



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

R06G26GSA

Wide Band Low Noise Amplifier 6GHz~26.5GHz



Features

- Gain: 21dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +10dBm Typical
- Supply Voltage: +3.5V

Typical Applications

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

Electrical Specifications, TA = +25°C, Vcc = +3.5V

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	6		18	18		26.5	GHz
Gain	17	21		16	20.5		dB
Gain Flatness		±1.0			±1.5		dB
Gain Variation Over Temperature (-45 ~ +85)		±2.0			±2.0		dB
Noise Figure		2.5	3.8		2.5	3.5	dB
Input VSWR		2.2			1.6		: 1
Output VSWR		1.8			1.8		: 1
Output 1dB Compression Point (P1dB)	7	9		7	10		dBm
Saturated Output Power (Psat)		11			12		dBm
Output Third Order Intercept (IP3)		18			20		dBm
Supply Current (Vcc=+3.5V)		50	70		50	70	mA
Isolation S12		-48			-38		dB
Weight	0.35						Ounces
Impedance	50						Ohms
Input / Output Connectors	SMA-Female						
Finish	Standard: Gold 40 micron; Nickel 220 micron thickness						
	Option: Gold 80 micron; Nickel 180 micron thickness						
Material	Aluminum						
Package Sealing	Epoxy Sealing (Standard)						
	Hermetically Sealed (Optional)						

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Absolute Maximum Ratings

Operating Voltage	+4V
RF Input Power	+0dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +3.5V biasing
Power OFF Procedure	
Step 1	Turn off +3.5V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	MIL-STD-883	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)		MIL-STD-883 (For Hermetically Sealed Units)

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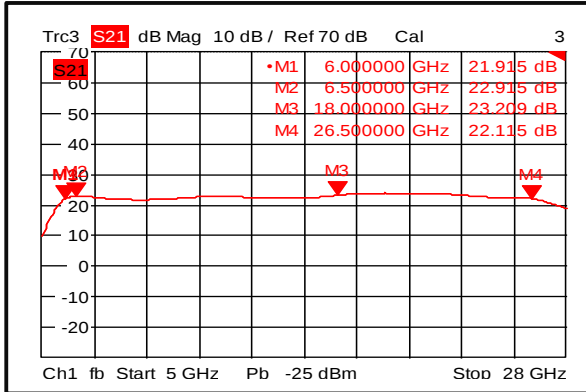
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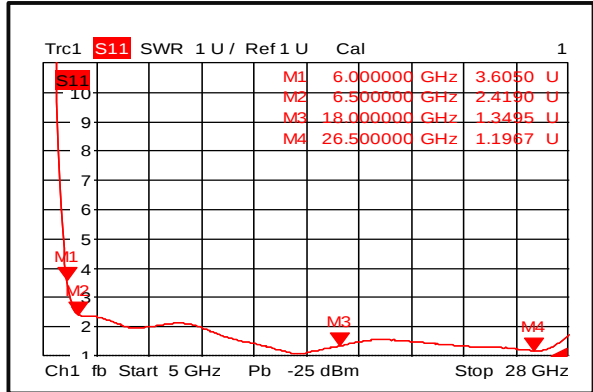
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Typical Performance Plots

