

Power Amplifier

0.3-2GHz /50 dB Gain/50 dBm Psat

Model: TLPA0.3G2G-50-50

TLPA0.3G2G-50-50 is a power amplifier with a typical small signal gain of 50 dB and Psat of 50 dBm across the frequency range of 0.3 to 2 GHz. The DC power requirement for the amplifier is +28 VDC. The input and output port configuration offers coax adapter structure with SMA Female/N Female.

Features:

- Ultra Wide Band: 0.3-2GHz
- Small Signal Gain: 50dB Min
- Output Power Psat: 50dBm 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	0.3-2			GHz
增益 Gain	50			dB
增益平坦度 Gain Flatness		±3		dB
饱和输出功率 Output Psat	50			dBm
杂散 Spurious@Pout=50dBm			-60	dBc
谐波 Harmonics@Pout=50dBm			-10	dBc
输入驻波 Input VSWR			2.0	:1
直流电压 DC Voltage		+28		V DC
功耗 Power Consumption			850	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	
DC加电接口 DC Power Interface	D-SUB5W5	
尺寸 Size	271*264*113.5	mm
重量 Weight	15	g

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+28V
输入功率 RF Input Power	0 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

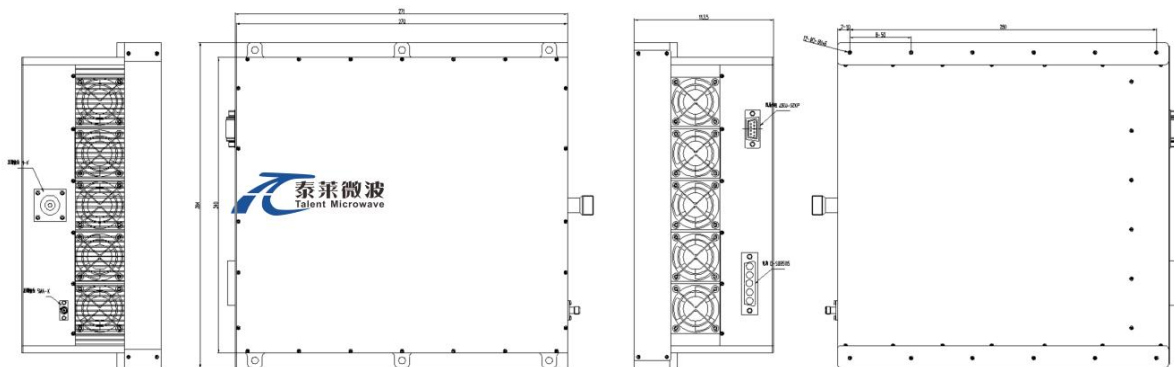
主要功能 Key Features:

Parameter	Advantages
Built-in protections	Output Power, Temperature, Voltage, Current
Protection functions	Over TEM, Over voltage, Over current protection, Over VSWR
Built-in Control	Shutdown

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

外形图 Outline Drawing:

Unit:mm



SUB-5W5 Define	
Pin	Function
A1-A2	+28V
A3-A5	GND

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	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			

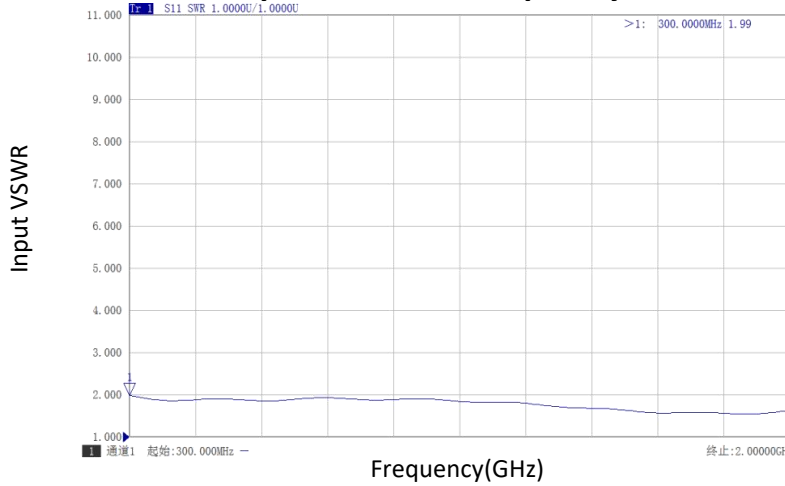
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

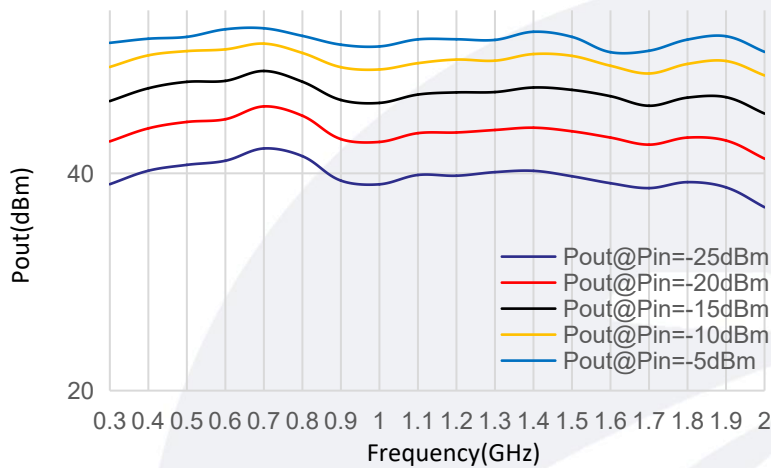
标准型号 Base Number	描述 Description	版本号 Revision
TLPA0.3G2G-50-50	Power amplifier 0.3-2GHz,Gain:50dB,Psat:50dBm,+28V DC,Protection:Over TEM,over voltage, over current,over reflection and Fault location Protection.	Rev.1.1

