

Gain Control Amplifier

2-6GHz/40dB Gain/SMA Female

Model: TLPA2G6G-40-15-GCR20

TLPA2G6G-40-15-GCR20 is a gain control amplifier with a minimum small signal gain of 40 dB and a minimum P1dB of 15 dBm @no gain control across the frequency range of 2 to 6 GHz. The DC power requirement for the amplifier is +12 VDC/360 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2-6GHz
- Gain: 40dB Min
- Output Power P1dB: 15dBm 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 | 2-6 | | | GHz |
| 小信号增益 Small Signal Gain | 40 | | | dB |
| 增益控制范围 Gain Control range | 20 | | | dB |
| 增益平坦度 Gain Flatness | | | ±2.25 | dB |
| 线性输出功率 Output P1dB @no gain control | 15 | | | dBm |
| 线性输出功率 Output P1dB @max gain control | | 12 | | dBm |
| 噪声系数 Noise Figure@no gain control | | | 3 | dB |
| 噪声系数 Noise Figure@max gain control | | 4 | | dB |
| 驻波 VSWR | | | 2 | :1 |
| 直流电压 DC Voltage | | 12 | 15 | V DC |
| 直流电流 DC Supply Current | | 360 | | mA |
| 阻抗 Impedance | 50 | | | Ohms |

机械特性 Mechanical Specifications:

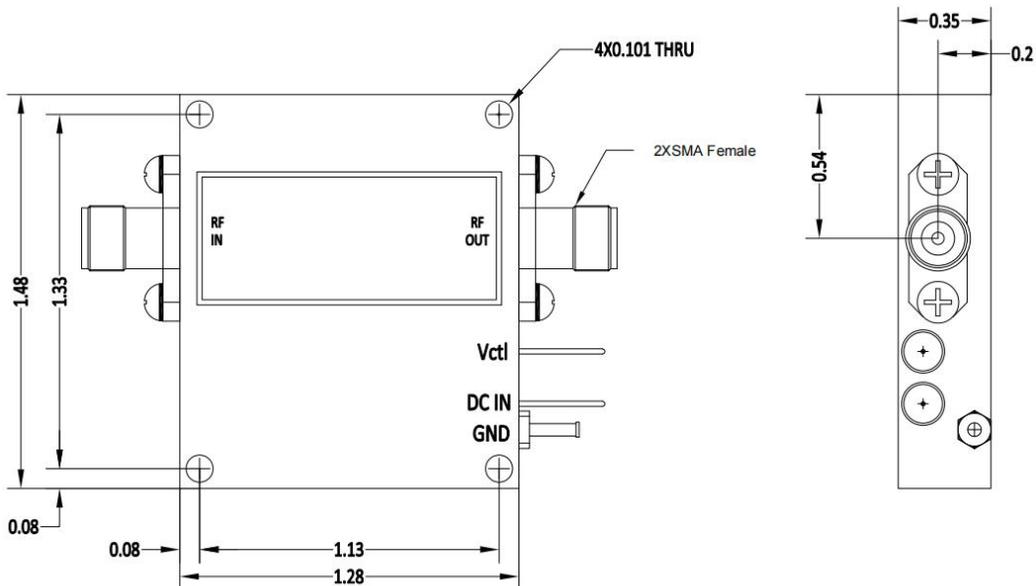
| 参数 Parameter | 指标 Value | 单位 Units |
|---------------------------------|-----------------------|----------|
| 输入/输出接口 Input /Output Connector | SMA Female/SMA Female | |
| 直流偏置 DC Bias | Solder Pin | |
| 尺寸 Size | 1.48*1.28*0.35 | Inch |

绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | +15 V |
| 输入功率 RF Input Power | TBD |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

外形图 Outline Drawing:

Unit:Inch



温度环境 Environmental Conditions:

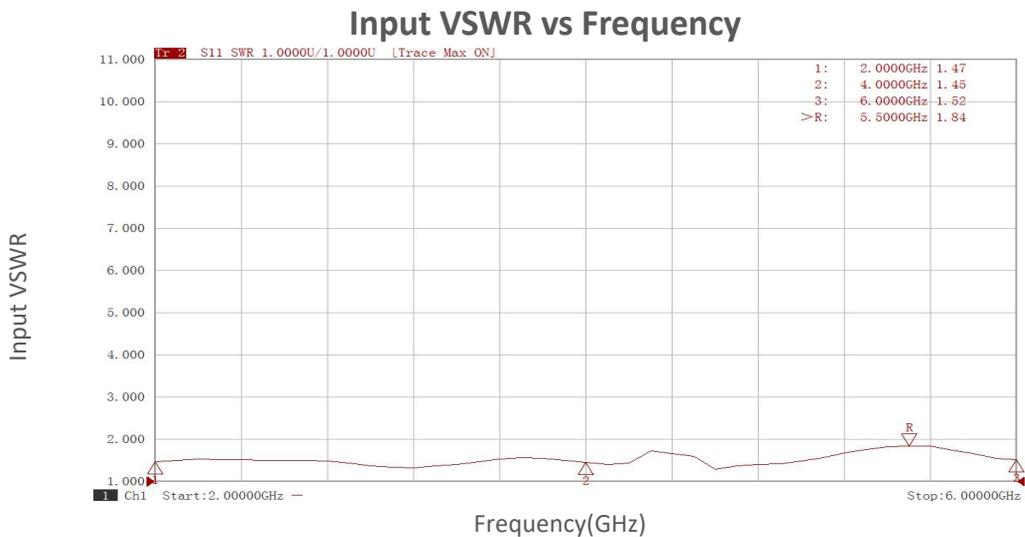
| 参数 Parameter | Min | Typ | Max | 单位 Units |
|------------------------------------|---|-----|-----|----------|
| 操作温度 Operating Temperature* | -40 | | +60 | °C |
| 存储温度 Non-operating Temperature* | -50 | | +70 | °C |
| 相对湿度 Relative humidity | | 95 | | % |
| 海拔 Altitude | 10,000 | | | feet |
| 震动 Shock / 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:

