Medium Power Wide Band Driver Amplifier
0.8GHz~2.3GHz

RoHS Compliant

Features

- Gain: 32 dB
- Output power +31dBm typical
- Supply Voltage: +15V
- 50 Ohm Matched

Typical Applications

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

Electrical Specifications, TA = +25°C, Vcc = +15V

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.8		2.3	GHz
Gain	29	31		dB
Gain Flatness		±0.8	±1.5	dB
Gain Variation Over Temperature (-45 ~ +85)		±1.0		dB
Input VSWR		1.6	2.0	:1
Noise Figure		3.1	4.5	dB
Output 1dB Compression Point (P1dB)	30	31		dBm
Saturated Output Power (Psat)		33		dBm
Output Third Order Intercept (IP3)		41		dBm
Isolation S12		-60		dB
Supply Current (Vcc=+15V)		500	600	mA
Weight	1.76			ounces
Impedance	50			Ohms
Input / Output Connectors	SMA - Female			
Finish	Nickel Plated			
Material	Aluminum			
Package Sealing	Epoxy Sealing (Standard)			
	Hermetically Sealed (Optional)			

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Absolute Maximum Ratings

Operating Voltage	+15V +/-10%
RF Input Power	+18dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +15V biasing
Power OFF Procedure	
Step 1	Turn off +15V 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

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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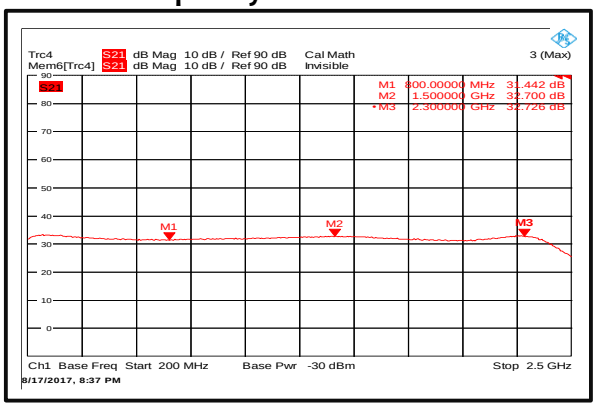
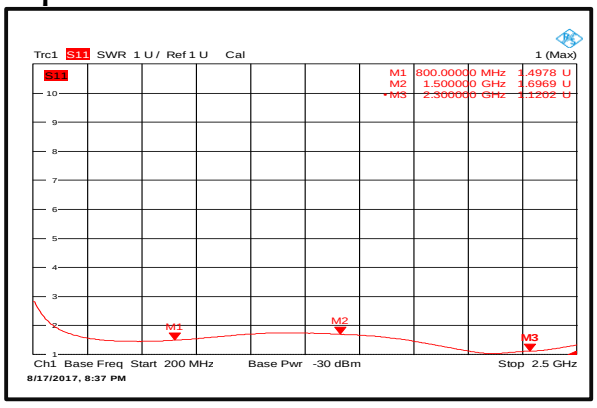
Typical Performance Plots

