



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

R04G08GSMA

Low Noise Amplifier 4GHz ~ 8GHz

Features

- Gain: 22.5dB Typical
- Noise Figure: 1dB Typical
- P1dB Output Power: +17.5dBm Typical
- Supply Voltage: +10V

Typical Applications

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



Electrical Specifications, TA = +25 °C, Vcc = +10V

Parameter	Min.	Typ.	Max.	Units
Frequency Range	4		8	GHz
Gain		22.5		dB
Gain Flatness		-		dB
Gain Variation Over Temperature (-45°C~+85°C)		-		dB
Noise Figure		1		dB
Input VSWR		1.5		: 1
Output VSWR		1.5		: 1
Output 1dB Compression Point (P1dB)		17.5		dBm
Saturated Output Power (Psat)		-		dBm
Output Third Order Intercept (IP3)		28		dBm
Supply Current(Vcc=+10V)		75		mA
Isolation S12		-		dB
Weight	-			Ounces
Impedance	50			Ohms
Input / Output Connectors	SMA			
Finish	Standard: Gold 40 micron; Nickel 220 micron thickness			
	Option: Gold 80 micron; Nickel 180 micron thickness			
Material	Aluminum / copper			
Package Sealing	Epoxy Sealing (Standard)			
	Hermetically Sealed (Optional)			

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Absolute Maximum Ratings

Operating Voltage	+35V
RF Input Power	+37dBm Pulsed

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
step3	Connect +10V biasing
Power OFF Procedure	
Step 1	Turn off +10V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

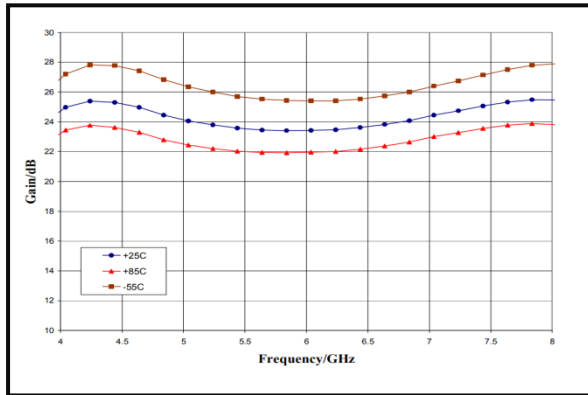
Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
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)
Random Vibration	MIL-STD-202	Test Method 214A. Test Condition I. Test Condition Letter C. Duration 15 minutes

