

## FEATURES:

- 20.0 MHz– 6.0 GHz;
- 34 dB Gain;
- 2 W Output Power;
- Single DC Power;
- RoHS Compliant;
- Designed to meet MIL-STD-202g;
- Made In USA.

## APPLICATIONS:

- Ultra Broadband Amplifier;
- Fiber Optic Driver;
- Test Instrument;
- EMC Amplifier Driver;
- LTE Measurement.

# LPA00206000M, 20.0 MHz ~ 6.0 GHz WIDE BAND 3W AMPLIFIER

## ELECTRICAL SPECIFICATIONS @ 21 °C

| Symbol            | Parameters/Conditions  | Unit  | Min | Typical   | Max |
|-------------------|--|-------|-----|-----------|-----|
| G                 | Small Signal Gain  | dB    | 31  | 35        |     |
| $\Delta G$        | Gain Variation   | dB    |     | $\pm 1.5$ |     |
| VSWR <sub>1</sub> | VSWR – Input   | Ratio |     | 1.5:1     | 2:1 |
| VSWR <sub>2</sub> | VSWR – Output  | Ratio |     | 1.5:1     | 2:1 |
| S <sub>12</sub>   | Reverse Isolation  | dB    | 40  |           |     |
| NF                | Noise Figure   | dB    |     | 3.0       | 4.5 |
| P <sub>sat</sub>  | Output Saturate Power  | W     |     | 3         |     |
| OIP <sub>3</sub>  | Output 3 <sup>rd</sup> order Interception Point (2 tone, P <sub>out</sub> +27 dBm each, 1MHz Separation) | dBm   |     | 45        |     |
| I <sub>dd</sub>   | Quiescent Current (V <sub>dd</sub> =+28V)  | mA    |     | 250       | 650 |
| V <sub>dd</sub>   | DC Power Supply Voltage  | V     | 26  | 28        | 30  |
| Eff               | Efficiency @ 2W P <sub>out</sub>   | %     |     | 20        |     |
| Z <sub>0</sub>    | Impedance  | Ohm   |     | 50        |     |

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

| Parameters/Conditions | Unit | Maximum    |
|-----------------------|------|------------|
| CW RF Input Power     | dBm  | +15        |
| DC Supply Voltage     | V    | -0.5, 30   |
| Drain Current         | mA   | 700        |
| Thermal Resistance    | °C/W | 4.5        |
| Junction Temperature  | °C   | 180        |
| Operating Temperature | °C   | -40 ~ +85  |
| Storage Temperature   | °C   | -55 ~ +125 |

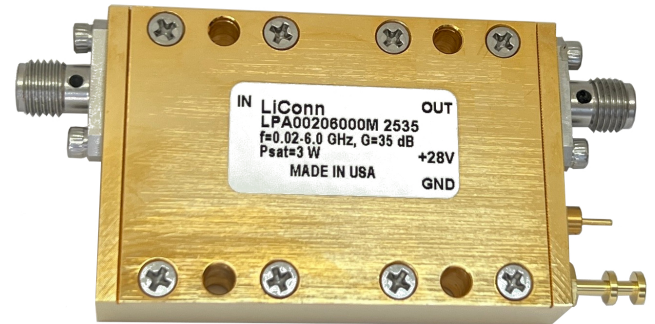
[1] Operation beyond these limits may cause permanent damage.

