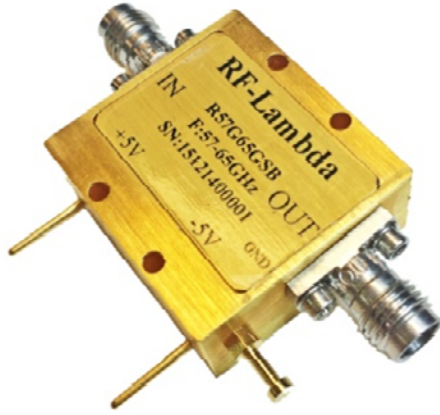




### Low Noise Amplifier 50-69GHz



#### Feature

- Gain: 22 dB Typical
- Noise Figure: 5dB Typical
- P1dB Output Power: +15dBm full band
- Supply Voltage: +5V & -5V@ 152 mA
- 50 Ohm Matched Input / Output
- Size: 1.42" x 1.86" x 0.48"

#### Typical Applications

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

Low Noise Amplifier 50-69GHz

#### Electrical Specifications, TA = +25 ° C, With Vd = +5V, Vg=-5V, 50 Ohm System

Parameter	Min.	Typ.	Max.	Units
Frequency Range	50		69	GHz
Gain	21	22		dB
Gain Flatness		±1.5		dB
Gain Variation Over Temperature(-45 ~ +85)		±2.5		dB
Noise Figure		5	6	dB
Input Return Loss		10		dB
Output Return Loss		10		dB
Output Power for 1 dB Compression (P1dB)	13	14		dBm
Saturated Output Power (Psat)		17		dBm
Output Third Order Intercept (IP3)		26		dBm
Supply Current (Idd) (Vcc=+5V)		152	160	mA
Isolation S12	40	45		dB
Input Max Power(no damage)			-5	dBm
Weight		65		g
Impedance		50		Ohms
Input /Output Connector	1.85mm-Female			
Finishing	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 Seal (Option with extra charge)			



# RF-LAMBDA

The power beyond expectations

## R50G69GSA

### Absolute Maximum Ratings

Operating Voltage (Vd)	< +5.5V
Operating Voltage (Vg)	< -5V
RF Input Power (RFIN)(Vcc= +5V)	-5 dBm
Storage Temperature	-55 to +125 °C
Operating Temperature	-45 to +85 °C

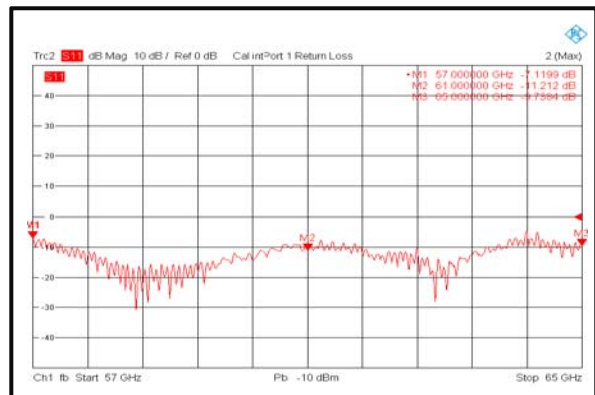
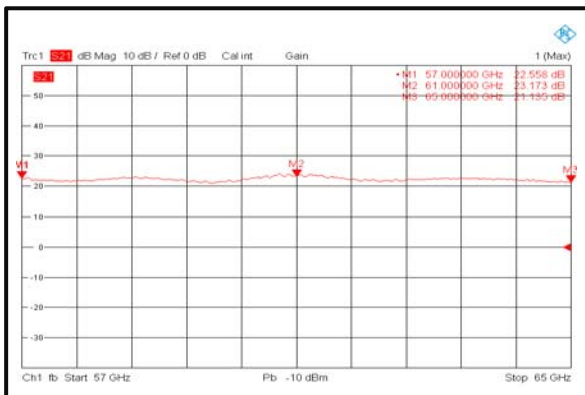
### Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Turn On Vg (-5V)
Step 3	Turn On Vd (+5V)
Power OFF Procedure	
Step 1	Turn Off Vd (+5V)
Step 2	Turn Off Vg (-5V)
Step 3	Remove Ground.

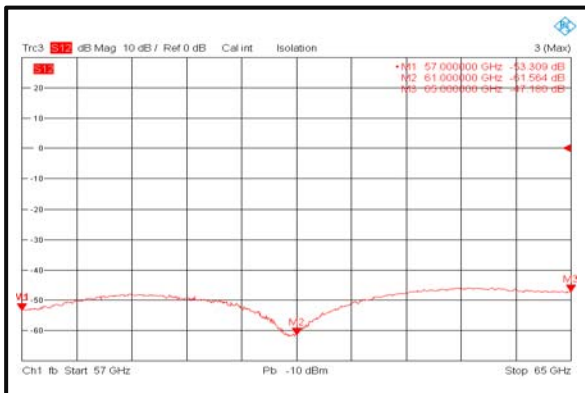
### Environment specifications

Operational Temperature (C°)	-45 to +85
Storage Temperature (C°)	-55 to +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) ( Optional )
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°c
Shock	20G for 11msc half sin wave,3 axis both directions