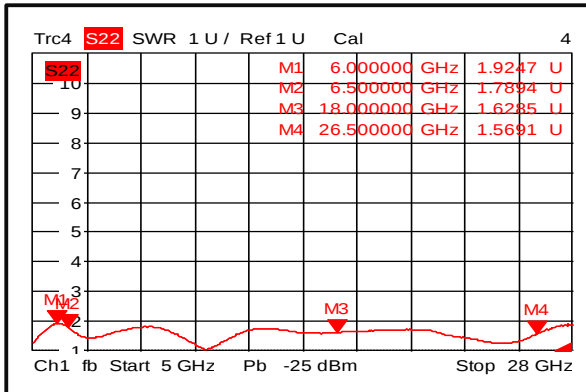
Gain@+25°C



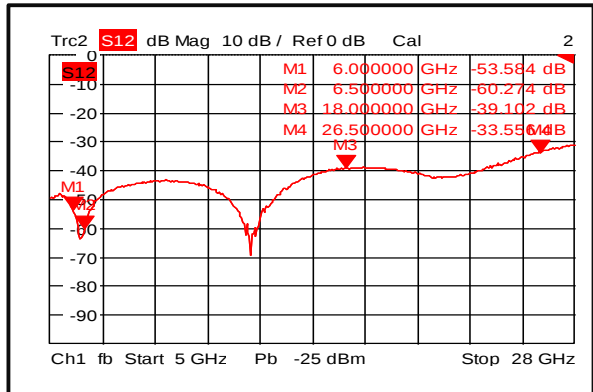
Input VSWR@+25°C



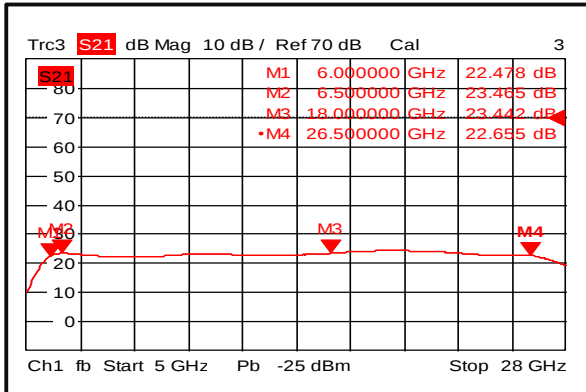
Output VSWR@+25°C



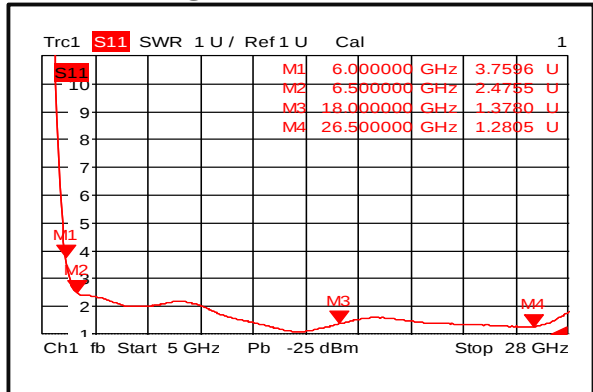
Isolation@+25°C



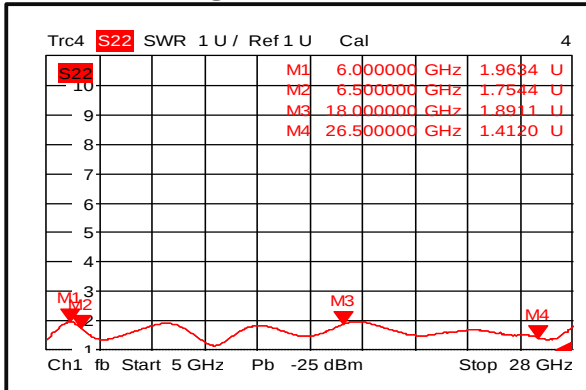
Gain@-45°C



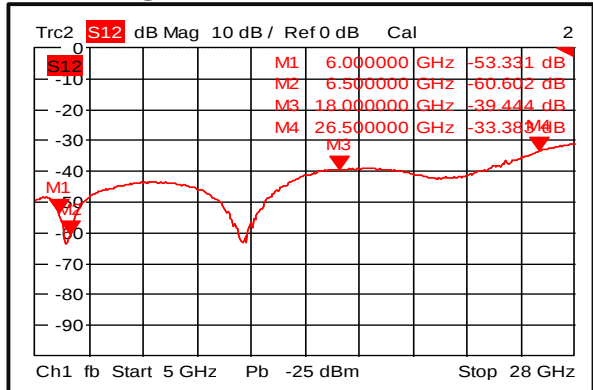
Input VSWR@-45°C



Output VSWR@-45°C



Isolation@-45°C



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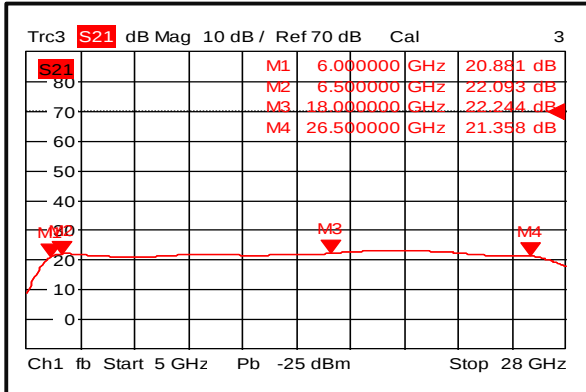


