

Power Amplifier

13.5-14.5GHz/47dB Gain/47dBm Psat**Model: TLPA13.5G14.5G-47-47**

TLPA13.5G14.5G-47-47 is a power amplifier with a minimum small signal gain of 47 dB and a minimum Psat of 47 dBm across the frequency range of 13.5 to 14.5 GHz. The DC power requirement for the amplifier is +28 VDC. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female or WR75/WR62 waveguide.

Features:

- Frequency range: 13.5-14.5GHz
- Gain: 47dB Min
- Output Power Psat: 47dBm Min
- Protection: Over voltage protection
- 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		13.5		14.5	GHz
增益平坦度 Gain flatness	@40MHz		±0.5		dB
	@full band		±2		
功率增益 Power Gain		47			dB
饱和输出功率 Output Psat		47			dBm
三阶互调 Output IM3*			-25		dBc
杂散 Spurious@Pout=45dBm				-60	dBc
谐波 Harmonics@Pout=45dBm				-25	dBc
输入驻波 Input VSWR				1.5	:1
直流电压 DC Voltage			28	29	V DC
功耗 Power Consumption				350	W
阻抗 Impedance		50			Ohms

*Note: The two-tone interval is 5MHz, and the total power of two-tone synthesis is 44dBm.

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入接口 Input Connector	SMA Female	
输出接口 Output Connector	N Female or WR75 or WR62	
直流偏置 DC Bias	DSUB-7W2	A1: +28V A2: GND Pin1: Enable Pin2~5: GND
尺寸 Size	200*140*90	mm
重量 Weight	3	Kg

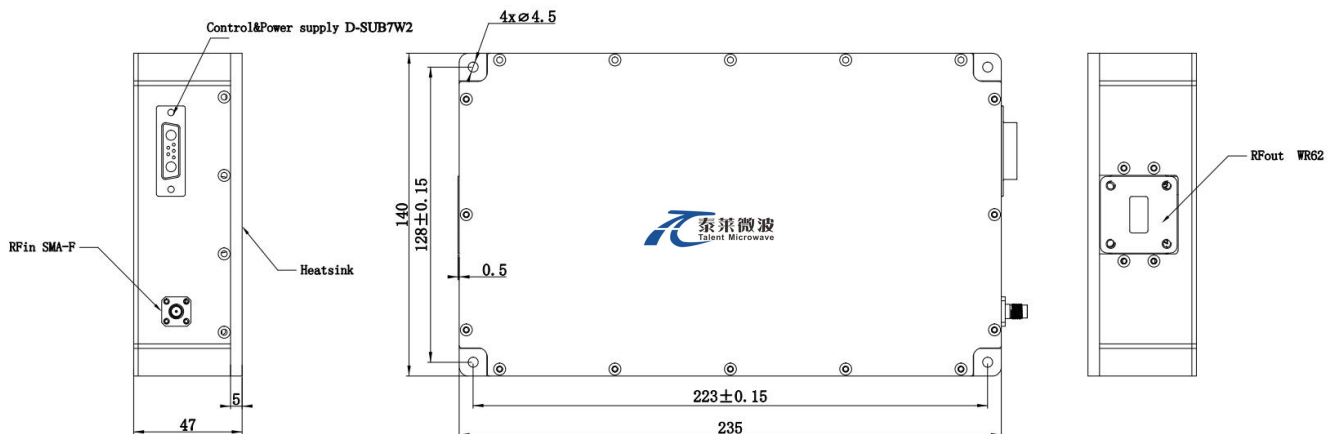
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+29 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; Tolerance:±0.1mm



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



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

主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	Power setting On/Off
内置保护功能 Protection functions	Over DC voltage protection
冷却系统 Cooling system	Built in Cooling system,forced air cooling

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+50	℃
存储温度 Non-operating Temperature*	-30		+60	℃
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
TLPA13.5G14.5G-47-47	Power amplifier 13.5-14.5GHz, Gain:47dB,Psat:7dBm,+28V DC,Without Heatsink	Rev.1.0
TLPA13.5G14.5G-47-47-HS	Power amplifier 13.5-14.5GHz, Gain:47dB,Psat:7dBm,+28V DC,With Heatsink	Rev.1.0