

Power Amplifier

42-46GHz/47dB Gain/47dBm Psat

Model: TLPA42G46G-47-47

TLPA42G46G-47-47 is a power amplifier with a minimum power gain of 47 dB and a nominal Psat of 47 dBm across the frequency range of 42 to 46 GHz. The DC power requirement for the amplifier is +24 VDC. The input port configuration offers coax adapter structure with 2.4mm female and output port configuration offers WR22.

Features:

- Frequency range: 42-46GHz
- Gain: 47dB Min
- Output Power Psat: 47dBm 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	42		46	GHz
功率增益 Power Gain	47			dB
增益平坦度 Gain Flatness		±3		dB
饱和输出功率 Output Psat	46	47		dBm
三阶互调 Output IM3*		-25		dBc
杂散 Spurious@Pout=46dBm			-60	dBc
二次谐波 2nd Harmonic@Pout=46dBm			-30	dBc
输入驻波 Input VSWR			2	:1
直流电压 DC Voltage		24	25	V DC
功耗 Power Consumption			420	W
阻抗 Impedance		50		Ohms

*Note: Two tone, spacing 5MHz, total power 42dBm.

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入接口 Input Connector	2.4mm Female	
输出接口 Output Connector	WR22	
供电及控制接口 DC Power Supply&Control Connector	DSUB-7W2	
尺寸 Size	165*130*90	mm
重量 Weight	≤4.5	g

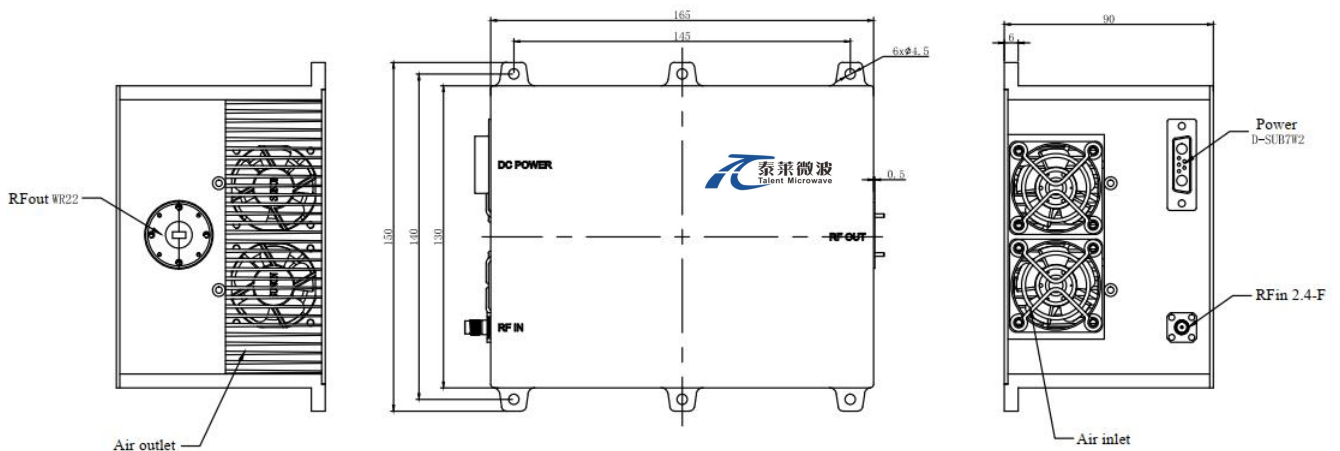
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+25 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.

直流供电接口 DC Supply Connector(DSUB-7W2):

引脚 Pin	名称 Name	功能 Function
A1	+24V	Power supply positive,+24.0VDC
A2	GND	Ground
Pin1	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: TTL Low (0V)Short to ground
Pin2		Voltage sensor
Pin3		Current sensor
Pin4		TEMP sensor
Pin5		GND

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+50	°C
存储温度 Non-operating Temperature*	+30		+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
TLPA42G46G-47-47	Power amplifier 42-46GHz, Gain:47dB,Psat:47dBm,+24V DC, Built in Fan Cooling	Rev.1.0