Ultra Wide Band Low Noise Amplifier
0.1GHz~20GHz

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

Features

- Gain: 19dB Typical
- Noise Figure: 3dB Typical
- P1dB Output Power: 21dBm Typical
- Supply Voltage: +8V
- Drop in Package

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Test and Measurement

Electrical Specifications, TA = +25°C, Vcc = +8V

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.1		20	GHz
Gain		19		dB
Gain Flatness		±1.5		dB
Gain Variation Over Temperature (-40 ~ +85)		±1.0		dB
Noise Figure		3		dB
Input VSWR			1.5	: 1
Output VSWR			1.5	: 1
Output 1dB Compression Point (P1dB)	21			dBm
Saturated Output Power (Psat)		23		dBm
Output Third Order Intercept (IP3)		33		dBm
Supply Current (Vcc=+8V)			200	mA
Isolation S12		-30		dB
Impedance	50			Ohms
Input / Output Connectors	SMA -Female			
Finish	Gold Plated			
Material	Kovar			
Package Sealing	Epoxy Sealed (Standard)			

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Absolute Maximum Ratings

Operating Voltage	+9V
RF Input Power	20dBm

Biasing Up Procedure

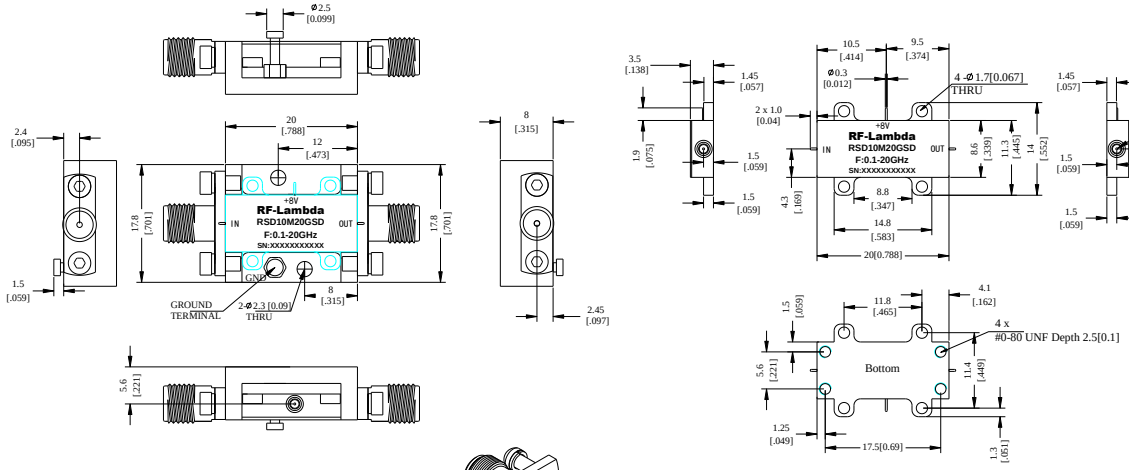
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +8V biasing
Power OFF Procedure	
Step 1	Turn off +8V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications and Test Standards

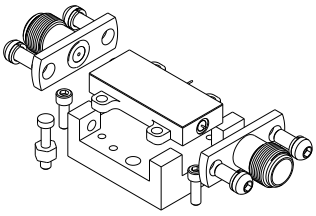
Parameter	Description
Operational Temperature	-40℃~+85℃ (Case Temperature)
Storage Temperature	-50℃~+105℃
Thermal Shock	-40℃ → +85℃ (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85℃ for 72 Hours
Shock	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)

Outline Drawing:

All Dimensions in mm [inches]



USE AS A DROP-IN



EXPLODED VIEW

Heat Sink required during operation (Sold Separately)

Ordering Information

Part No.	Description
RSD10M20GSD	0.1-20GHz Ultra Wide Band Low Noise Amplifier

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