

Power Amplifier

1-6GHz/53dB Gain/53dBm Psat

Model: TLPA1G6G-53-53-HS

TLPA1G6G-53-53-HS is a power amplifier with a minimum power gain of 53 dB and a minimum Psat of 53 dBm across the frequency range of 1 to 6 GHz. The DC power requirement for the amplifier is +36 VDC/1900 W. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

Features:

- Frequency range: 1-6GHz
- Gain: 53dB Min
- Output Power Psat: 53 dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

电气特性 Electrical Characteristics:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|----------------------------------|-----|------|------|----------|
| 频率范围 Frequency range | 1 | | 6 | GHz |
| 功率增益 Power Gain@Pout=53dBm | 53 | | | dB |
| 增益平坦度 Gain Flatness | | ±3 | | dB |
| 增益调节范围 Gain adjust Range | | 31.5 | | dB |
| 增益调节步进 Gain adjust Step | | 0.5 | | dB |
| 饱和输出功率 Output Psat | 53 | | | dBm |
| 杂散 Spurious@Pout=53dBm | | | -60 | dBc |
| 二次谐波 2nd Harmonics@Pout=53dBm | | | -10 | dBc |
| 输入驻波 Input VSWR | | | 2 | :1 |
| 耐受负载驻波 Tolerate load VSWR | | | 3 | :1 |
| 直流电压 DC Voltage | | +36 | | V DC |
| 功耗 Power consumption | | | 1900 | W |
| 阻抗 Impedance | | 50 | | Ohms |

机械特性 Mechanical Specifications:

| 参数 Parameter | 指标 Value | 单位 Units |
|----------------------------------|---------------------|--|
| 输入/输出接口 Input /Output Connector | SMA Female/N Female | |
| 控制接口 Control Interface* | J30J-9ZKP | Pin1-6:0.5/1/2/4/8/16 Attenuation control bit Pin7~9:GND |
| 直流供电接口 DC Power Supply Connector | D-SUB5W5 | Pin1-2: +36V Pin3-5: GND |
| 尺寸 Size | 364*330*97.5 | mm |

*Active high, inactive at low level or floating state.

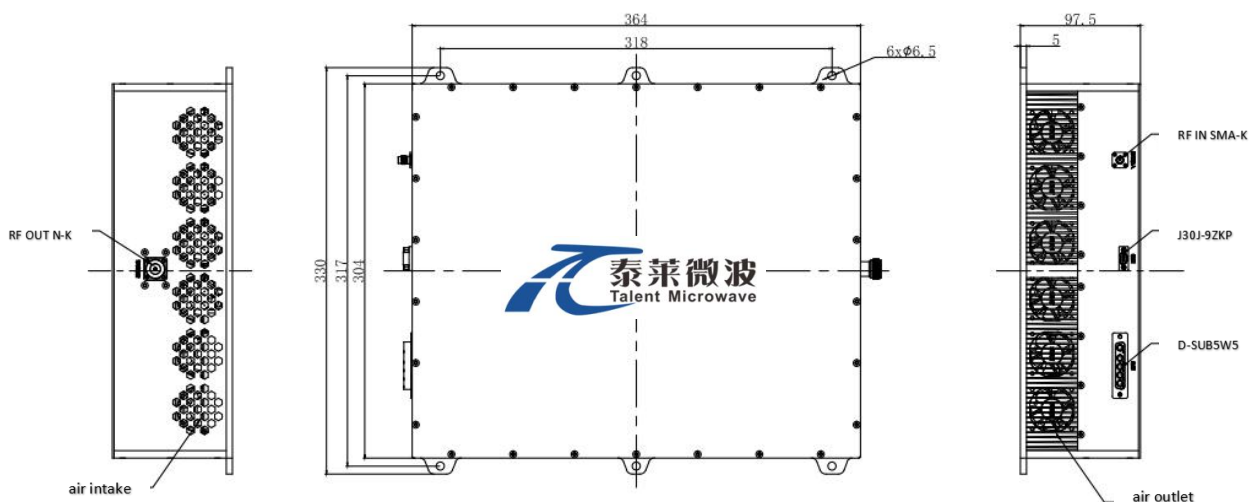
绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | +37 V |
| 输入功率 RF Input Power | +5 dBm |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |



外形图 Outline Drawing:

Unit:mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|------------------------------------|---|-----|-----|----------|
| 操作温度 Operating Temperature* | -20 | | +40 | °C |
| 存储温度 Non-operating Temperature* | -30 | | +50 | °C |
| 相对湿度 Relative humidity | | 95 | | % |
| 海拔 Altitude | 10,000 | | | 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 | | | |

*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

| 标准型号 Base Number | 描述 Description | 版本号 Revision |
|-------------------|---|--------------|
| TLPA1G6G-53-53-HS | Power amplifier 1-6GHz, Gain:53dB,Psat:53dBm,+36V DC,With Heatsink | Rev.1.1 |