

Power Amplifier

1-2GHz/40dB Gain/45 dBm Psat

Model: TLPA1G2G-40-45

TLPA1G2G-40-45 is a power amplifier with a minimum gain of 40 dB and a typical Psat of 45 dBm across the frequency range of 1 to 2 GHz. The DC power requirement for the amplifier is +36 VDC/1.2 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-2GHz
- Gain: 40dB Min
- Output Power Psat: 45dBm Typ
- 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		2	GHz
增益 Gain	40	43		dB
增益平坦度 Gain Flatness		±1	±1.5	dB
线性输出功率 Outout P1dB	43	44		dBm
饱和输出功率 Output Psat	44	45		dBm
三阶互调 IMD3 @ 37dBm/Tone, 7MHz space	30			dBc
谐波抑制 Harmonic@Pout=43dBm		-17	-15	dBc
输入驻波 Input VSWR		1.3	1.5	:1
直流电压 DC Voltage	+34	+36	+38	V DC
直流电流 DC Supply Current		1.2	5	A
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	
直流供电接口 DC Supply Connector	J30J-9ZKSP	
尺寸 Size	138*97*20	mm
重量 Weight	700	g

绝对最大值 Absolute Maximum Ratings:

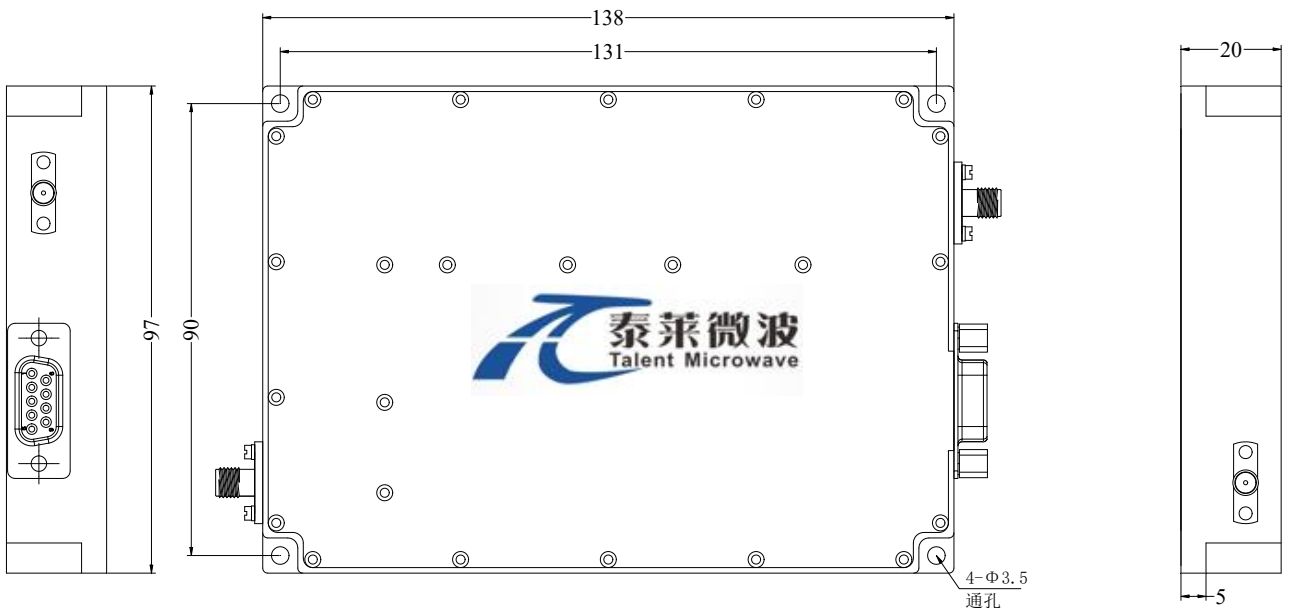
参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+30 V
输入功率 RF Input Power	+10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



Simple 220V System
Available SAC option

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



****Heat Sink Required During Operation**



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

直流供电接口 DC Supply Connector(J30J-9ZKSP):

引脚 Pin	名称 Name	功能 Function
1	VCC	Power supply positive,+34.0-38.0VDC
2	VCC	Power supply positive,+34.0-38.0VDC
3	VCC	Power supply positive,+34.0-38.0VDC
4	GND	Power supply negative
5	GND	Power supply negative
6	NC	Not connected
7	Over TEM	When the temperature of the case exceeds 70 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 60 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
8	NC	Not connected
9	+28V	(Or when suspended): Turn on the amplifier; turn off the amplifier at low voltage.

*Note: TTL is 5V.

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+50	°C
存储温度 Non-operating Temperature*	-50		+60	°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
TLPA1G2G-40-45	Power amplifier 1-2GHz, Gain:40dB,Psat:43dBm,+36V DC,Without Heatsink	Rev.1.1
TLPA1G2G-40-45-HS	Power amplifier 1-2GHz, Gain:40dB,Psat:43dBm,+36V DC,With Heatsink	Rev.1.1