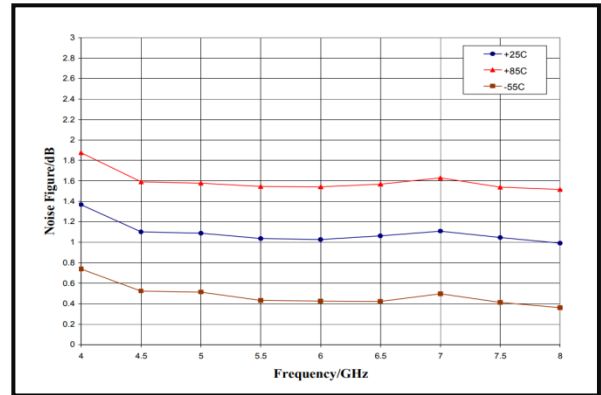


Typical Performance Plots

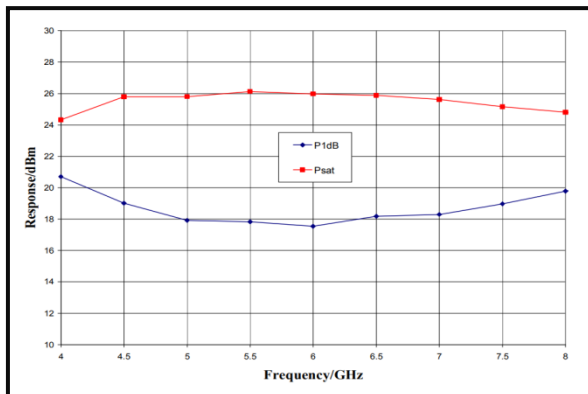
Gain vs. Temperature



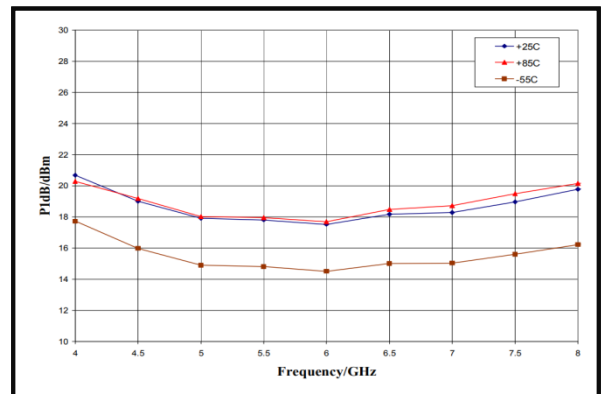
Noise Figure vs. Temperature



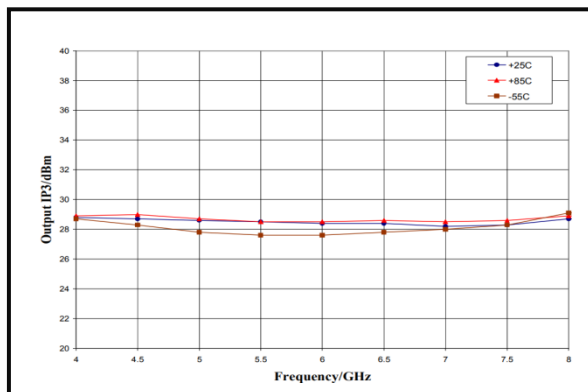
Output Power



P1dB vs. Frequency



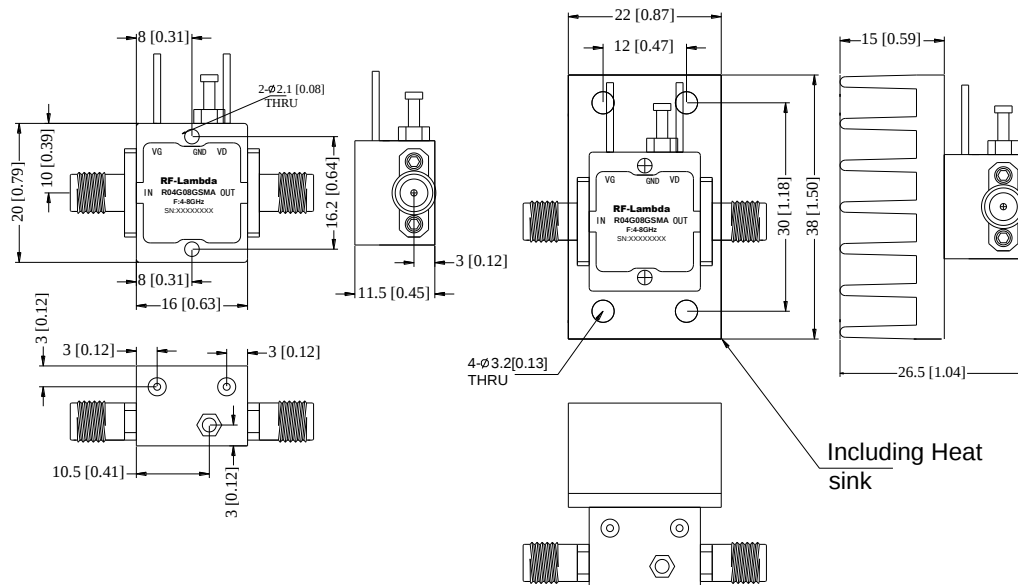
Output Third Order Intercept (IP3)





Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)



Ordering Information

Part No.	ECCN	Description
R04Go8GSMA	EAR99	4-8GHz Low Noise Amplifier

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