Wide Band Low Noise Amplifier
0.55GHz~1.2GHz

Features

- Gain: 16dB Typical
- Noise Figure: 0.5dB Typical
- P1dB Output Power: +20 dB m Typical
- Supply Voltage: +3v @40mA
- +5V @ 90mA
- 50 Ohm Matched Input / Output
- Size: 0.63" x 0.59" x 0.39"

Typical Applications

- Wireless Infrastructure
- RF Microwave & VSAT
- Military & Aerospace
- Test Instrument
- Fiber Optics

RoHS Compliant

Electrical Specifications, TA = +25 ° C, With Vcc = +3V or +5V

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
	+3v			+5v			
Frequency Range	0.55		1.2	0.55		1.2	GHz
Gain		15		12	16.5		dB
Gain Flatness		±3.0			±3.0	±3.5	dB
Gain Variation Over Temperature(-45 ~ +85)		±0.5			±0.5	±0.8	dB
Noise Figure		0.7			0.8	1.6	dB
Input VSWR		1.5			1.5		: 1
Output VSWR		1.8			1.8		: 1
Output Power for 1 dB Compression (P1dB)		16		16	20		dBm
Saturated Output Power (Psat)		17			21		dBm
Output Third Order Intercept (IP3)		29			37		dBm
Supply Current (Idd)		40			90	115	mA
Isolation S12		-20			-20		dB
Input Max Power(no damage)			+10			+10	dBm
Weight	0.71						ounces
Impedance	50						Ohms
Input / Output Connectors	SMA-Female						
Finishing	Standard: Gold 40 micron; Nickel 220 micron thickness						
	Option: Gold 80 micron; Nickel 180 micron thickness						
Material	Aluminum						
Package Sealing	Epoxy Sealing (Standard)						
	Hermetically Seal (Option with extra charge)						

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Absolute Maximum Ratings

Operating Voltage	+6V
RF Input Power (Vcc= +3~5V)	+10dBm

Biasing Up Procedure

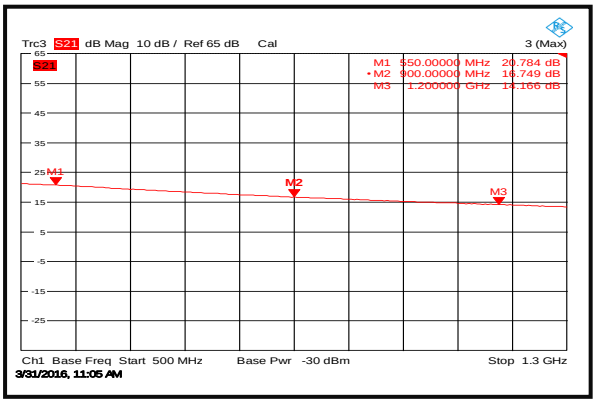
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +5V biasing
Power OFF Procedure	
Step 1	Turn off +5V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications

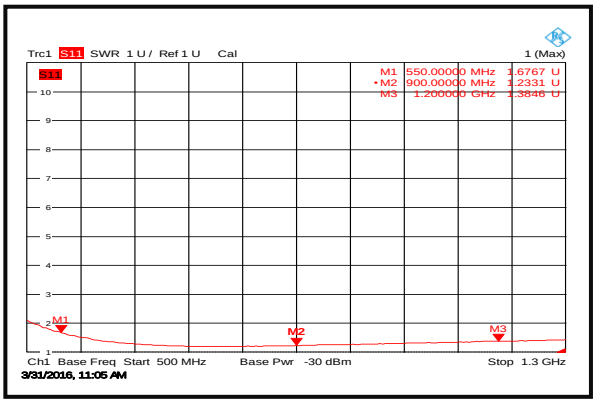
Operational Temperature (C°)	-45 to +85
Storage Temperature (C°)	-55 to +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) （Optional）
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°c
Shock	20G for 11msec half sine wave,3 axis both directions

