

## LOW NOISE AMPLIFIER, 1-18GHz, Gain 35dB

Model: LF-LA3525-18G

### FEATURES:

- Ultra Wide Band: 1-18GHz
- Gain: 35dB Min
- Noise Figure: 2.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### ELECTRICAL SPECIFICATIONS:

| Parameter         | Min  | Typ  | Max | Units |
|-------------------|------|------|-----|-------|
| Frequency range   | 1-18 |      |     | GHz   |
| Gain              | 35   |      |     | dB    |
| Gain Flatness     |      | ±2.0 |     | dB    |
| Noise Figure      |      | 2.5  | 3.0 | dB    |
| Output P1dB       | 15   | 19   |     | dBm   |
| Output IP3        |      | 25   |     | dBm   |
| Input VSWR        |      | 2.0  | 2.2 | :1    |
| Output VSWR       |      | 2.0  | 2.2 | :1    |
| DC Voltage        | +8   | +12  | +15 | V DC  |
| DC Supply Current |      | 160  |     | mA    |
| Impedance         | 50   |      |     | Ohms  |

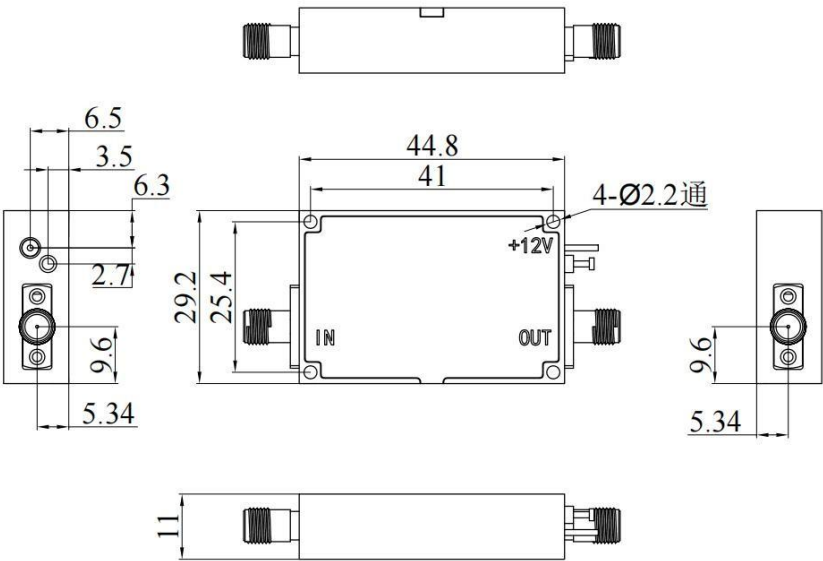
### MECHANICAL SPECIFICATIONS:

| Parameter               | Value                 | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female |       |
| DC Bias                 | Solder Pin            |       |
| Size                    | 44.8*29.2*11          | mm    |
| Weight                  | 55                    | g     |

### ABSOLUTE MAXIMUM RATINGS:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +15V                 |
| RF Input Power        | 10 dBm               |
| ESD sensitivity (HBm) | Class 0, passed 150V |