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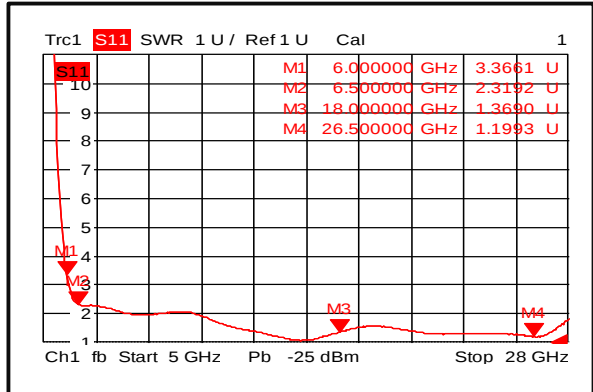
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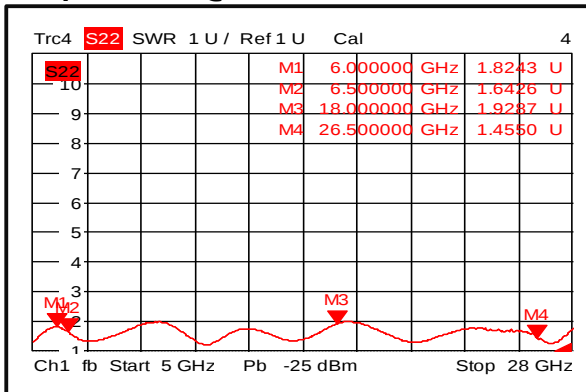
Gain@+85°C