## ORDERING INFORMATION:

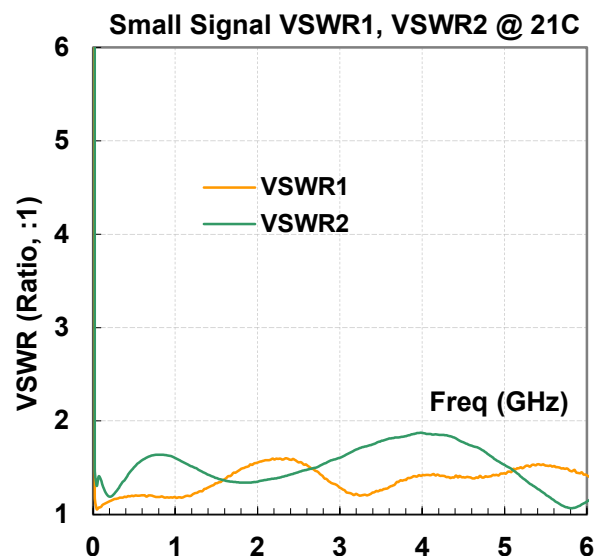
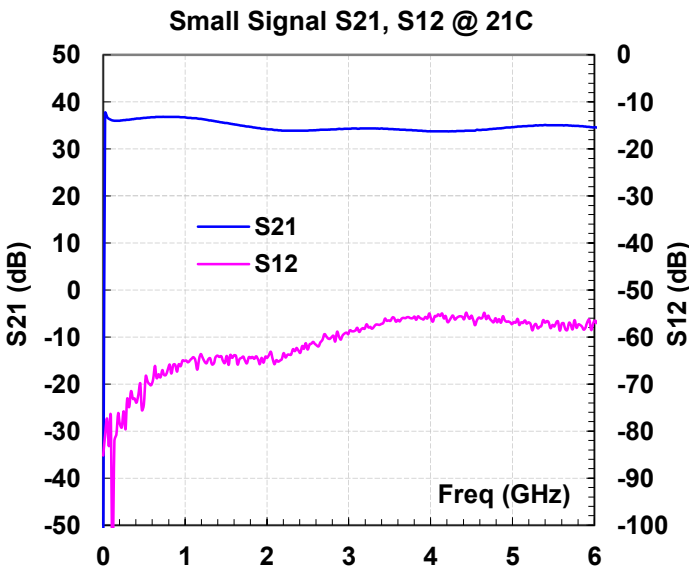
LPA00206000M

LPA00206000M-H (with Heat Sink assembled)

**Additional Heat Sink Required**



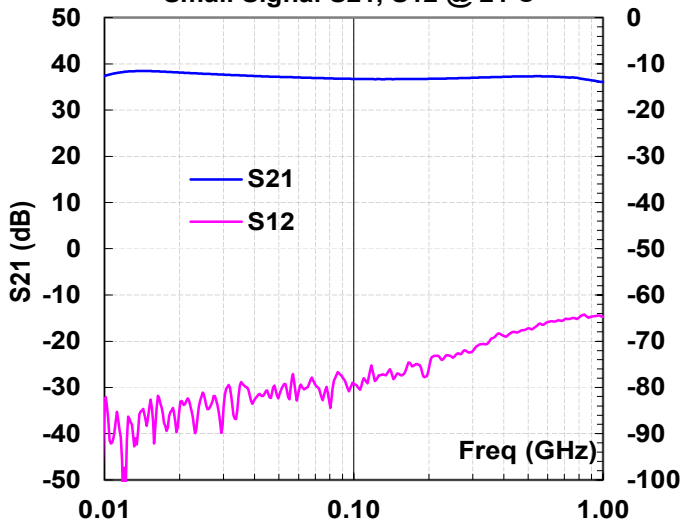
## ELECTRICAL PERFORMANCE



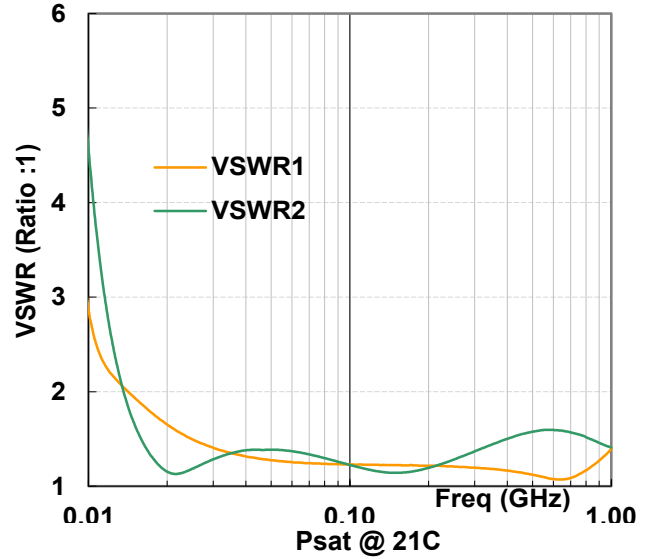
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## ELECTRICAL PERFORMANCE

