



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

R06G17GSA

Wide Band Low Noise Amplifier 6GHz~17GHz



Features

- Gain: 19dB Typical
- Noise Figure: 1.5dB Typical
- Output P1dB: +15dBm Typical
- Single Supply Voltage: +4V @ 90mA
- 50 Ohm Matched Input / Output
- Size: 0.63" x 0.59" x 0.31"

Typical Applications

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

Electrical Specifications, TA = +25 ° C, Vcc = +4V, 50 Ohm System

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	6		12	12		17	GHz
Gain	17.5	20		17.5	19		dB
Gain Flatness		±1.2	±1.5		±0.8	±1.2	dB
Gain Variation Over Temperature (-45 ~ +85)		±1.0			±1.0		dB
Noise Figure		2.0	2.8		1.5	2.5	dB
Input VSWR		1.8	2		1.8	2	
Output VSWR		1.9	2.2		1.8	2	
Output Power for 1 dB Compression (P1dB)	13	15		14	16		dBm
Saturated Output Power (Psat)		16			17		dBm
Output Third Order Intercept (IP3)		25			27		dBm
Supply Current (Idd) (Vcc=+4V)		90	120		90	120	mA
Isolation S12		-35			-36		dB
Input Max Power(no damage)		+5			+5		dBm
Weight	0.35						ounces
Impedance	50						Ohms
Input /Output Connector	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	+4.5V
RF Input Power (RFIN)(Vcc= +4V)	+10dBm
Operating Temperature(C°)	-45 to +85
Storage Temperature(C°)	-55 to +125

Biasing Up Procedure

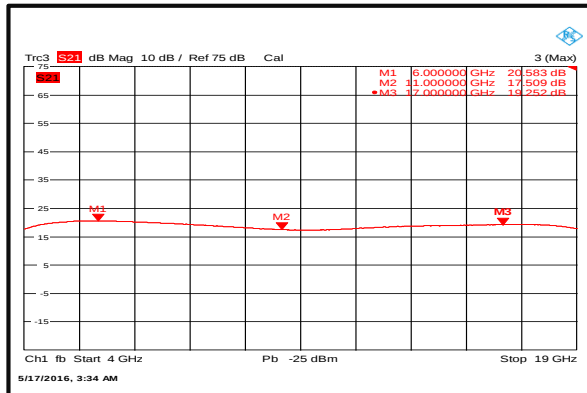
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +4V biasing
Power OFF Procedure	
Step 1	Turn off +4V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications

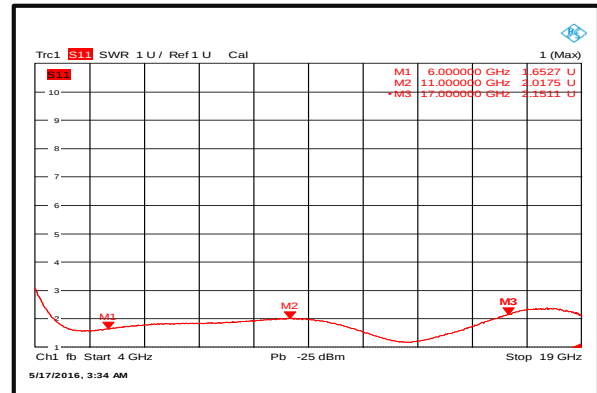
Operational Temperature (C°)	-45 to +85
Storage Temperature (C°)	-55 to +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH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

