

## FEATURES:

- 1.2 GHz ~ 9.0 GHz;
- 24.0 dB Gain;
- 3.0 dB Noise Figure;
- 17.5 dBm P<sub>1dB</sub>;
- 29.0 dBm IP<sub>3</sub>;
- Unconditionally Stable;
- RoHS Compliant.

## APPLICATIONS:

- Radar;
- Receivers;
- ECM System;
- WBA Systems;
- Point to Point;
- Test & Measurement;
- Wide Band PA Driver.



# LNA12009000A – 1.2 GHz ~ 9.0 GHz WIDE BAND AMPLIFIER

## ELECTRICAL SPECIFICATIONS @ 21 °C

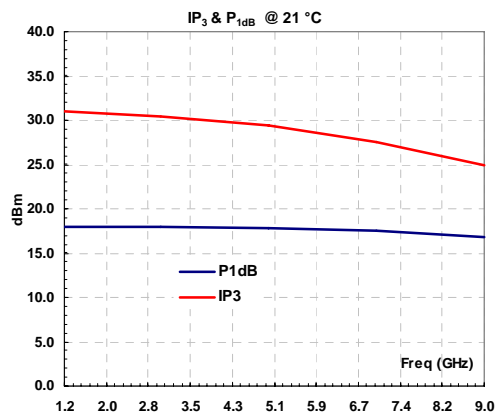
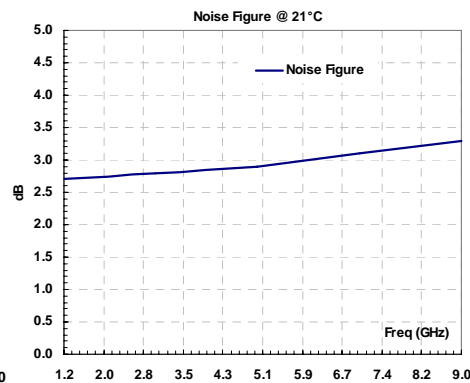
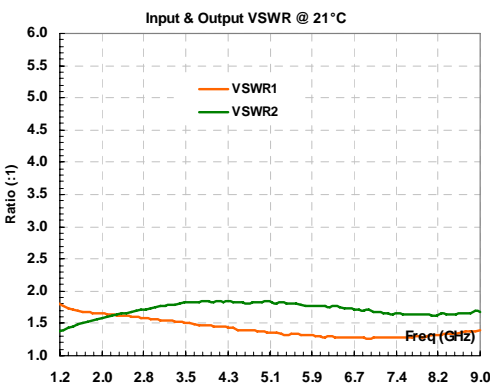
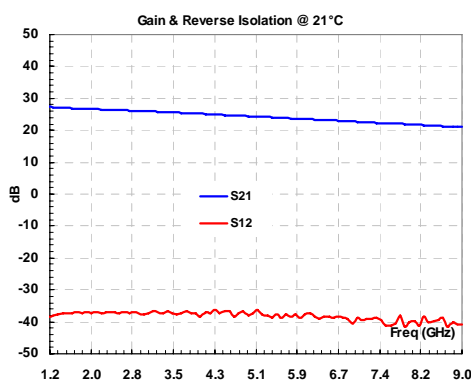
| Symbol            | Parameters/Conditions                  | Unit  | Min | Typical | Max    |
|-------------------|--|-------|-----|---------|--------|
| I <sub>d</sub>    | Device Current                         | mA    |     | 110     |        |
| G                 | Gain                                   | dB    | 21  | 24      |        |
| ΔG                | Gain Flatness                          | dB    |     | ±3.0    |        |
| Z <sub>0</sub>    | Impedance                              | Ohm   |     | 50      |        |
| OIP3              | Output 3 <sup>rd</sup> Order Intercept | dBm   |     | 29      |        |
| NF                | Noise Figure                           | dB    |     | 3.0     | 3.7    |
| P <sub>1dB</sub>  | Output 1dB Gain Compression            | dBm   |     | 17.5    |        |
| S <sub>12</sub>   | Reverse Isolation                      | dB    |     | 38      |        |
| V <sub>dd</sub>   | DC Power Supply Voltage                | V     | 4.5 | 5.0     | 6.0    |
| VSWR <sub>1</sub> | VSWR – Input                           | Ratio |     | 1.43:1  | 1.80:1 |
| VSWR <sub>2</sub> | VSWR – Output                          | Ratio |     | 1.70:1  | 1.85:1 |