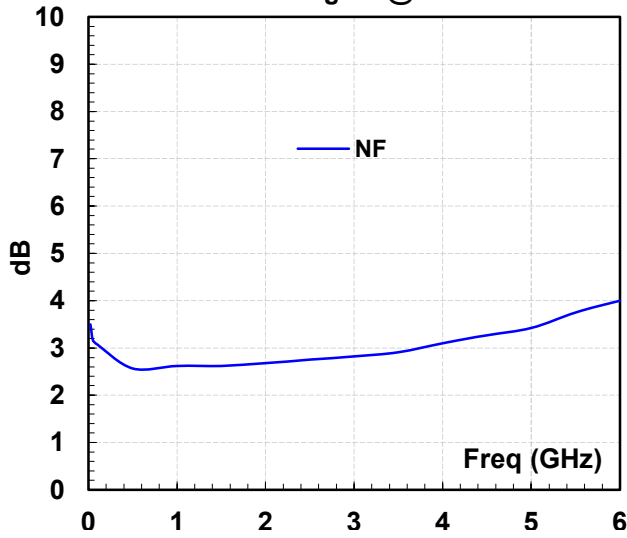
Small Signal S21, S12 @ 21 C



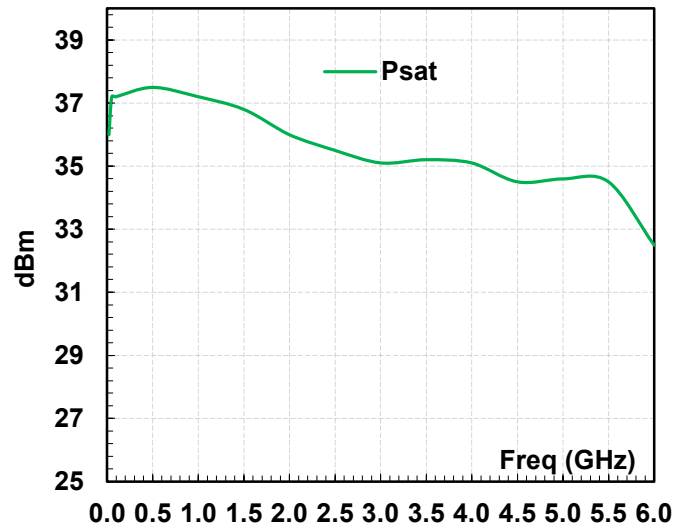
Small Signal VSWR1, VSWR2 @ 21C



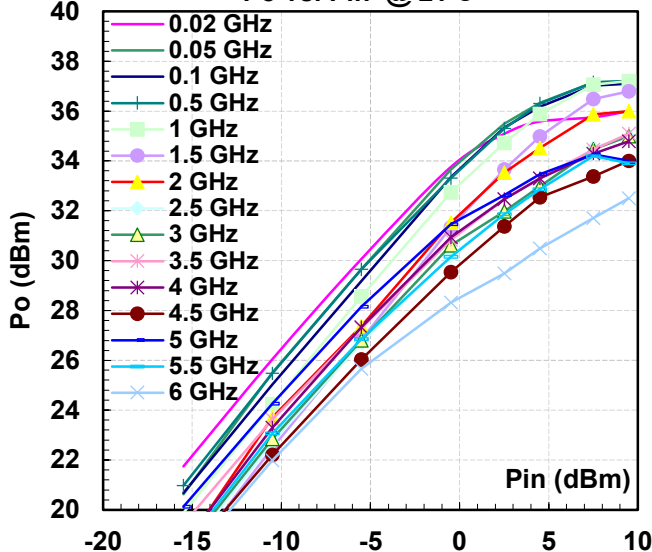
Noise Figure @ 21C



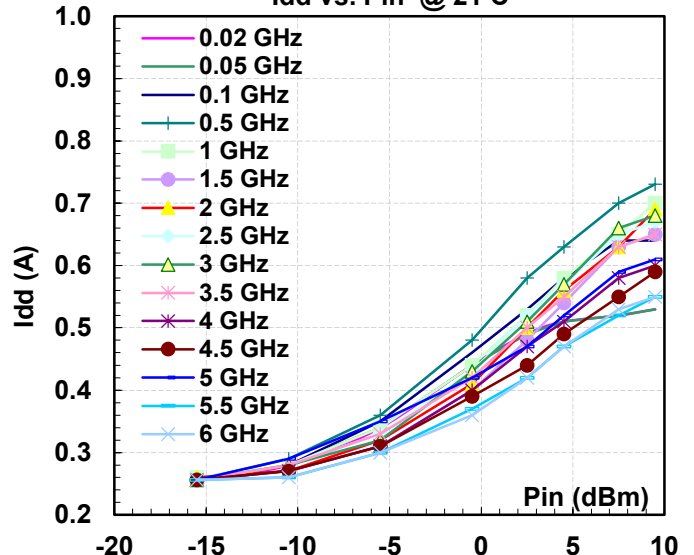