Typical Performance Plots

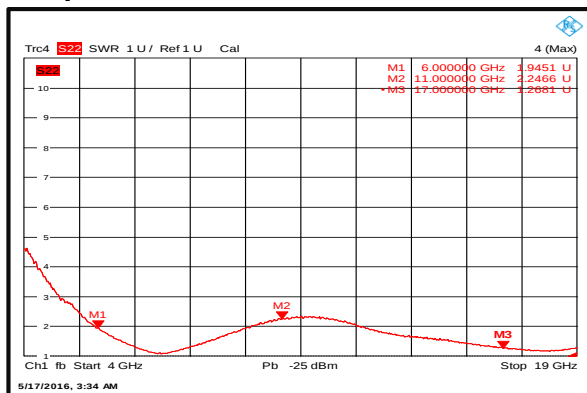
Gain



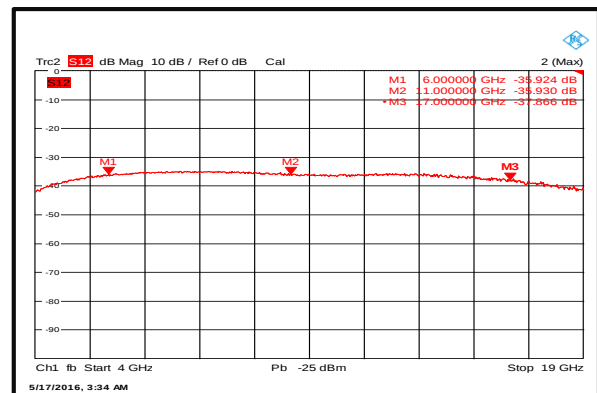
Input VSWR



Output VSWR

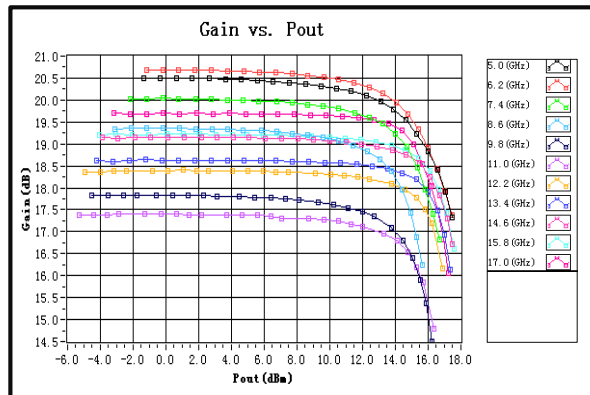


Isolation

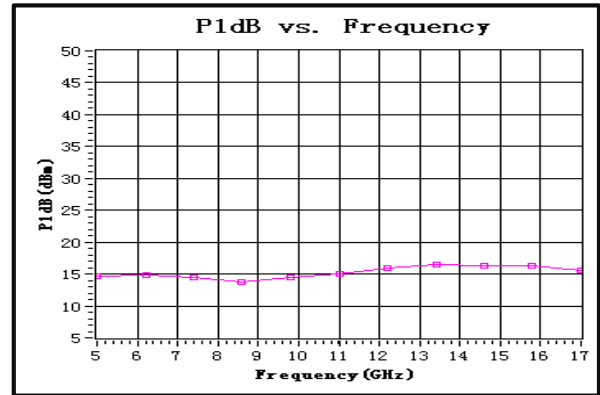




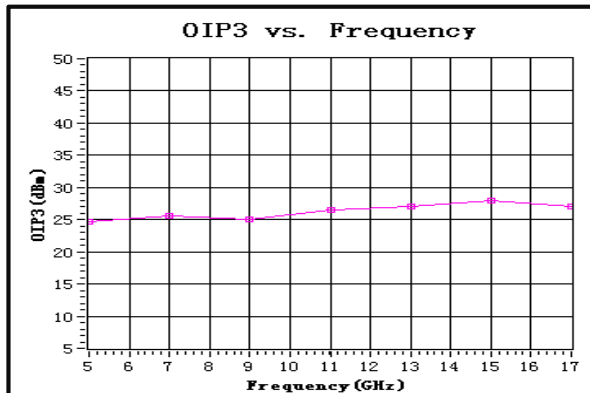
Gain vs. Output Power



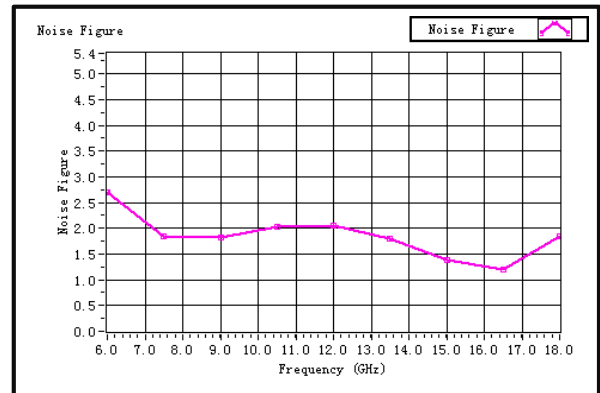
P1dB vs. Frequency



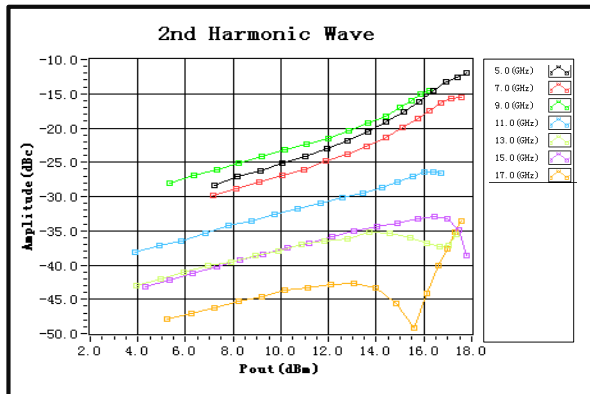
Output Third Order Intercept (IP3)



