

**Model: TLLA2G12G-30-12**
**Low Noise Amplifier**
**2-12GHz, NF:1.2 dB, Gain:30 dB, P1dB:15dBm**
**Feature:**

- Ultra Wide Band: 2-12GHz
- Gain: 30 Min
- Noise Figure: 1.2dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

**电气特性 Electrical:**

| 参数Parameter            | Min. | Typ. | Max. | 单位Units |
|------------------------|------|------|------|---------|
| 频率范围 Frequency range   | 2-12 |      |      | GHz     |
| 增益 Gain                | 30   |      |      | dB      |
| 增益平坦度 Gain Flatness    |      | ±1.0 | ±2.0 | dB      |
| 噪声系数 Noise Figure      |      | 1.2  | 1.8  | dB      |
| 线性输出功率P1dB             | 13   | 15   |      | dBm     |
| 三阶交调 IP3               |      | 25   |      | dBm     |
| 输入驻波 Input VSWR        |      | 1.5  | 2.0  | :1      |
| 输出驻波 Output VSWR       |      | 1.8  | 2.0  | :1      |
| 直流电压 DC Voltage        |      | +12  |      | V DC    |
| 直流电流 DC Supply Current |      | 150  |      | mA      |
| 阻抗 Impedance           | 50   |      |      | Ohms    |

**机械特性 Mechanical :**

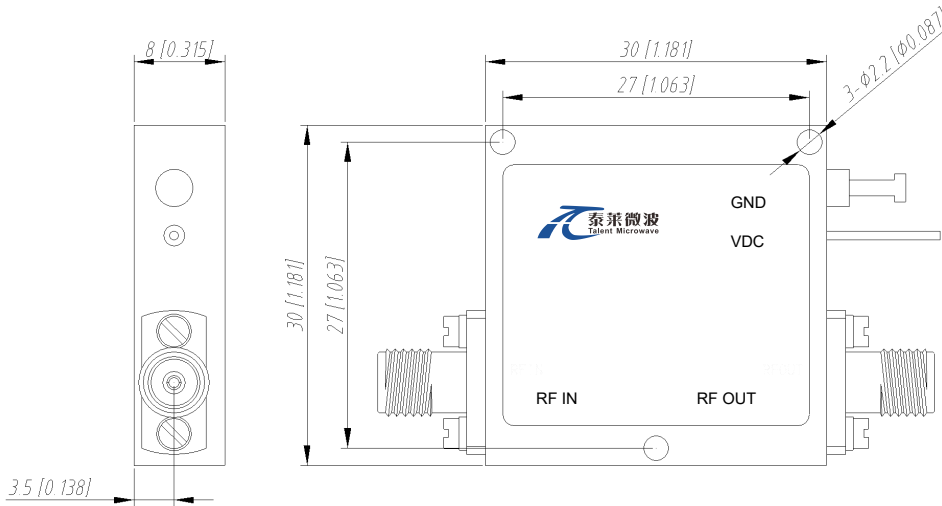
| 参数Parameter                    | 指标 Value   | 单位Units |
|--------------------------------|------------|---------|
| 输入输出接口 Input /Output Connector | SMA Female |         |
| 直流偏置 Bias                      | Solder Pin |         |
| 尺寸 Size                        | 30*30*10.2 | mm      |
| 重量 Weight                      | /          | g       |


**绝对最大值 Absolute Maximum Ratings:**

| 参数Parameter                  | 指标 Value             |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage   | TBD                  |
| 输入功率 RF INPUT POWER          | -10 dBm              |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

**外形尺寸 Outline Drawing:**

Unit: mm(inchs)