Typical Performance Plots

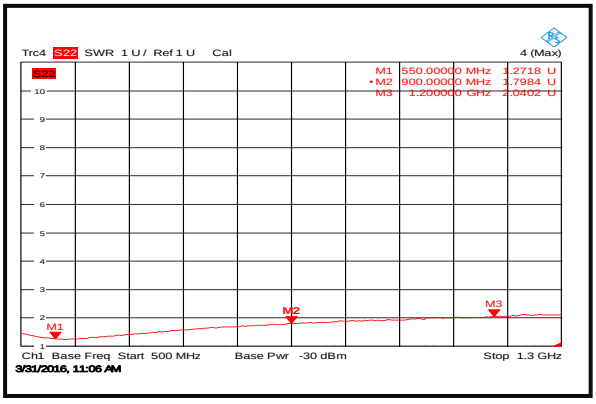
Gain



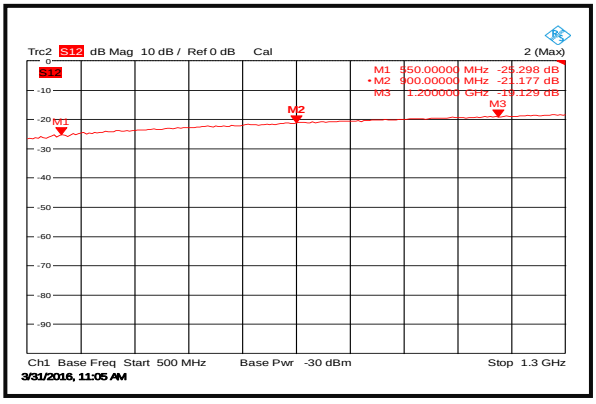
Input VSWR



Output VSWR



Isolation



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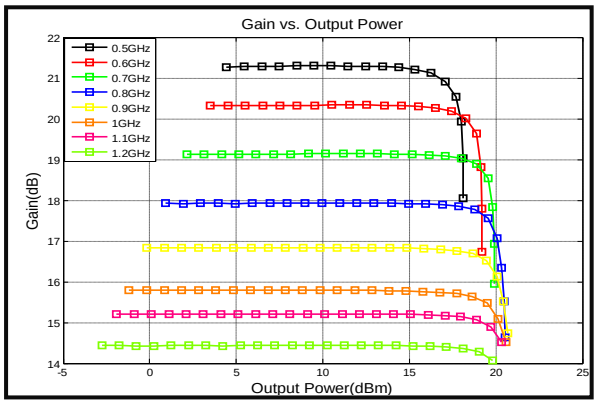
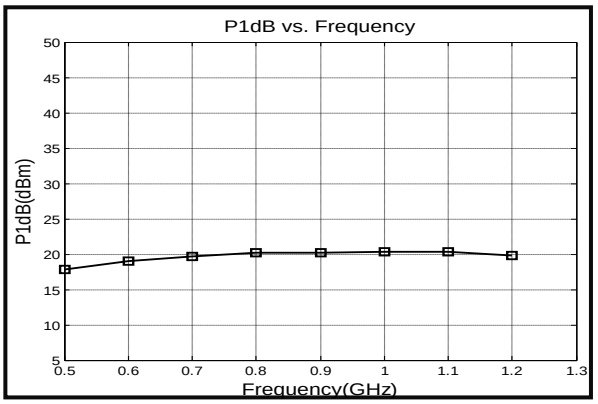
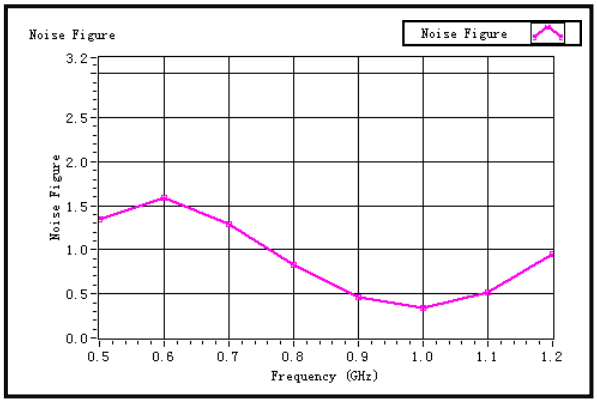
Gain vs. Output Power