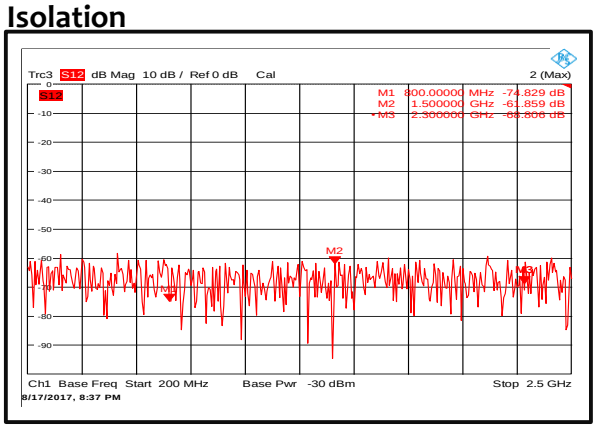
Gain vs. Frequency



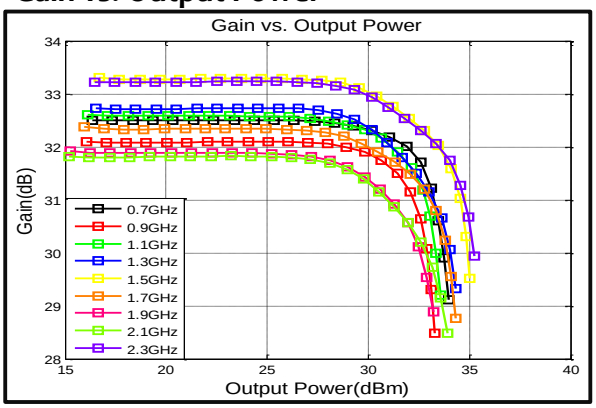
Input VSWR



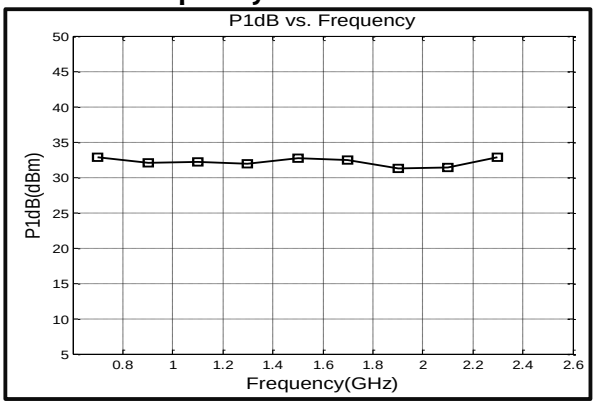
Isolation



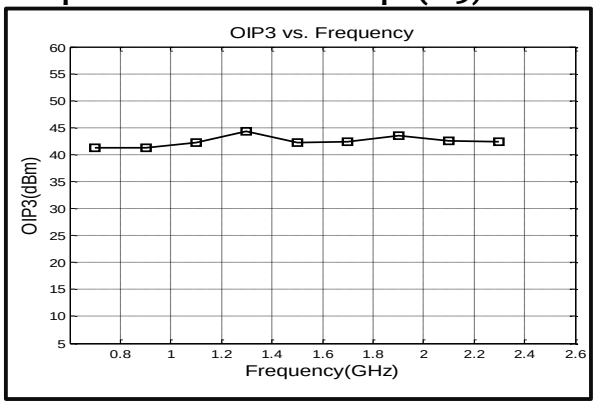
Gain vs. Output Power



P1dB vs. Frequency



Output Third Order Intercept (IP3)



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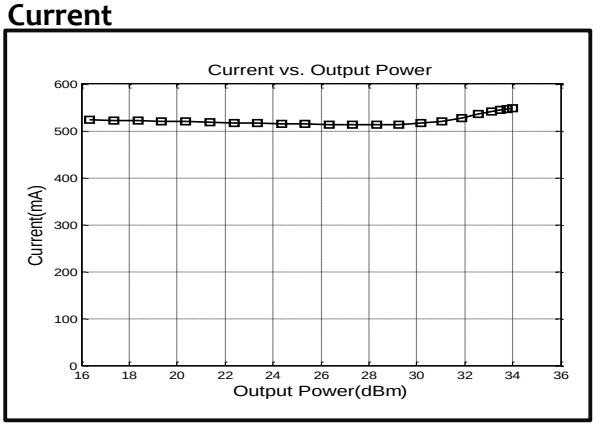
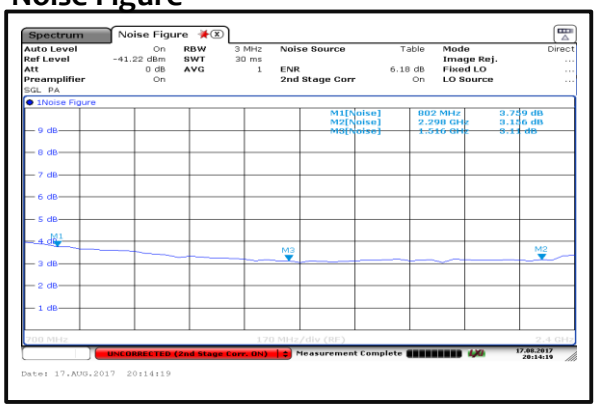
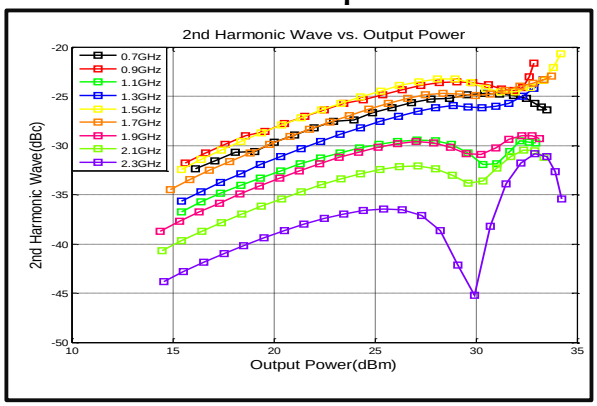
Current