**\*\*\*Heat Sink Required During Operation**



**温度环境 Environmental Conditions:**

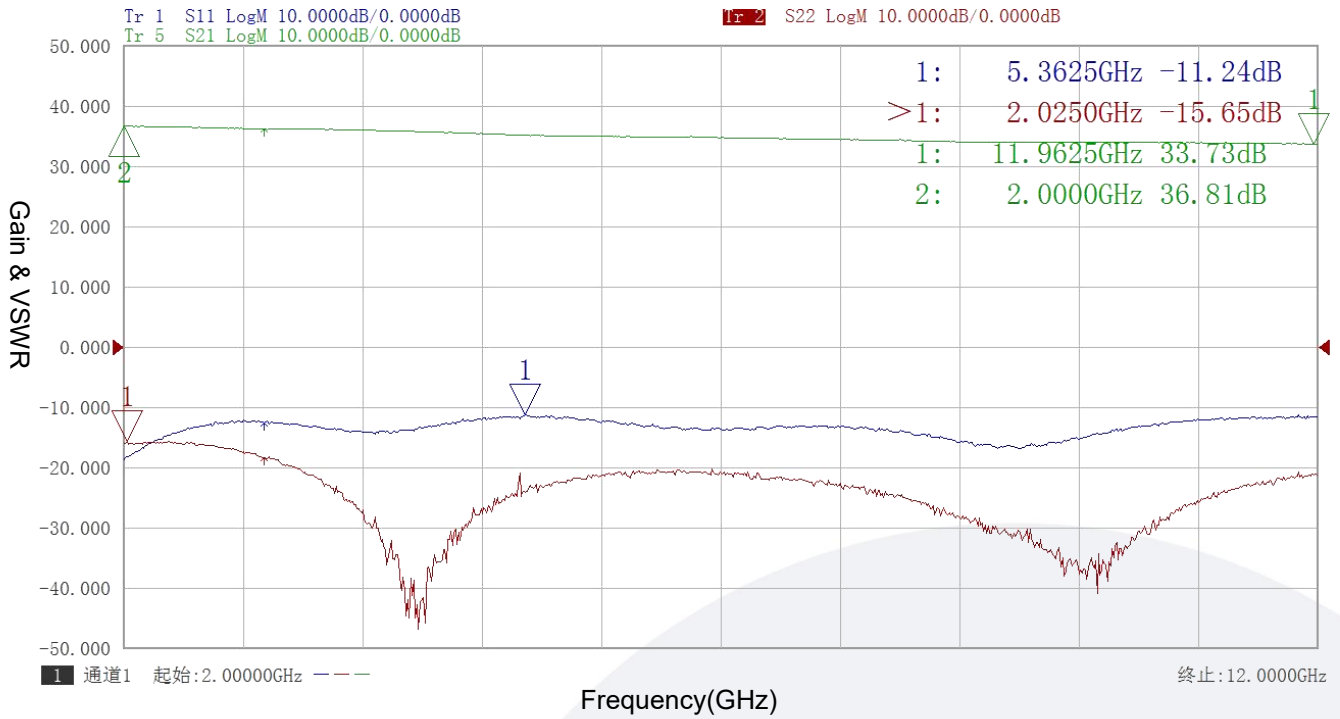
| 参数Parameter                        | Min.  | Typ. | Max. | 单位Units |
|------------------------------------|---|------|------|---------|
| 操作温度 Operating Temperature         | -45   |      | +85  | °C      |
| 存储温度 Non-operating Temperature     | -55   |      | +125 | °C      |
| 相对湿度 Relative humidity             |   | 95   |      | %       |
| 海拔 Altitude                        | 50,000  |      |      | feet    |
| 震动 Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |      |      |         |
| 冲击 Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |      |      |         |