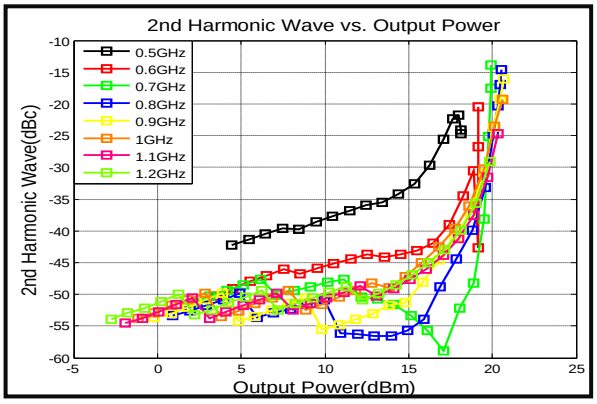
P1dB vs. Frequency



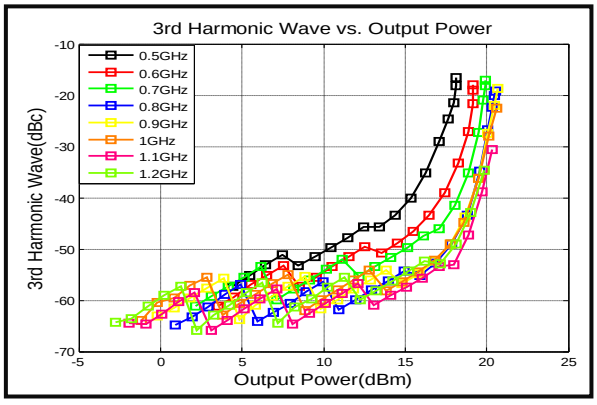
Noise Figure



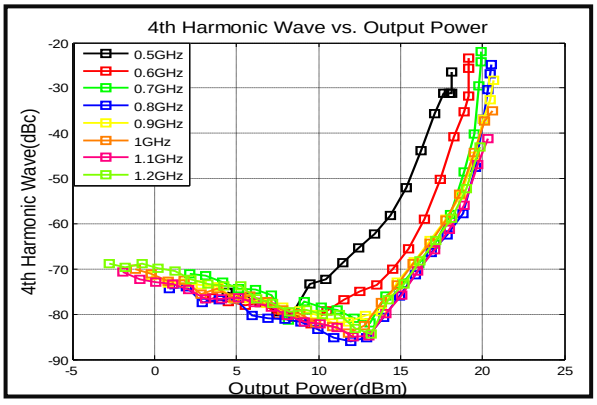
2nd Harmonic Wave output Power



3rd Harmonic Wave output Power



4th Harmonic Wave output Power



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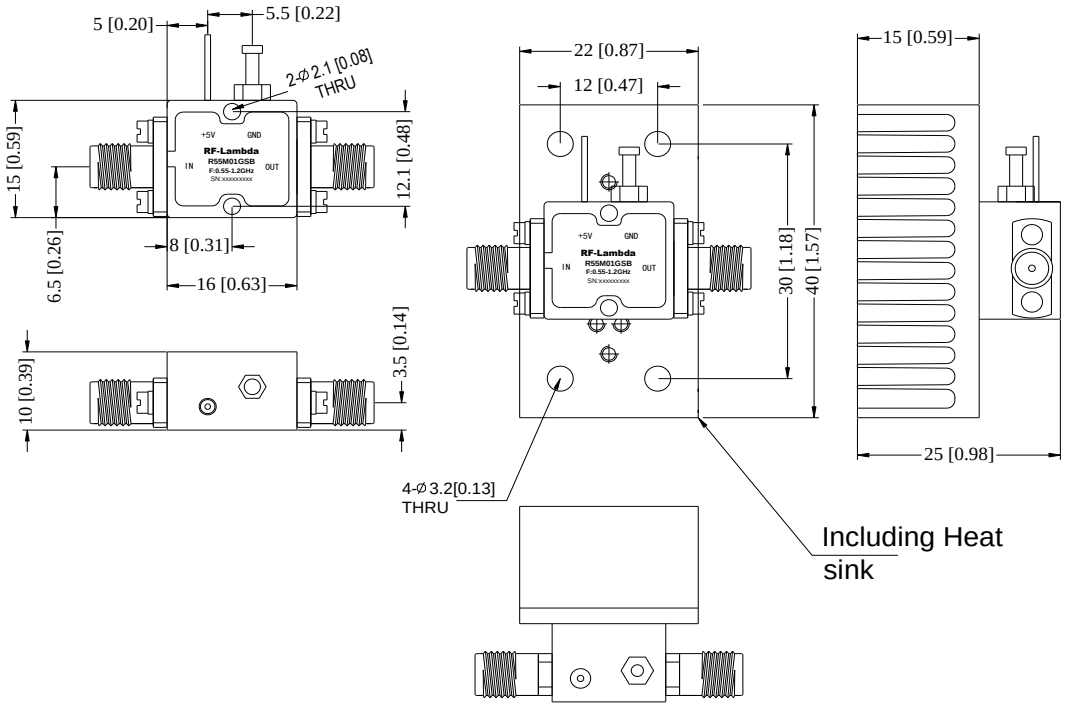
Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)

Ordering Information

Part No.	ECCN	Description
R55M01GSB	EAR99	0.55-1.2GHz Low Noise Amplifier

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