Psat @ 21C



Po vs. Pin @ 21 C

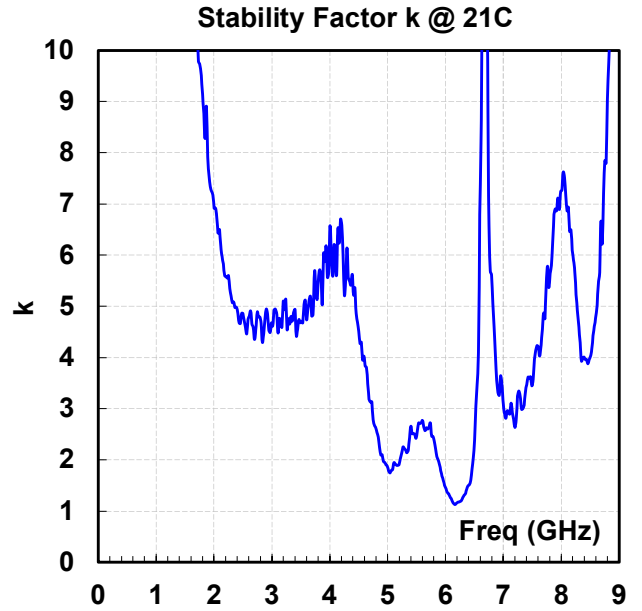
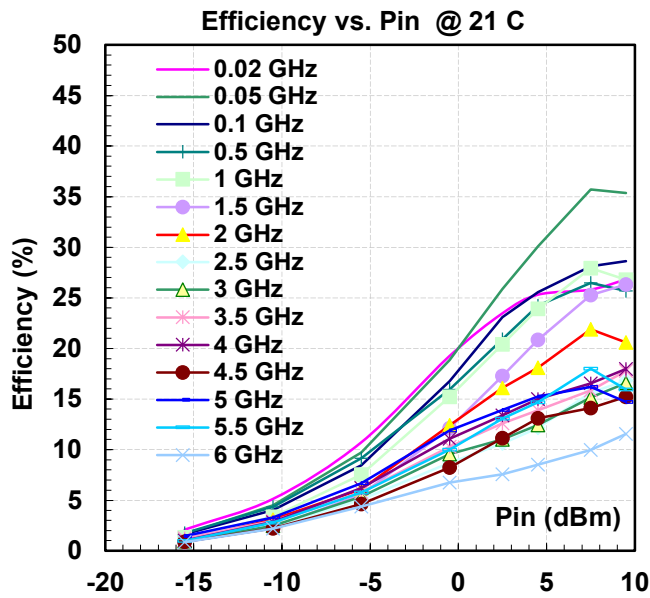


Idd vs. Pin @ 21 C



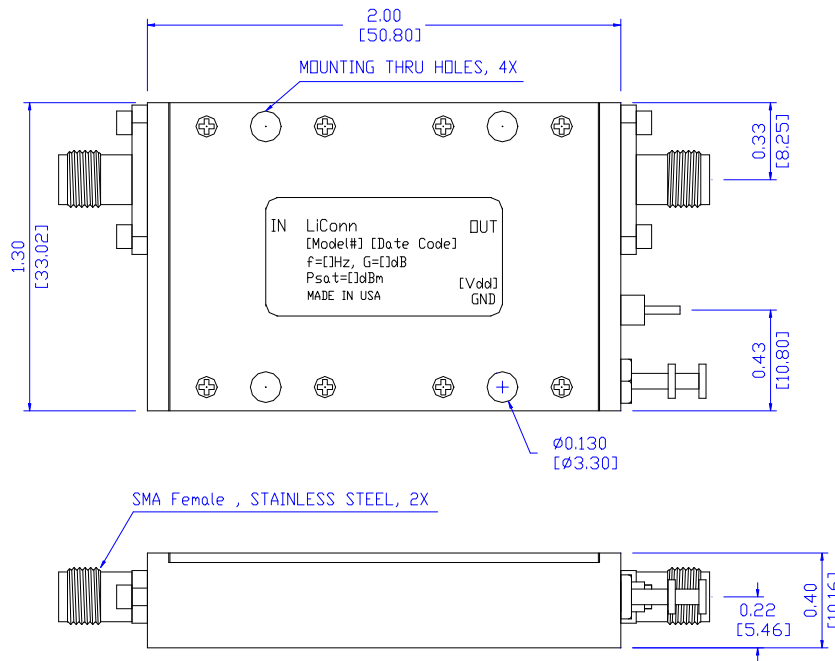
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## ELECTRICAL PERFORMANCE:



