Driver Amplifier
20GHz ~ 40GHz

Features

- Gain: 34dB Typical
- Noise Figure: 5.5dB Typical
- P1dB Output Power: +18dBm Typical
- Supply Voltage: +4V

Typical Applications

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

RoHS Compliant

Electrical Specifications, TA = +25 ℃, Vcc = +4V

Parameter	Min.	Typ.	Max.	Units
Frequency Range	20		40	GHz
Gain		34		dB
Gain Flatness		-		dB
Gain Variation Over Temperature (-45℃~+85℃)		-		dB
Noise Figure		5.5		dB
Input VSWR		1.5		: 1
Output VSWR		1.5		: 1
Output 1dB Compression Point (P1dB)		18		dBm
Saturated Output Power (Psat)		-		dBm
Output Third Order Intercept (IP3)		29		dBm
Supply Current(Vcc=+4V)		270		mA
Isolation S12		-		dB
Weight	-			Ounces
Impedance	50			Ohms
Input / Output Connectors	2.92mm			
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	+4V
RF Input Power	+10dBm

Biasing Up Procedure

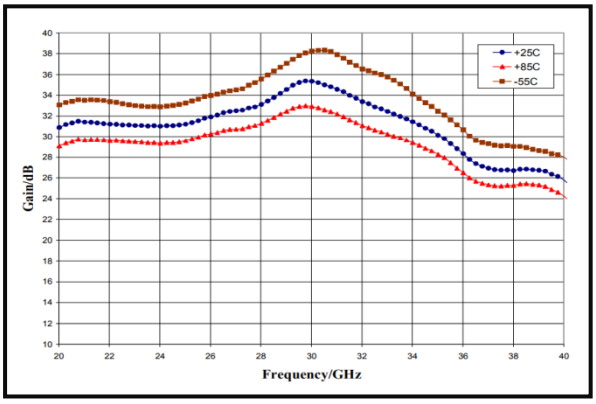
Step 1	Connect Ground Pin
Step 2	Connect input and output
step3	Connect +4V biasing
Power OFF Procedure	
Step 1	Turn off +4V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications and Test Standards

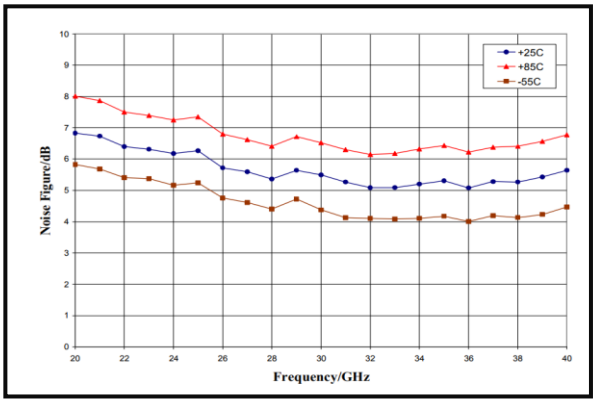
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45℃~+85℃
Storage Temperature		-50℃~+125℃
Thermal Shock		1 Hour@ -45℃ → 1 Hour @ +85℃ (5 Cycles)
Electrical & Temperature Burn In		Temperature +85℃ for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 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