典型曲线 Typical Performance Data:

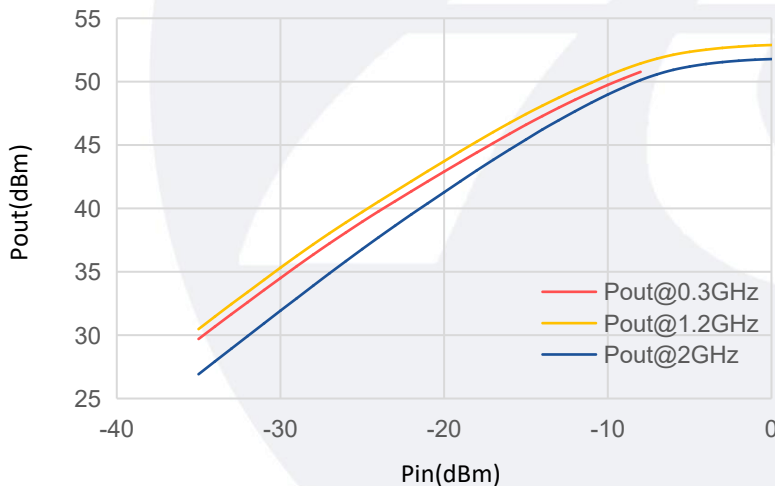
Input VSWR vs Frequency



Pout@Equal_Pin



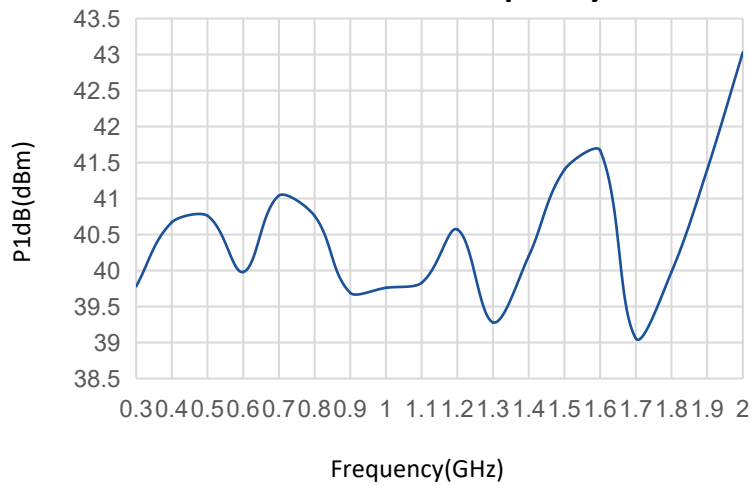
Pout@Pin



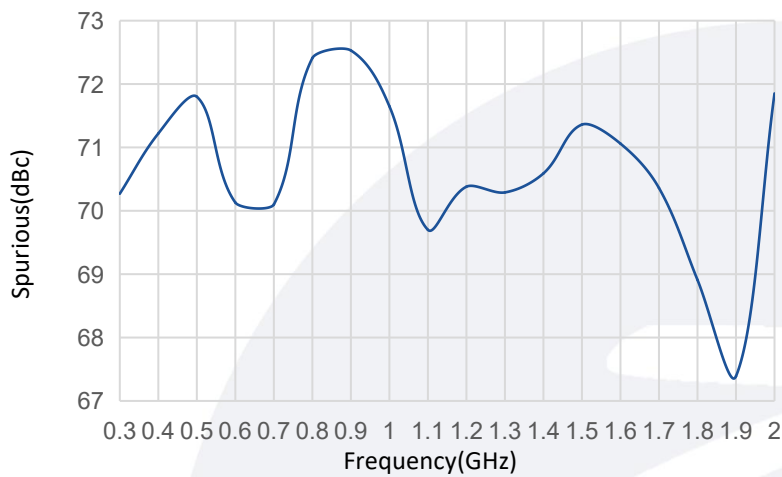
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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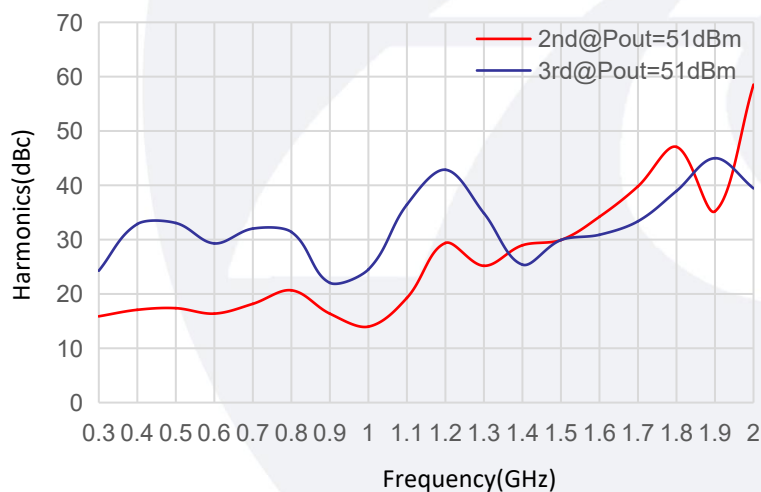
P1dB vs Frequency



Spurious VS Frequency



Harmonics VS Frequency



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