泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Solid State High Power Amplifier Systems

4-8GHz/47dB Gain/47dBm Psat/220V AC Model: TLPA4G8G-47-47-BC

TLPA4G8G-47-47-BC is a solid state high power amplifier systems provides high output power and high gain across the 4 to 8 GHz frequency range. The amplifier features a built-in 220V power supply, making it easy to use in most lab environments. This model features thermal self protection, preventing damage to the amplifier and providing added reliability.

Features:

- Frequency range: 4-8GHz
- Gain: 47dB Min
- Psat Output Power: 47dBm Min
- Protection:Over TEM,over voltage, over current ,over VSWR protection
- 50 Ohm Matched Input / Output

电气特性 Electrical Characteristics:

参数 Parameter	代码 Symbol	Min	Typ	Max	单位 Units
频率范围 Frequency range	BW	4		8	GHz
小信号增益 Small Signal Gain	SSGP	47	48		dB
增益平坦度 Gain flatness	ΔGL		±2	±3	dB
增益调节范围 Gain adjust Range	ΔGR		31.75		dB
增益调节步进 Gain adjust Step	ΔGS		0.25		dB
饱和输出功率 Output Psat	Psat	47	47.5		dBm
线性输出功率 Output P1dB	P1dB	43	44		dBm
杂散 Spurious@Pout=50W	Spur			-60	dBc
谐波 Harmonics@Pout=50W	HAM		-15		dBc
输入驻波 Input VSWR	VSWRin			2.0	:1
交流电压 AC Voltage	Vac		220		V AC
交流电流 AC Supply Current	Iac		1		A
功耗 Power Consumption	Pdiss		220	300	W
阻抗 Impedance	I/O-IMP		50		Ohms

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/N Female	
通信接口 Communication Connector	DB9/RJ45	
液晶显示屏 Front Panel LCD Screen Display	5 inch LCD Screen Display	
尺寸 Size	19 Inch 2U*446 depth	mm
重量 Weight	≤20	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting On/Off
内置保护功能 Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR
冷却系统 Cooling system	Built in Cooling system,forced air cooling

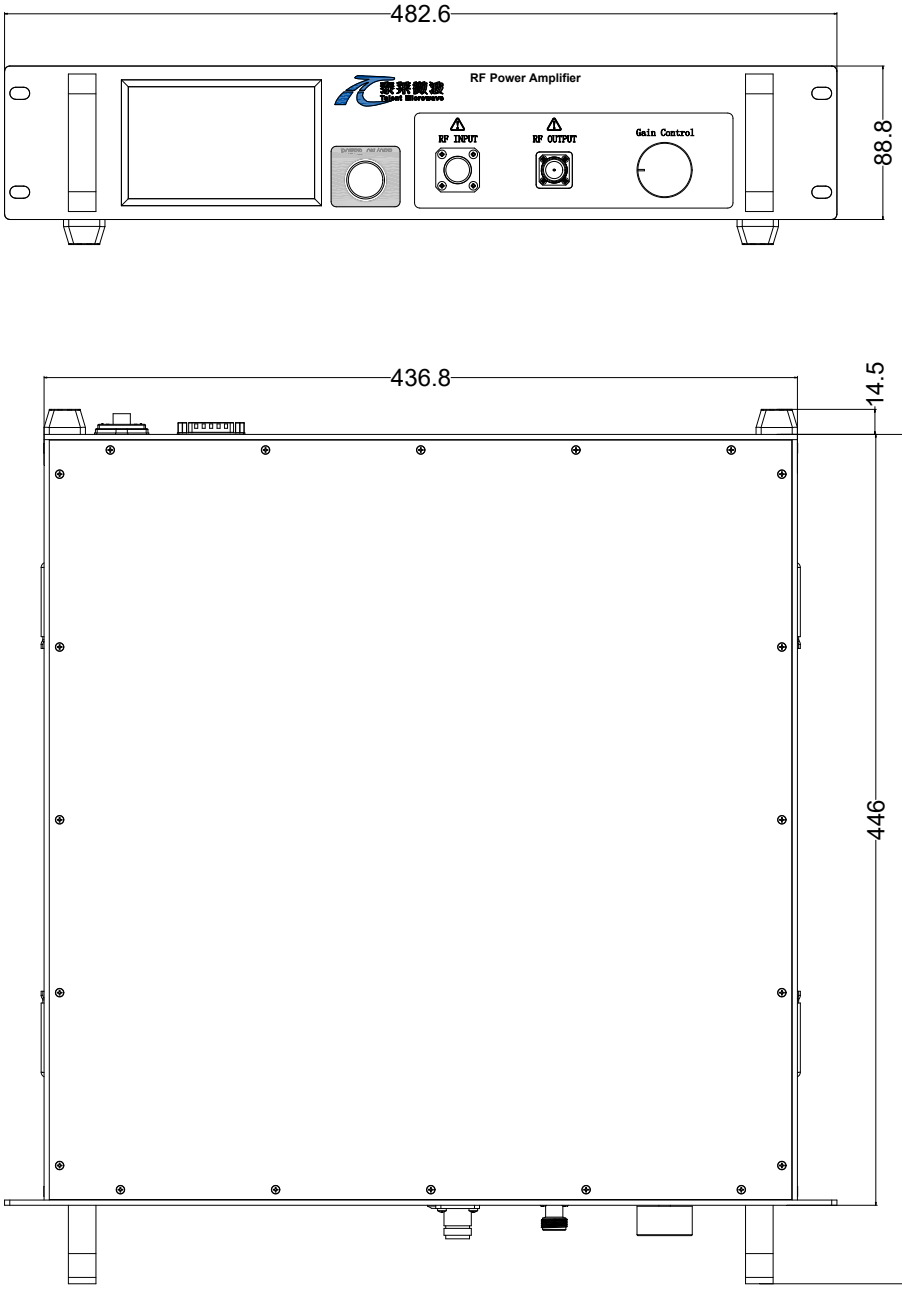
直流供电接口 DC Supply Connector(DSUB-15 Female):

引脚 Pin	名称 Name	功能 Function
1	EN	放大器使能: TTL高(5V)(内拉高); 放大器禁用: 接地
2	Over Voltage	电压报错: (TTL 高电平=故障, TTL 低电平=正常)
3	Over Current	电流报错: (TTL 高电平=故障, TTL 低电平=正常)
4	Over TEM	温度报错: (TTL 高电平=故障, TTL 低电平=正常)
5	Over VSWR	驻波报错: (TTL 高电平=故障, TTL 低电平=正常)
6	Reset	当逻辑为低电平时复位PA, 并在释放后恢复(内部上拉)。
7	GND	地
8~15	NC	未连接

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+40	℃
存储温度 Non-operating Temperature*	-30		+50	℃
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
TLPA4G8G-47-47-BC	Solid State High Power Amplifier Systems 4-8GHz,Gain:47dB,Psat:47dBm,220V AC,Built in Fan Cooling	Rev.1.1