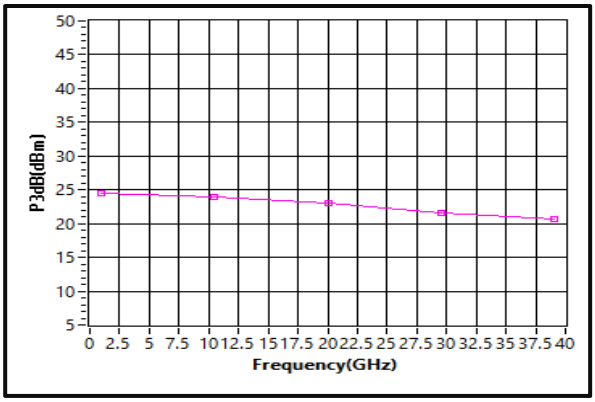
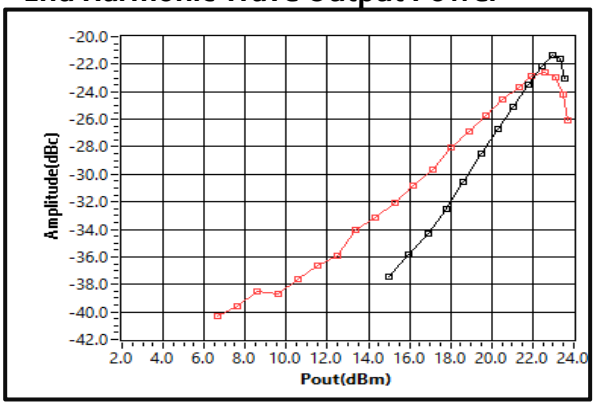
Gain vs. Output power



