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

RoHS Compliant

Electrical Specifications, TA = +25 ℃, Vcc = +10V

Parameter	Min.	Typ.	Max.	Units
Frequency Range	4		8	GHz
Gain		22.5		dB
Gain Flatness		-		dB
Gain Variation Over Temperature (-45℃~+85℃)		-		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)			

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℃~+85℃
Storage Temperature		-50℃~+125℃
Thermal Shock		1 Hour@ -45℃ → 1 Hour @ +85℃ (5 Cycles)
Electrical & Temperature Burn In		Temperature +85℃ 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		Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883	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

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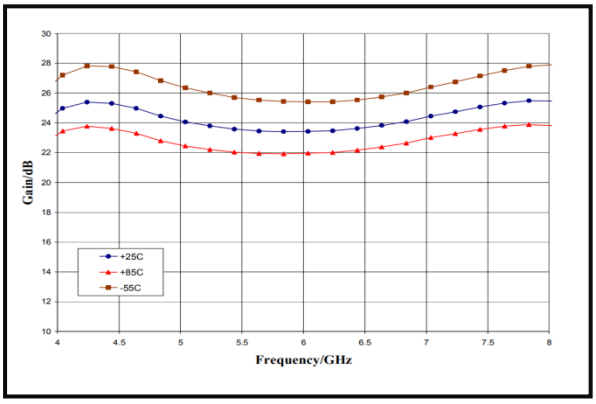
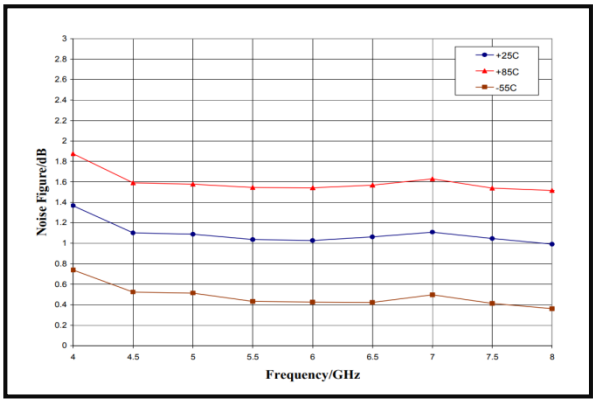
Typical Performance Plots

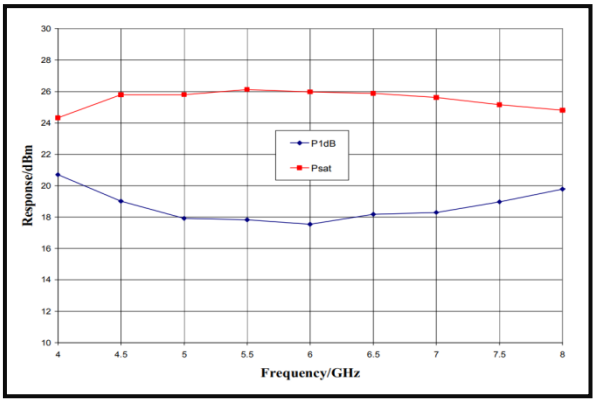
Gain vs. Temperature



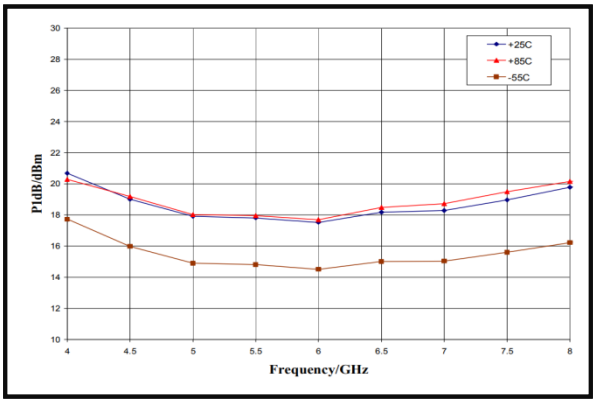
Noise Figure vs. Temperature



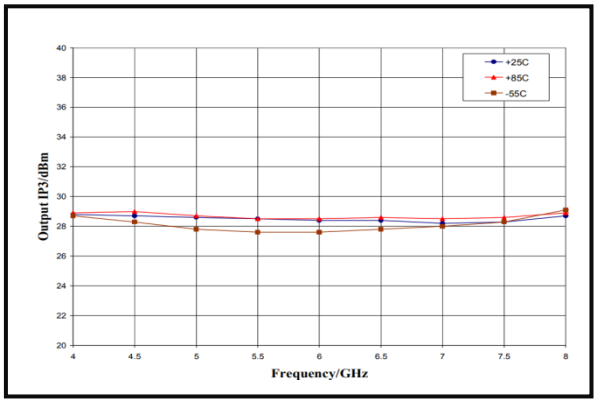
Output Power



P1dB vs. Frequency

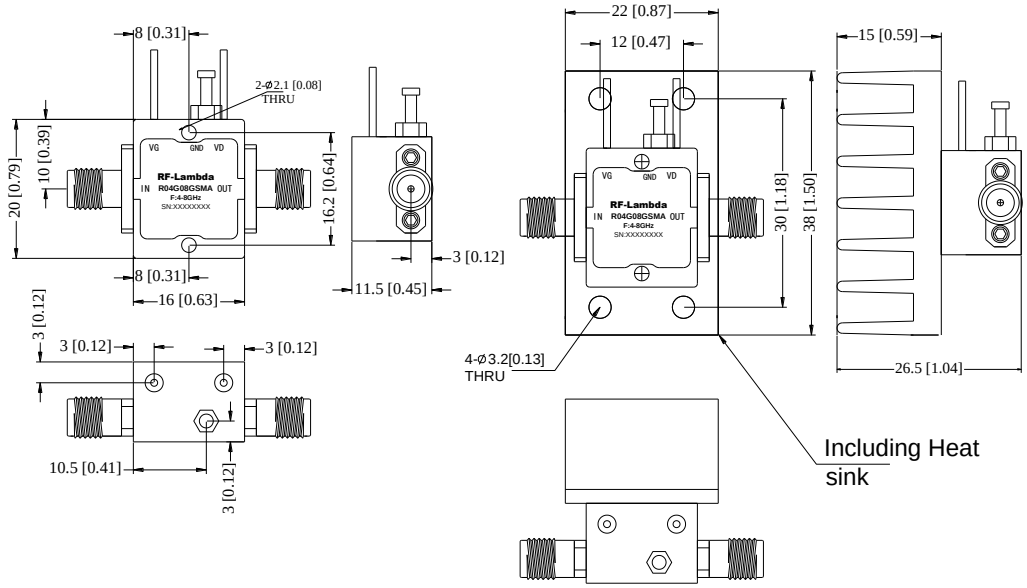


Output Third Order Intercept (IP3)



Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)

Ordering Information

Part No.	ECCN	Description
R04G08GSMA	EAR99	4-8GHz Low Noise Amplifier

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