OUTLINE DRAWING: mm (inches). Heat Sink required during operation

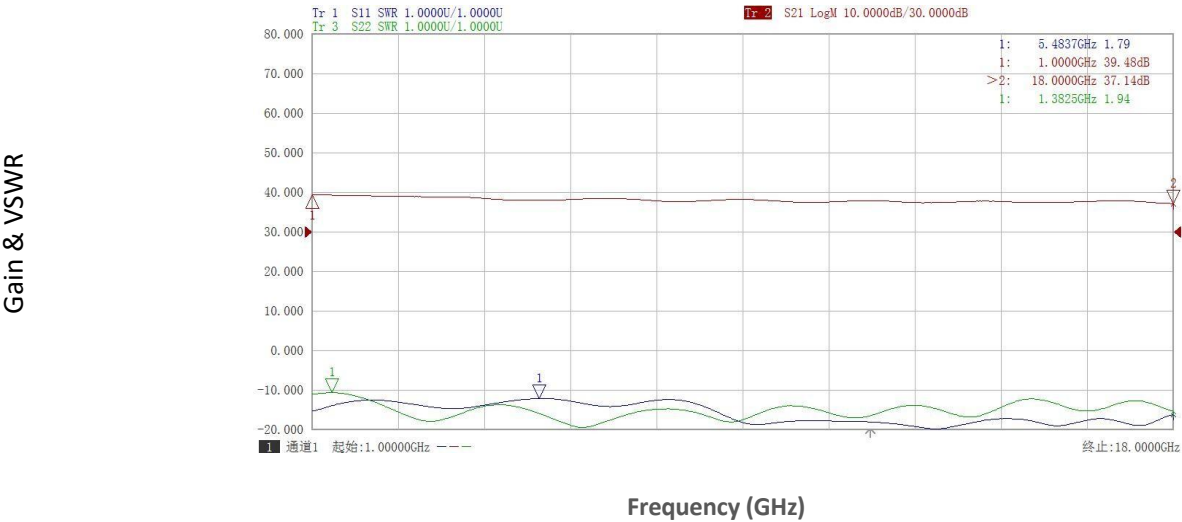


ENVIRONMENTAL CONDITIONS:

| Parameter                       | Min                                                 | Typ | Max  | Units |
|---------------------------------|-----------------------------------------------------|-----|------|-------|
| Operating Temperature           | -44                                                 |     | +85  | °C    |
| Non-operating Temperature       | -55                                                 |     | +125 | °C    |
| Relative humidity               |                                                     | 95  |      | %     |
| Altitude                        | 50,000                                              |     |      | feet  |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |      |       |
| Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |     |      |       |

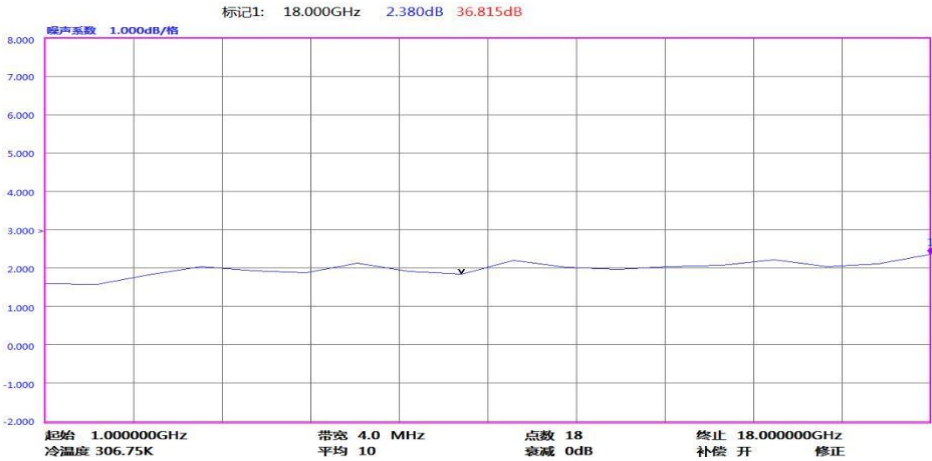
TYPICAL PERFORMANCE DATA:

Gain & VSWR vs Frequency



Noise Figure vs Frequency

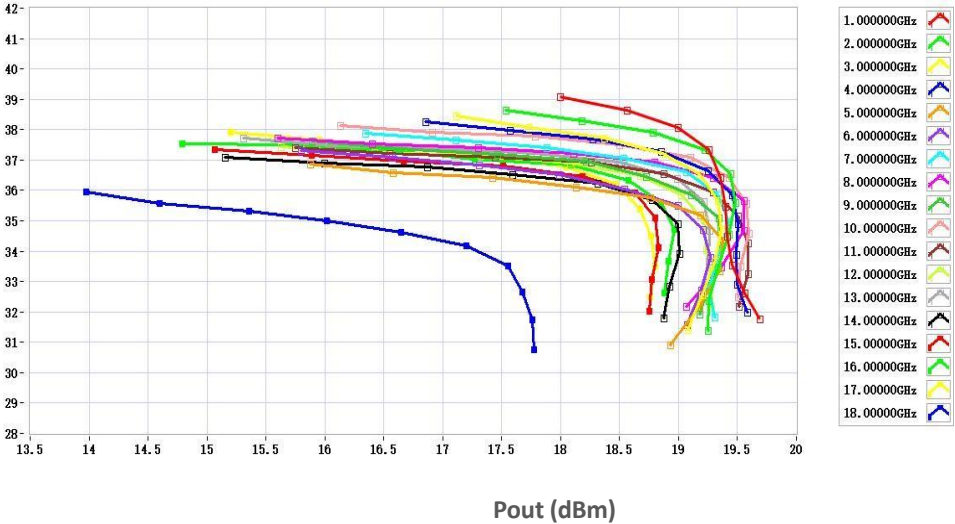
Noise Figure (dB)