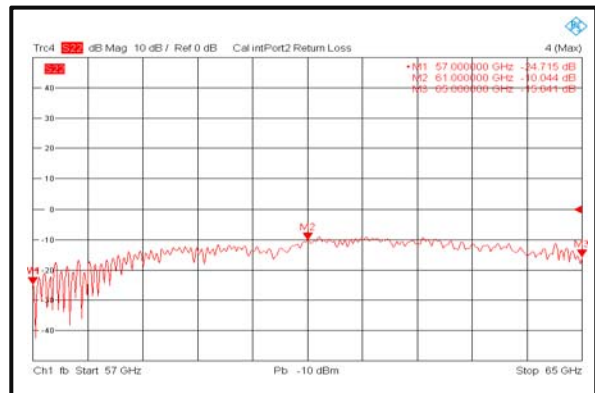
### performance plots



### Output VSWR



### Isolation



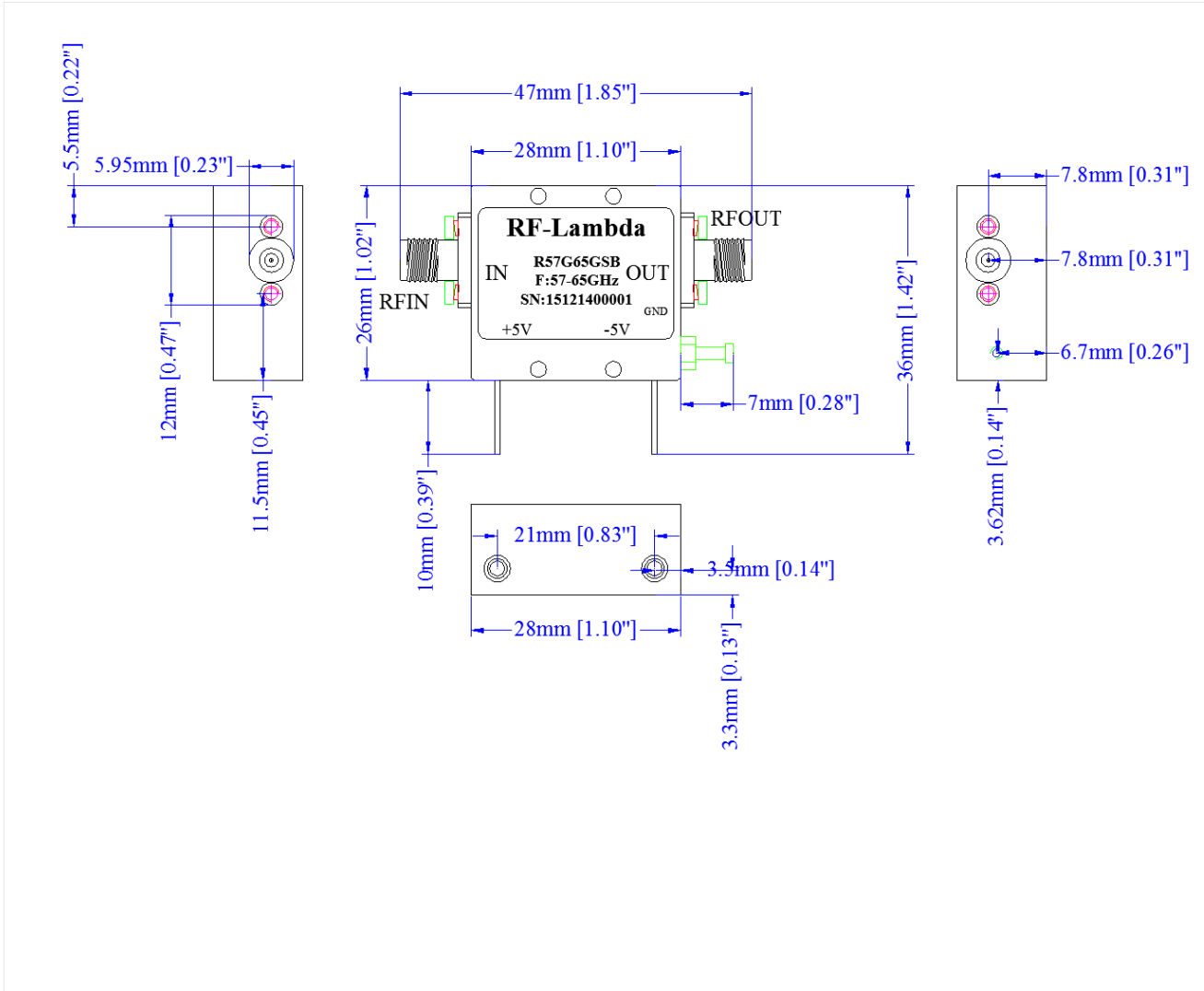
Low Noise Amplifier 50-69GHz



### Outline Drawing:

All Dimensions in mm (inches)

Heat Sink required during operation



Low Noise Amplifier 50-69GHz

### Ordering Information

Part No	ECCN	Description
R50G69GSA	3A001	57-65GHz LNA Amplifier

### Important Notice

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