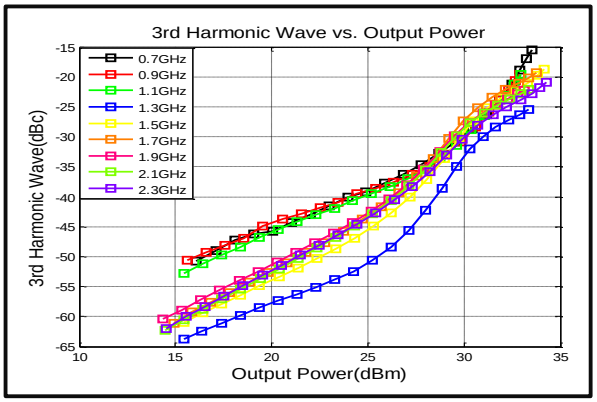
Noise Figure



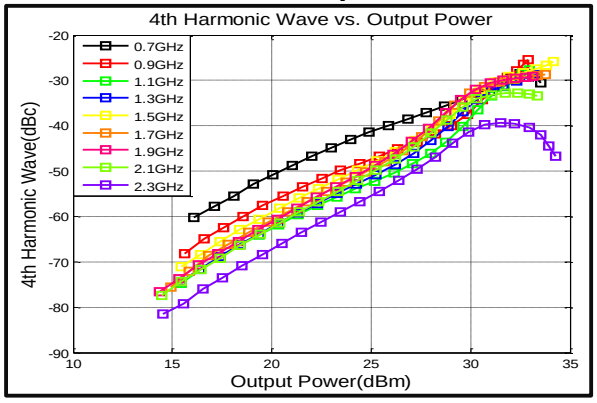
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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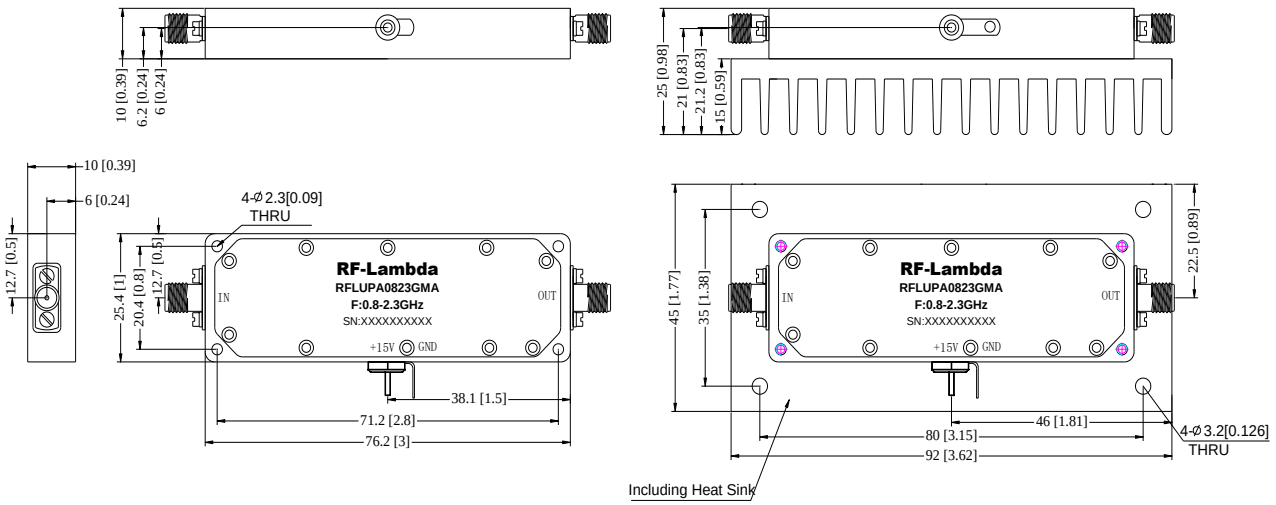
Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)

Ordering Information

Part No.	ECCN	Description
RFLUPA0823GMA	EAR99	0.8-2.3GHz Medium Power Amplifier

Important Notice

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