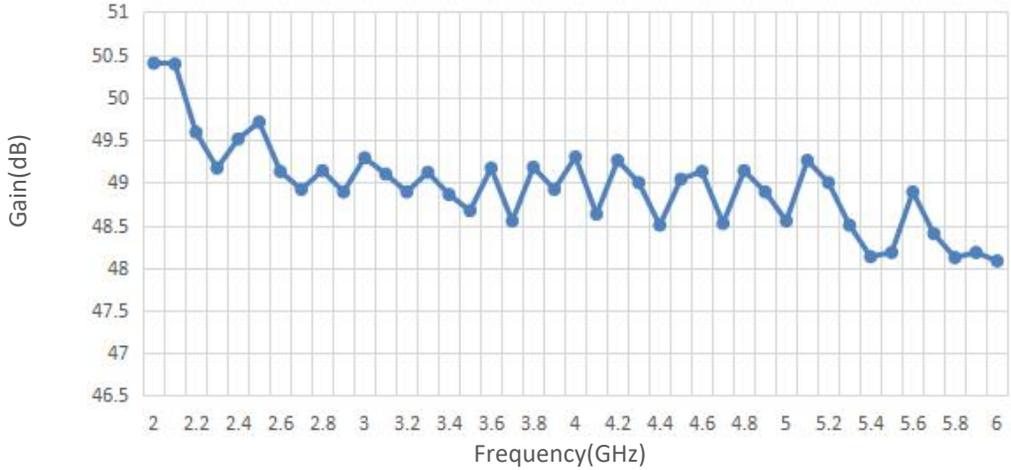
| 标准型号 Base Number | 描述 Description | 版本号 Revision |
|----------------------|---|--------------|
| TLPA2G6G-40-15-GCR20 | Gain Control Amplifier 2-6GHz, Gain:40dB,P1dB:15dBm,+12V DC,SMA Female | Rev.1.1 |

典型曲线 Typical Performance Data:

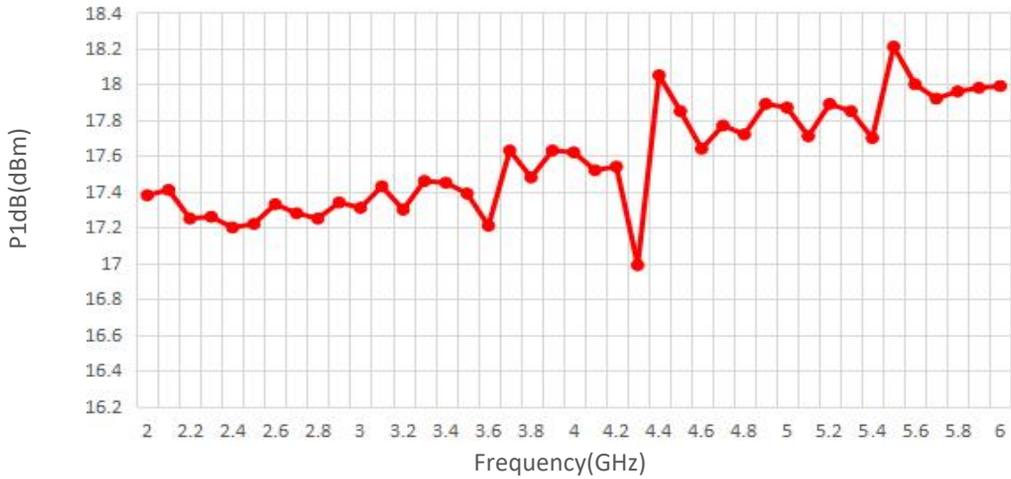


典型曲线 Typical Performance Data:

Small Signal Gain vs Frequency



P1dB@no gain control vs Frequency

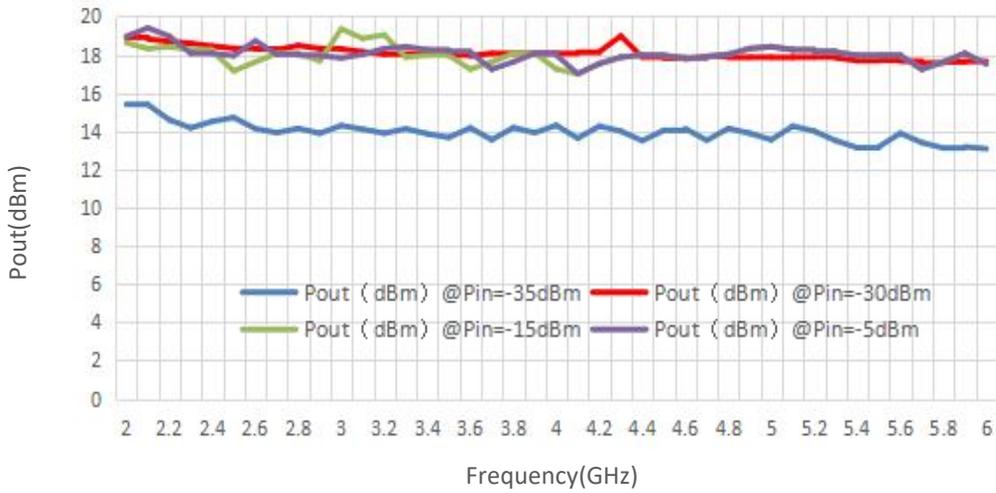


P1dB@max gain control vs Frequency

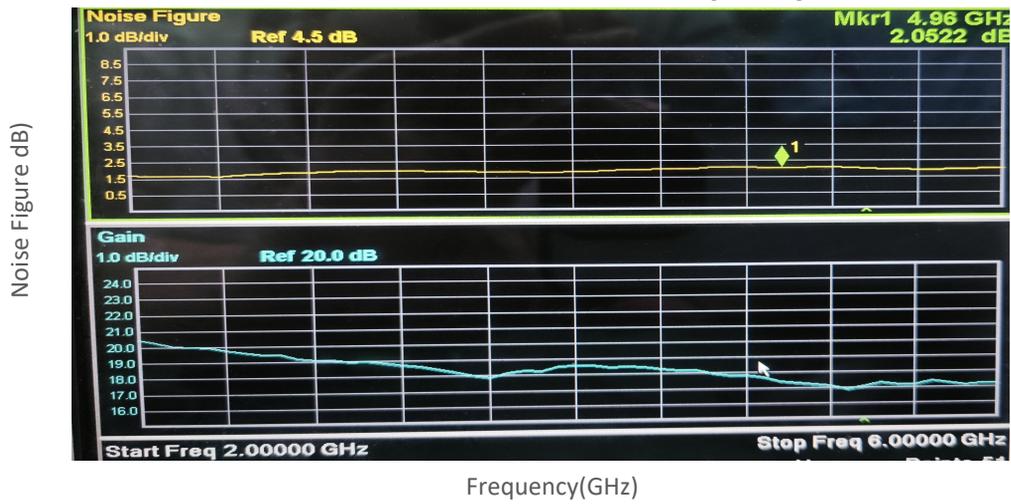
P1dB(dBm)

典型曲线 Typical Performance Data:

Pout@Equal_Pin



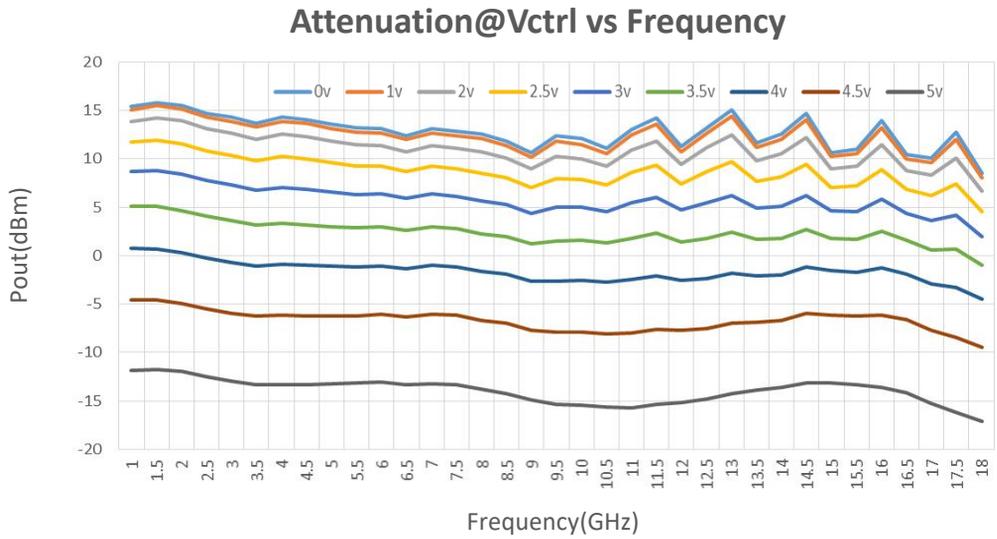
NF@min attenuation vs Frequency



NF@max attenuation vs Frequency

Noise Figure (dB)

典型曲线 Typical Performance Data:



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.