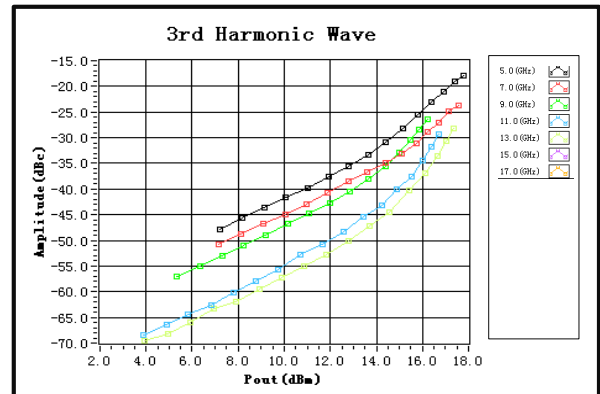
Noise Figure



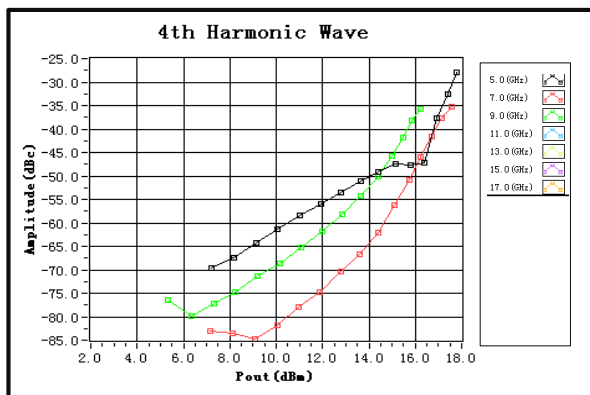
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

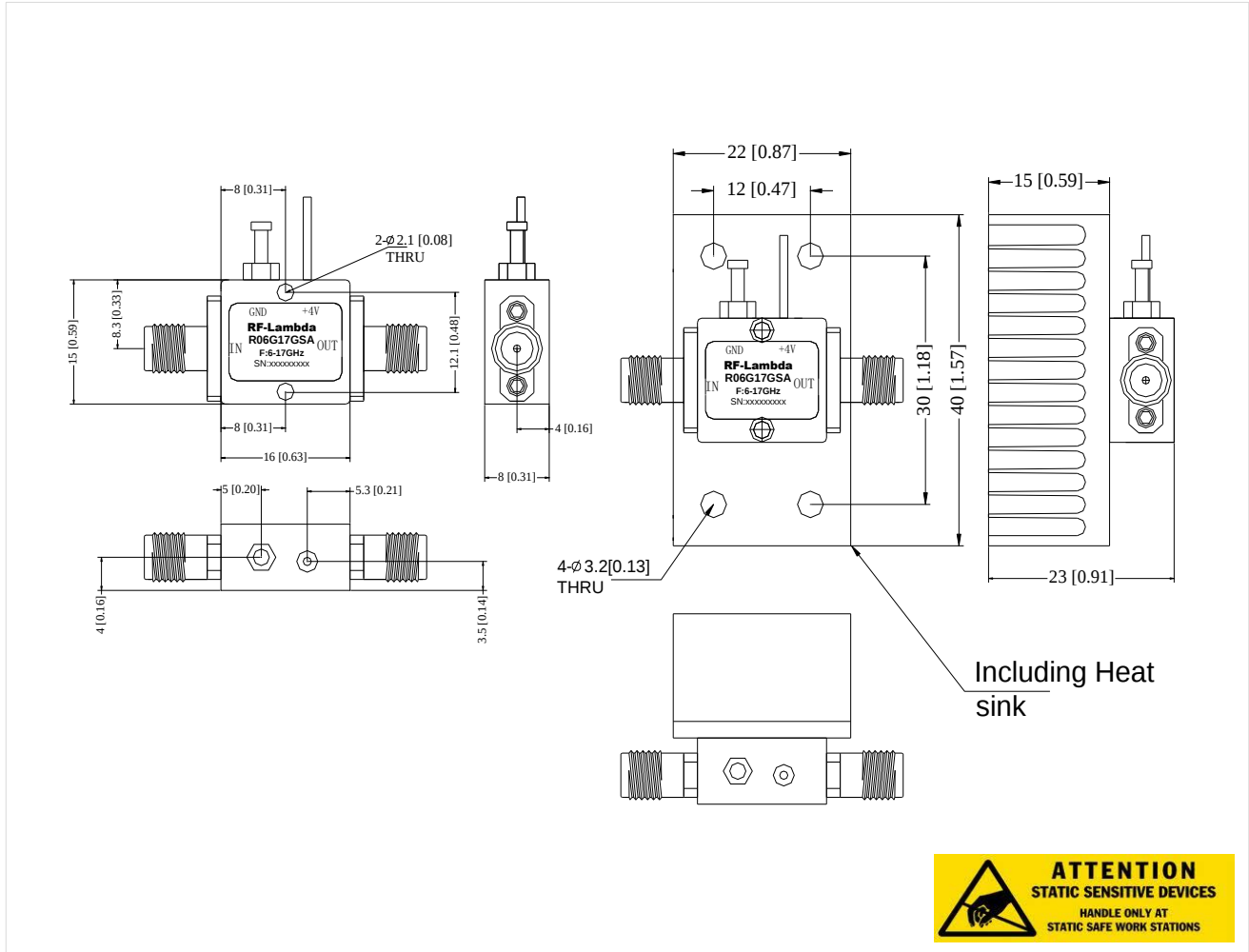




Outline Drawing:

All Dimensions in mm (inches)

Heat Sink required during operation (Sold Separately)



Ordering Information

Part No	ECCN	Description
R06G17GSA	EAR99	6-17GHz Low Noise Amplifier

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