## MECHANICAL OUTLINE:

### LPA00206000M



Unit: Inch  
[mm]

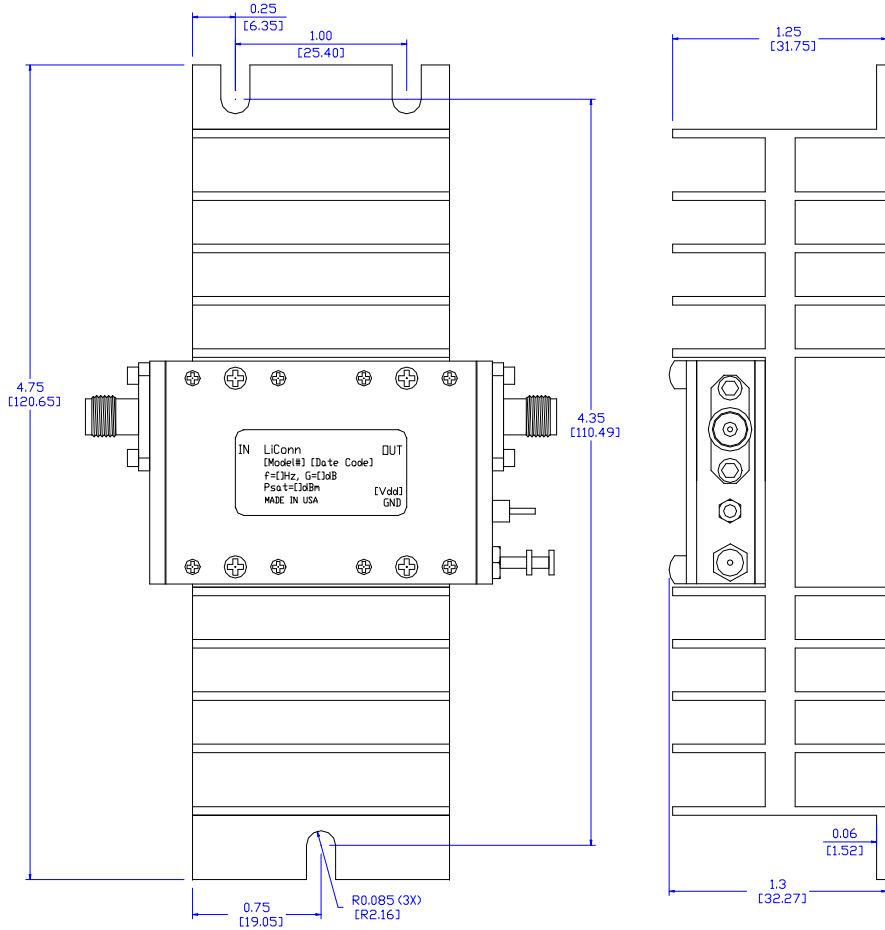
Tolerance:  
X.XX: ± 0.01"  
X.XXX: ± 0.005"

Housing:  
Base Material: Brass  
Finish: Gold Plating

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## MECHANICAL OUTLINE:

### LPA00206000M-H



Unit: Inch  
[mm]

Tolerance: X.XX:  $\pm 0.01$ "  
X.XXX:  $\pm 0.005$ "

Housing:  
Base Material: Brass  
Finish: Gold Plating

Heat Sink:  
Base Material: Aluminum  
Finish: Black Anodized