Frequency (GHz)

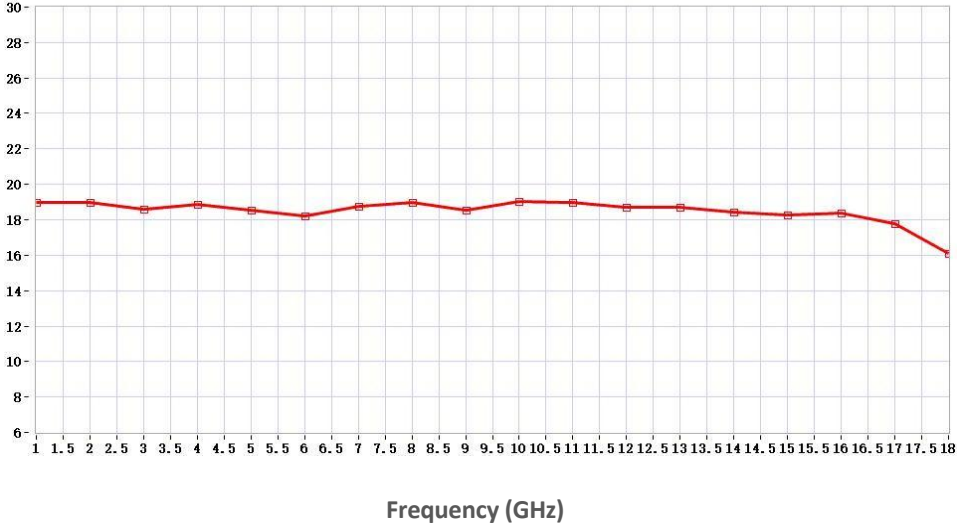
Gain vs Output Power

Gain (dB)

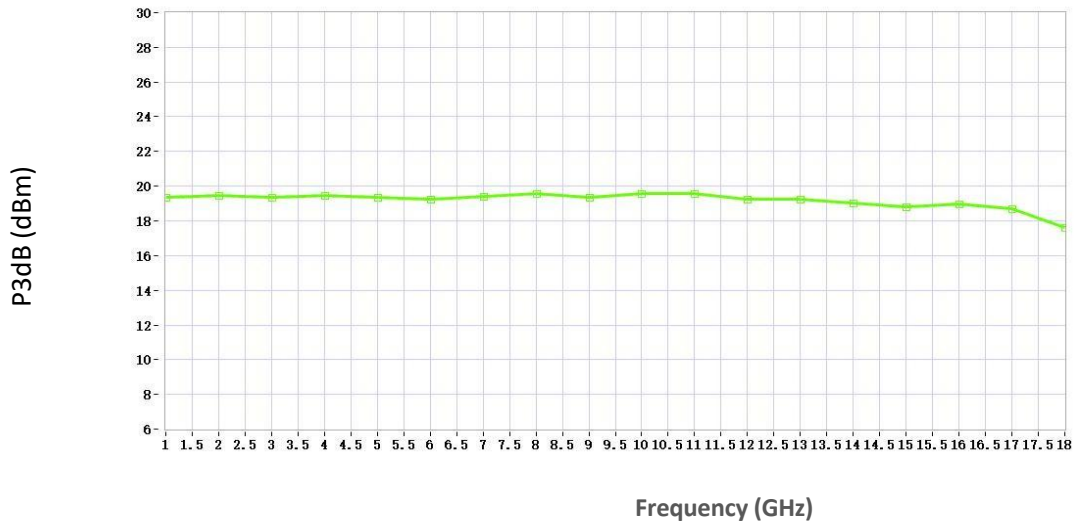


P1dB vs Frequency

P1dB (dBm)



**P3dB vs Frequency**



**ORDERING INFORMATION:**

| Part Number      | Description                                                                                       |
|------------------|---------------------------------------------------------------------------------------------------|
| LF-LA3525-18G    | Low Noise Amplifier, 1-18GHz, Noise Figure:2.5dB, Gain:35 dB, P1dB:15dBm, 5V DC, Without Heatsink |
| LF-LA3525-18G-HS | Low Noise Amplifier, 1-18GHz, Noise Figure:2.5dB, Gain:35 dB, P1dB:15dBm, 5V DC, With Heatsink    |