## ABSOLUTE MAXIMUM RATINGS<sup>1</sup>

| Parameters/Conditions    | Unit | Maximum    |
|--------------------------|------|------------|
| Channel Temperature      | °C   | +150       |
| Drain Current            | mA   | 150        |
| RF Input Power           | dBm  | +20        |
| RF Output Supply Voltage | V    | 8          |
| Thermal Resistance       | °C/W | 140        |
| Total Power Dissipation  | mW   | 750        |
| Operating Temperature    | °C   | -54 ~ +85  |
| Storage Temperature      | °C   | -65 ~ +150 |

[1] Operation beyond these limits may cause permanent damage.

## ELECTRICAL PERFORMANCE



## ORDERING INFORMATION

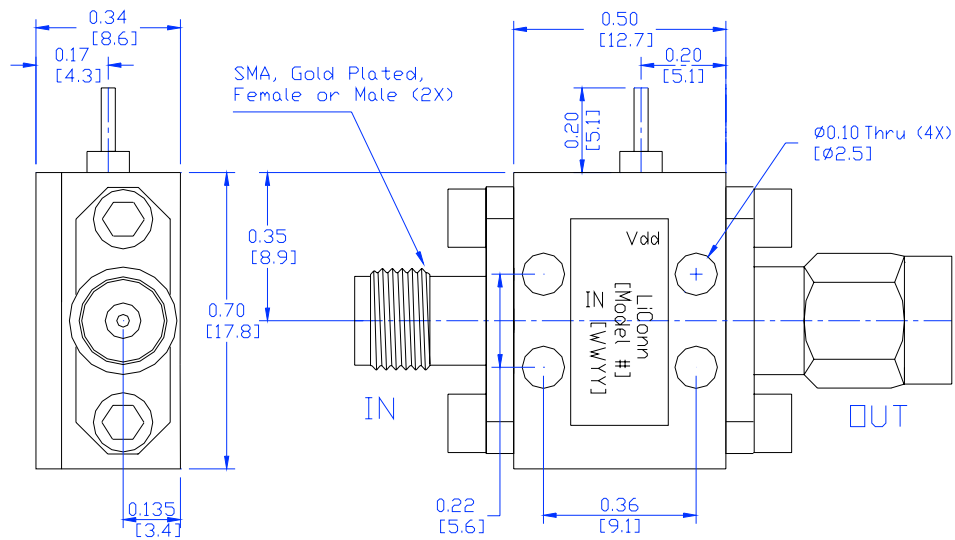
| Model Number    | Input      | Output     |
|-----------------|------------|------------|
| LNA12009000A-1  | SMA Female | SMA Female |
| LNA12009000A-2  | SMA Female | SMA Male   |
| LNA12009000A-3  | SMA Male   | SMA Male   |
| LNA12009000A-4  | SMA Male   | SMA Female |
| LNA12009000AG-1 | SMA Female | SMA Female |
| LNA12009000AG-2 | SMA Female | SMA Male   |
| LNA12009000AG-3 | SMA Male   | SMA Male   |
| LNA12009000AG-4 | SMA Male   | SMA Female |

## Mechanical Outline

Unit: Inch/mm

Material: Brass  
Finish: Gold Plating  
Tolerance is Non-Accumulative

### LNA12009000A-:



### LNA12009000AG- (with Ground Turret on Output SMA):