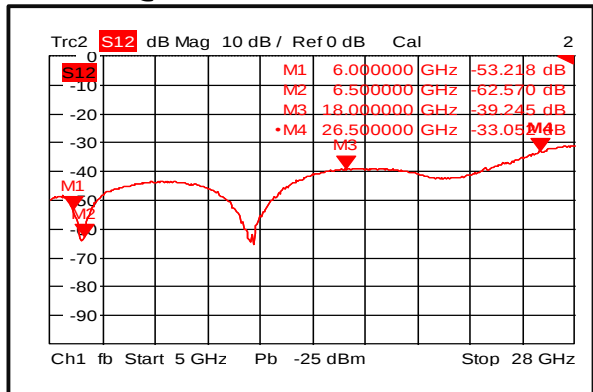
Input VSWR@+85°C



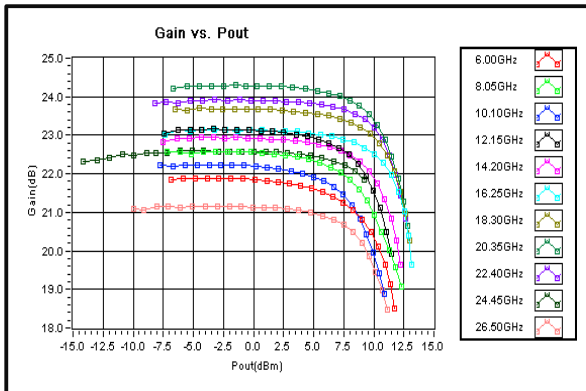
Output VSWR@+85°C



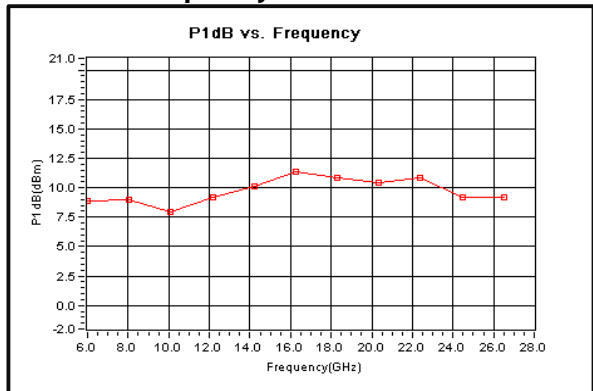
Isolation@+85°C



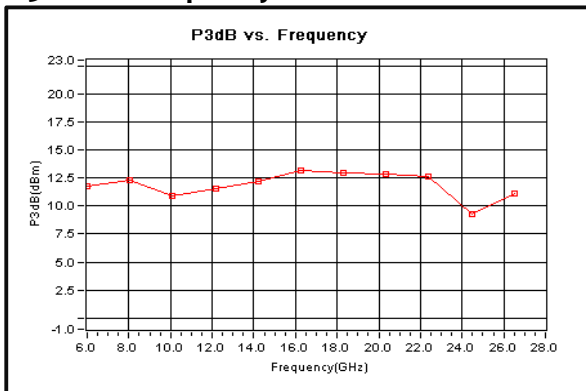
Gain vs. Output Power



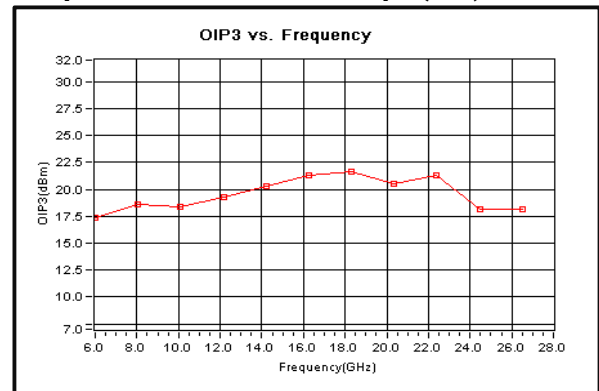
P1dB vs. Frequency



P3dB vs. Frequency



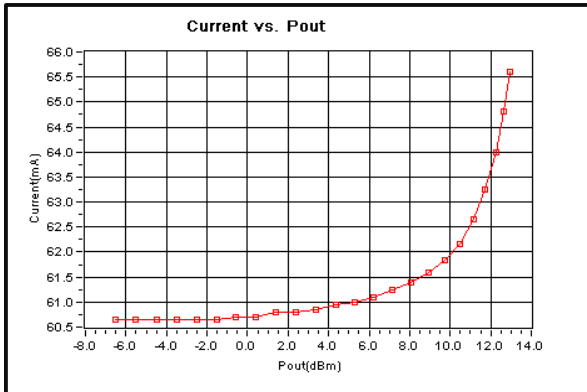
Output Third Order Intercept (IP3)



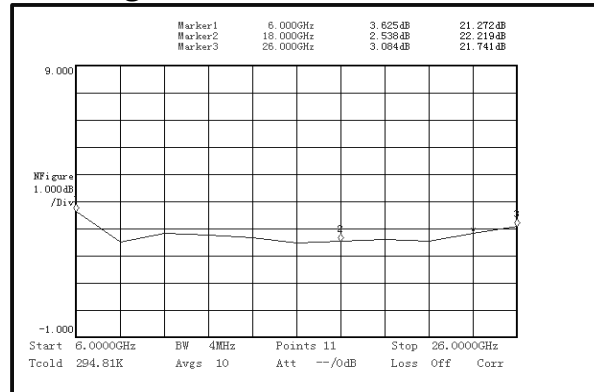
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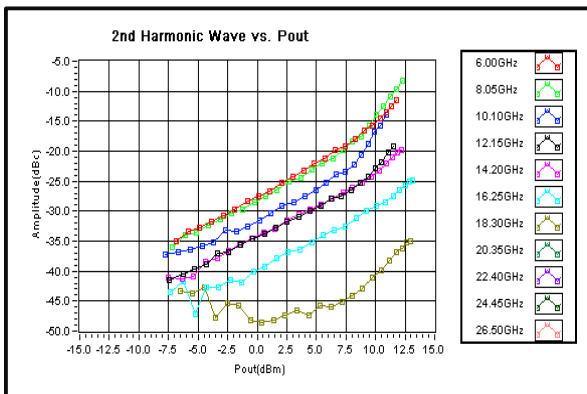
Current



