

Hermetically Sealed Low Noise Amplifier 29GHz~36GHz



Note: Photo is for illustration purposes only.
Please refer to outline drawing.

Features

- Gain: 22dB Typical
- Noise Figure: 3dB Typical
- P1dB Output Power: +12dBm Typical
- Supply Voltage: +3V
- Drop in Package

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Test and Measurement

Electrical Specifications, TA = +25°C, Vcc = +3V

Parameter	Min.	Typ.	Max.	Units
Frequency Range	29		36	GHz
Gain		22		dB
Gain Flatness		±1.5		dB
Gain Variation Over Temperature (-40 ~ +85)		±1.0		dB
Noise Figure		3		dB
Input VSWR			1.8	:1
Output VSWR			1.8	:1
Output 1dB Compression Point (P1dB)	9	12		dBm
Saturated Output Power (Psat)		13		dBm
Output Third Order Intercept (IP3)		23		dBm
Supply Current (Vcc=+3V)			80	mA
Isolation S12		-30		dB
Impedance		50		Ohms
Input / Output Connectors	2.92mm -Female			
Finish	Gold Plated			
Material	Kovar			
Package Sealing	Hermetically Sealed			

Absolute Maximum Ratings

Operating Voltage	+3.5V
RF Input Power	5dBm

Biasing Up Procedure

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

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High 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	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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Outline Drawing:

All Dimensions in mm [inches]

The drawing includes the following views and dimensions:

- Top View:** Shows a rectangular component with dimensions 20 [0.788] mm width and 17.8 [0.701] mm height. It features an IN port, an OUT port, a +3V terminal, and a GROUND TERMINAL. A 2-φ 2.3 [0.091] THRU hole is located at the bottom. A central hole has a diameter of φ 2.5 [0.099].
- Side View:** Shows a height of 8 [0.315] mm and a width of 2.45 [0.097] mm.
- Bottom View:** Shows a width of 17.5 [0.69] mm and a height of 5.6 [0.221] mm. It includes 4x #0-80 UNF Depth 2.5 [0.1] holes and a 1.3 [0.051] mm dimension.
- Exploded View:** Shows the component with its mounting hardware, including a 2.45 [0.097] mm wide base and a 1.3 [0.051] mm high spacer.
- Mounting Dimensions:**
 - Top edge: 3.5 [0.138] mm from left edge to first hole.
 - Between holes: 1.45 [0.057] mm.
 - Between holes: 2 x 1.0 [0.04] mm.
 - Between holes: 1.5 [0.059] mm.
 - Between holes: 1.5 [0.059] mm.
 - Between holes: 4.3 [0.169] mm.
 - Between holes: 8 [0.315] mm.
 - Between holes: 14.8 [0.583] mm.
 - Between holes: 20 [0.788] mm.
 - Between holes: 10.5 [0.414] mm.
 - Between holes: 9.5 [0.374] mm.
 - Between holes: 4-φ 1.7 [0.067] THRU holes.
 - Between holes: 0.3 [0.012] mm.
 - Between holes: 1.45 [0.057] mm.
 - Between holes: 1.5 [0.059] mm.
 - Between holes: 4.3 [0.169] mm.
 - Between holes: 1.5 [0.059] mm.
 - Between holes: 1.5 [0.059] mm.
 - Between holes: 4.3 [0.169] mm.
 - Between holes: 2 x φ 0.3 [0.012] mm holes.

USE AS A DROP-IN

EXPLODED VIEW

Heat Sink required during operation (Sold Separately)

ATTENTION
STATIC SENSITIVE DEVICES
HANDLE ONLY AT
STATIC SAFE WORK STATIONS

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Ordering Information

Part No.	Description
R29G36GSD-H	Hermetically Sealed 29-36GHz Low Noise Amplifier

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