**订货信息 Ordering Information:**

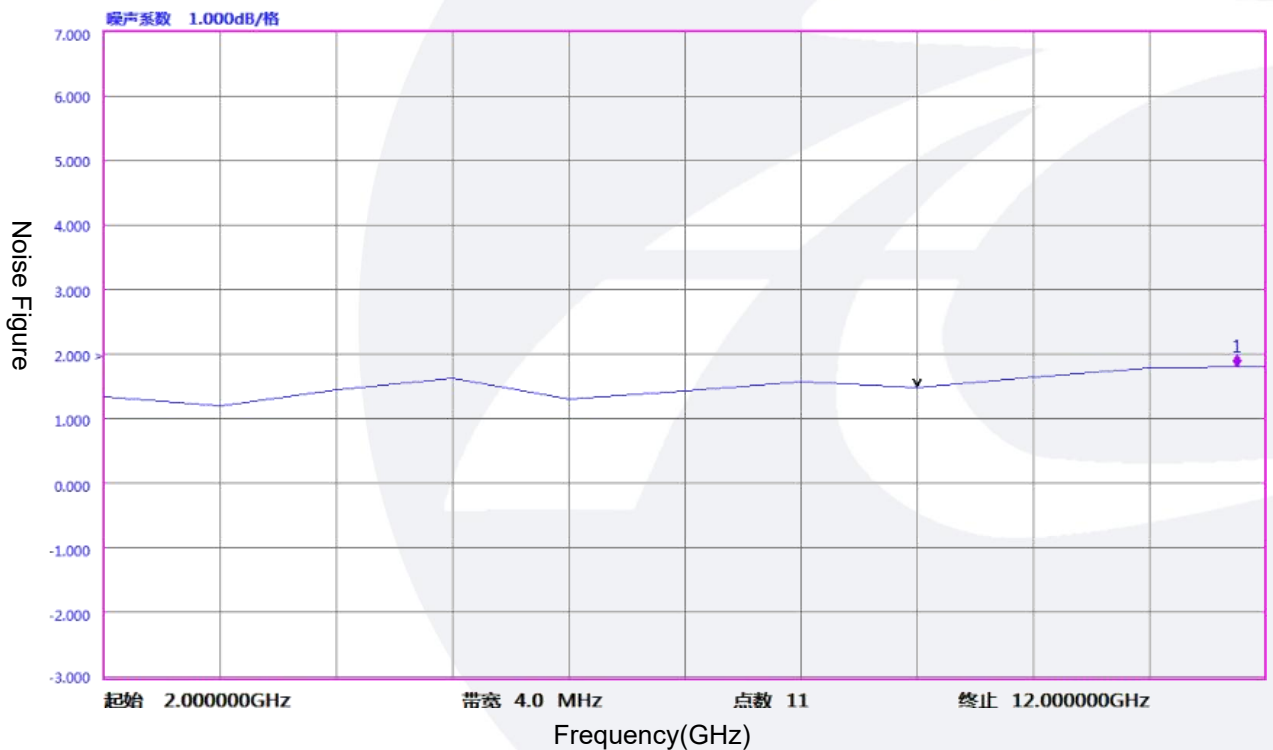
| 标准型号 Part Number   | 描述 Description   | 版本号Revision |
|--------------------|--|-------------|
| TLLA2G12G-30-12    | Low Noise Amplifier, 2-12GHz, Noise Figure:1.2 dB, Gain:30 dB,P1dB:15dBm,12V DC,Without Heatsink | Rev.1.1     |
| TLLA2G12G-30-12-HS | Low Noise Amplifier, 2-12GHz, Noise Figure:1.2 dB, Gain:30 dB,P1dB:15dBm,12V DC,With Heatsink    | Rev.1.1     |

典型曲线 Typical Performance Data:

### Gain & VSWR vs Frequency

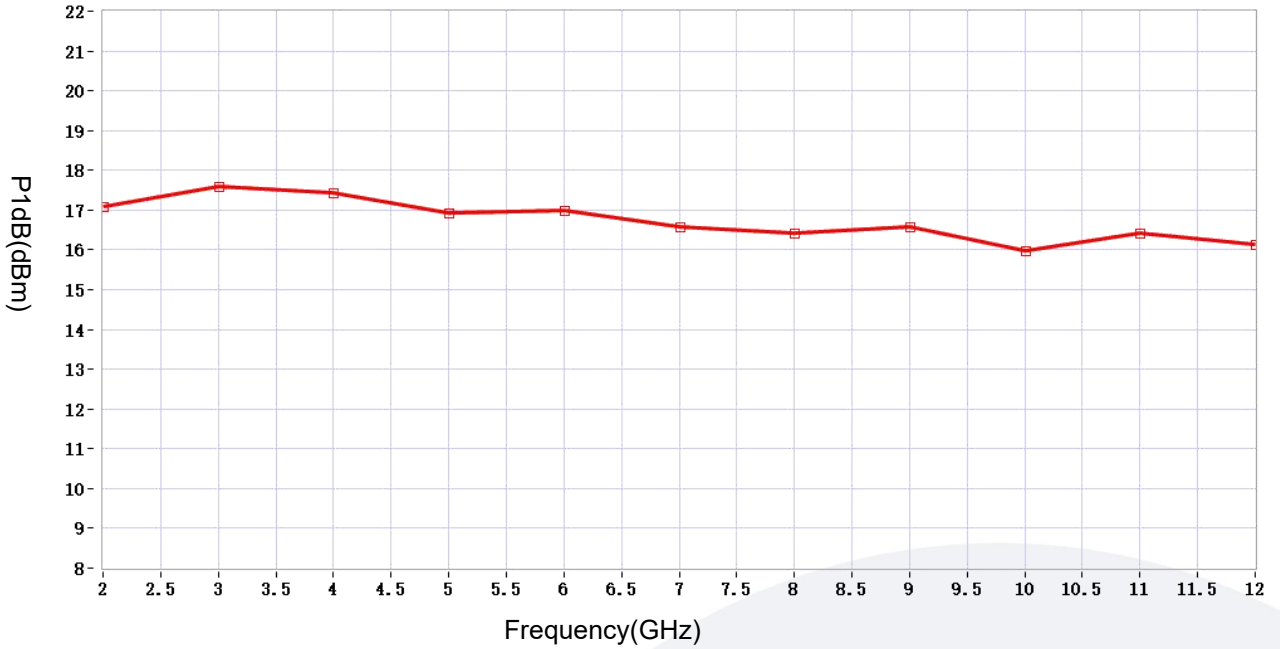


### Noise Figure vs Frequency

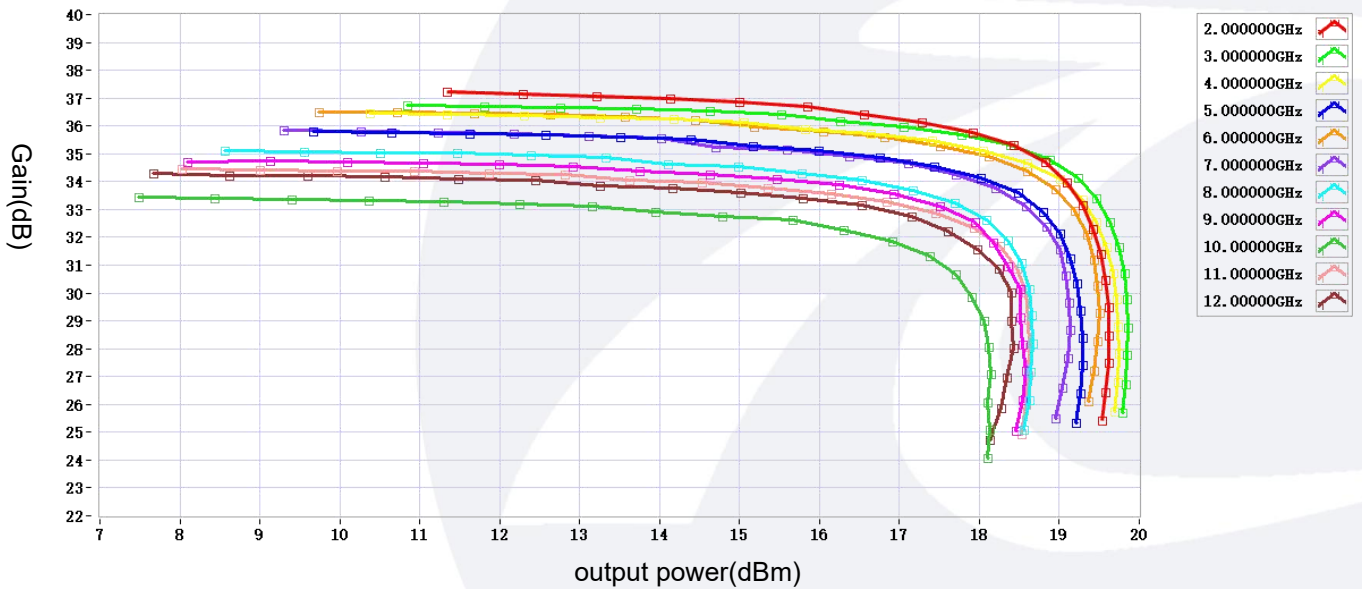


典型曲线 Typical Performance Data:

P1dB vs Frequency

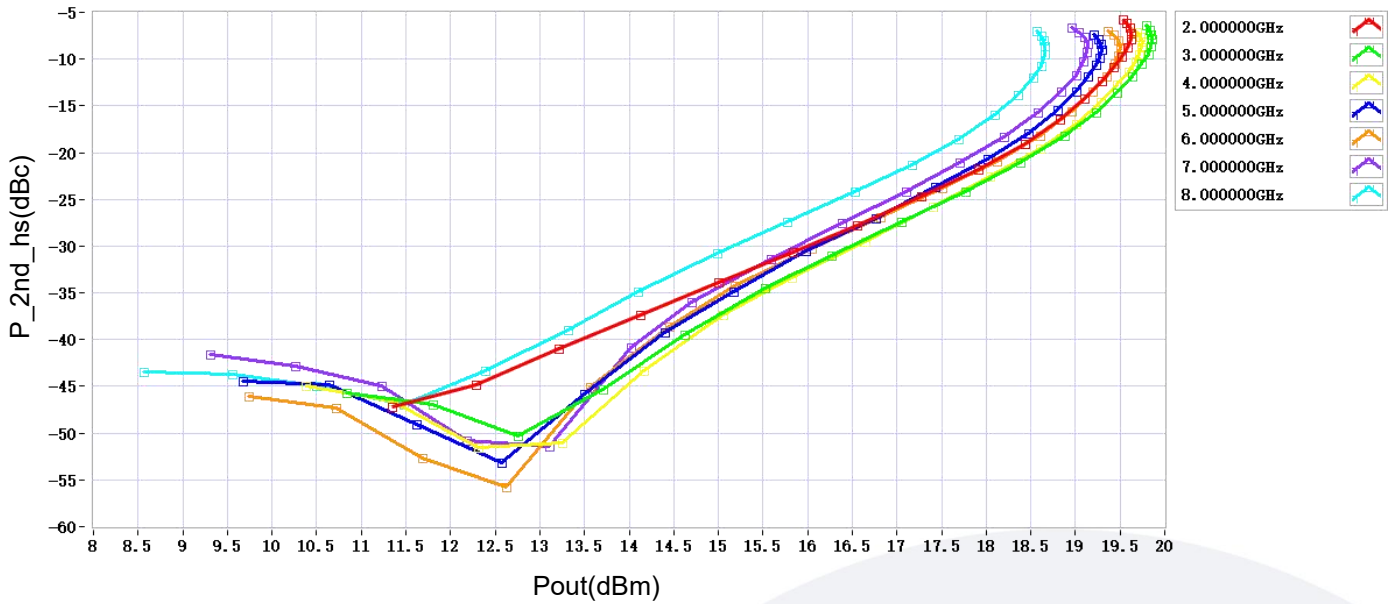


Gain vs Output Power

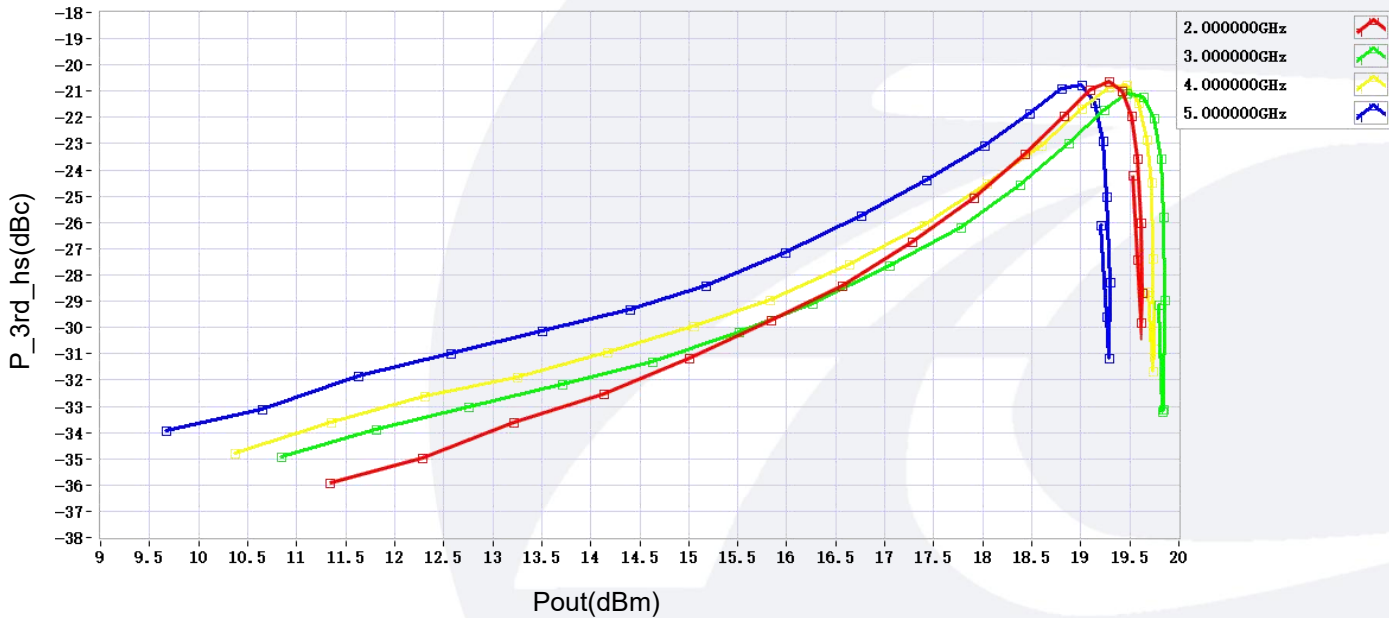


典型曲线 Typical Performance Data:

### 2nd Harmonic(dBc) vs Output Power

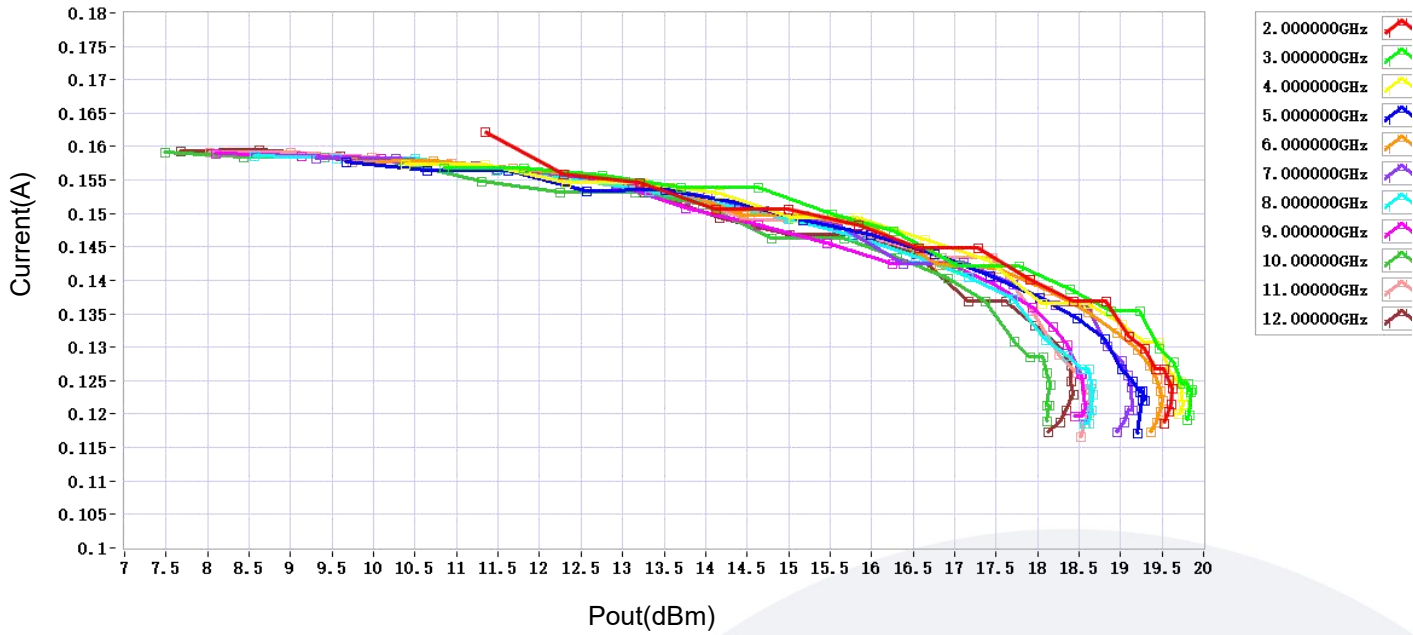


### 3rd Harmonic(dBc) vs Output Power



典型曲线 Typical Performance Data:

Current vs Output Power



PSat vs Frequency