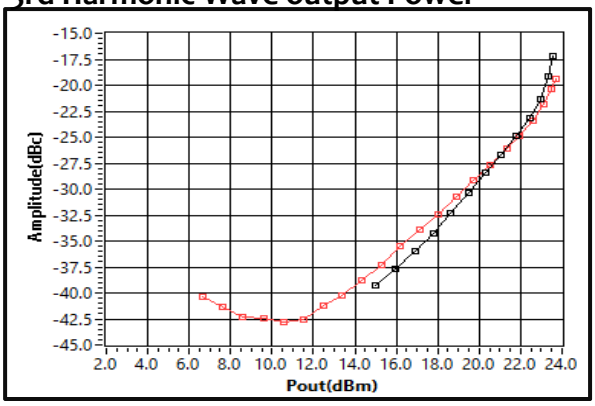
Psat vs. Frequency



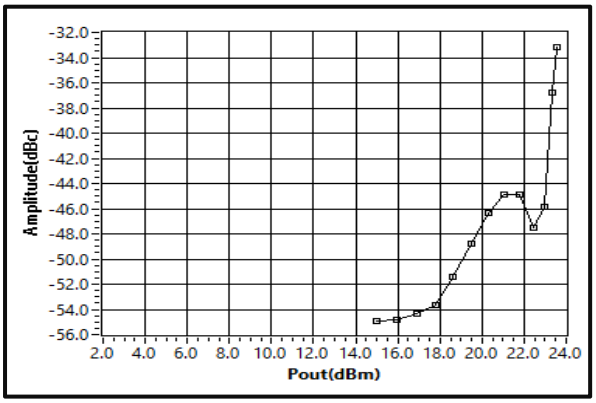
2nd Harmonic Wave Output Power



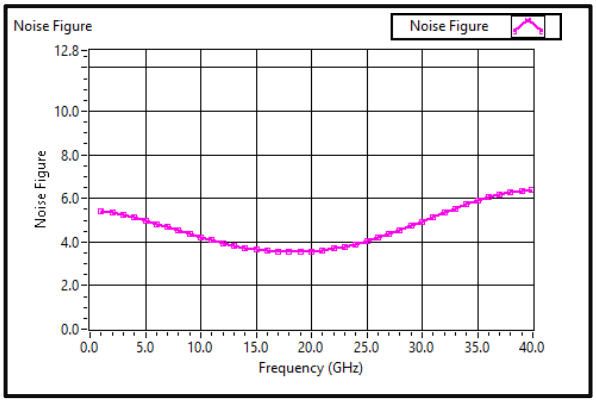
3rd Harmonic Wave output Power

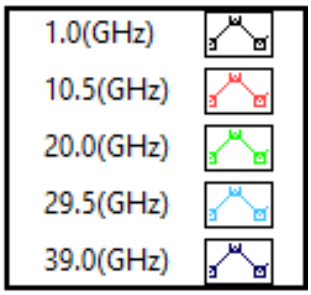


4th Harmonic Wave output Power



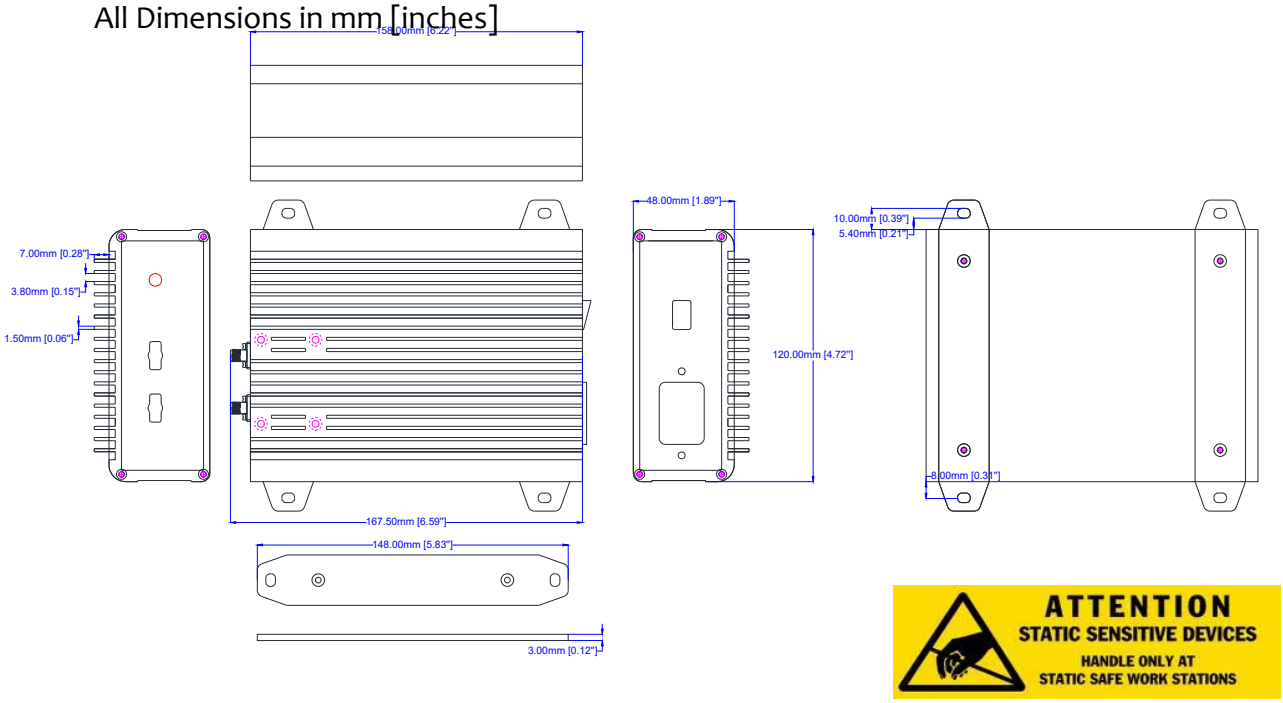
Noise Figure vs. Frequency





Outline Drawing:

All Dimensions in mm [inches]



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