Typical Performance Plots

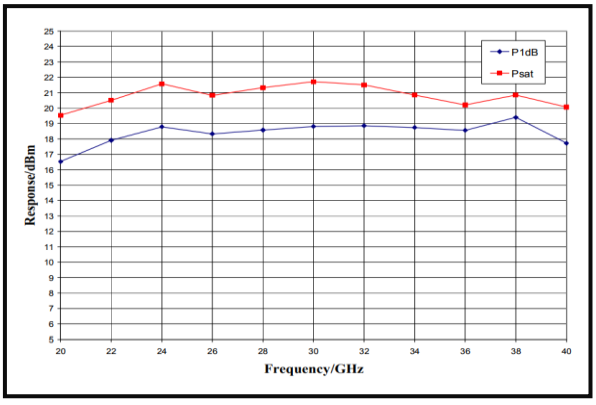
Gain vs. Temperature



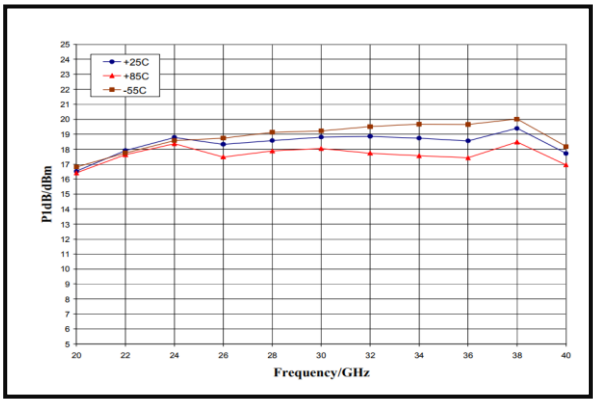
Noise Figure vs. Temperature



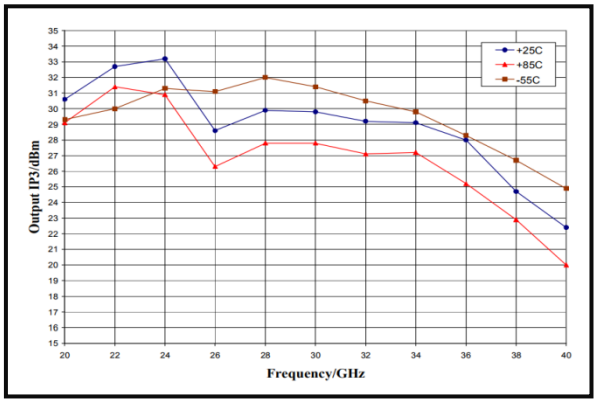
Output Power



P1dB vs. Temperature

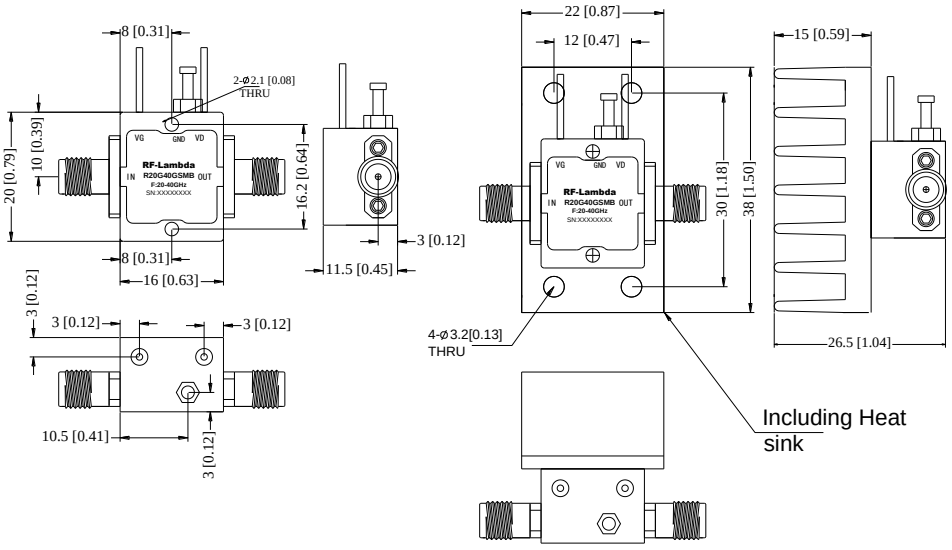


Output Third Order Intercept (IP3)



Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)

Ordering Information

Part No.	ECCN	Description
R20G40GSMB	EAR99	20-40GHz DriverAmplifier

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