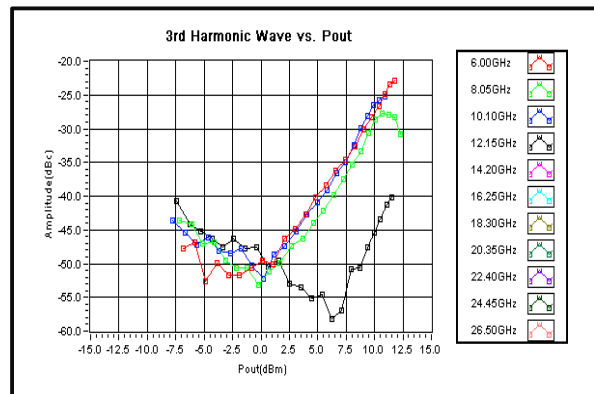
Noise Figure



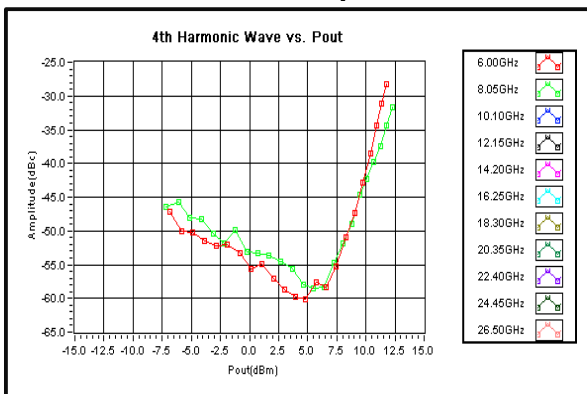
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



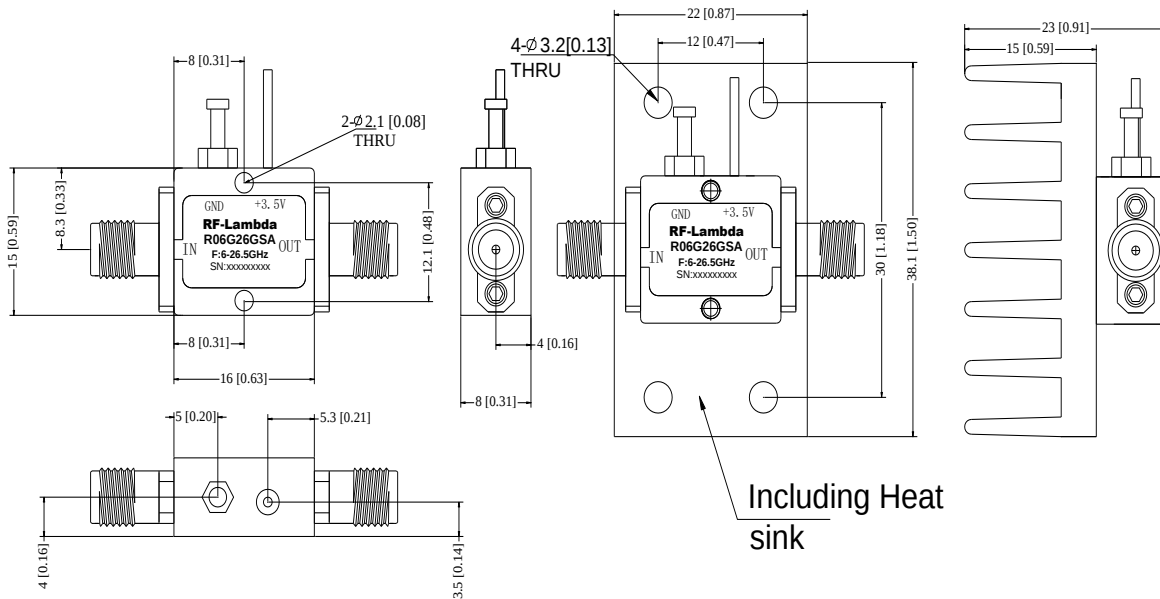
4th Harmonic Wave Output Power





Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)



Ordering Information

Part No.	ECCN	Description
R06G26GSA	EAR99	6-26.5GHz Low Noise Amplifier

Important Notice

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