

**Model: TLP30M1G-45-45-BC**
**Solid State High Power Amplifier Systems  
 30MHz-1GHz, Gain: 45dB, Psat: 45dBm, 220V AC**
**Feature:**

- Wide Band: 30MHz-1GHz
- Gain: 45dB Min
- Psat Output Power: 45dBm Min
- Protection: Over TEM, over voltage, over current, over VSWR protection.
- 50 Ohm Matched Input / Output


**电气特性 Electrical Specifications:**

参数Parameter	代码Symbo	Min	Typ	Max	单位Units
频率范围 Frequency range	BW	0.03-1			GHz
小信号增益 Small Signal Gain	SSGP	45	47		dB
增益平坦度 Gain flatness	$\Delta$ GL		$\pm 2$	$\pm 3$	dB
增益调节范围 Gain adjust range	$\Delta$ GR		30		dB
增益调节步进 Gain adjust step	$\Delta$ GS		0.5		dB
饱和输出功率 Output Psat	Psat	45	46		dBm
线性输出功率 Output P1dB	P1dB		42		dBm
杂散 Spurious	Spur			-60	dBc
谐波 Harmonics	HAM			-10	dBc
输入驻波 Input VSWR	VSWRin		1.5	2.0	:1
交流电压 AC Voltage	Vac	110	220		V AC
交流电流 AC Supply Current	Iac	1.5A@220V AC			A
阻抗 Impedance	I/O-IMP	50			Ohms

**机械特性 Mechanical Specifications:**

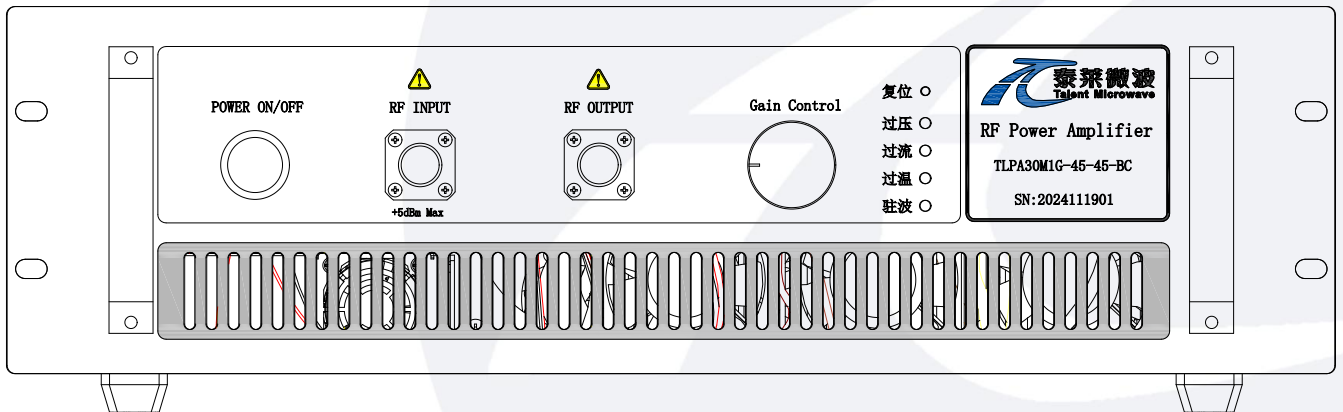
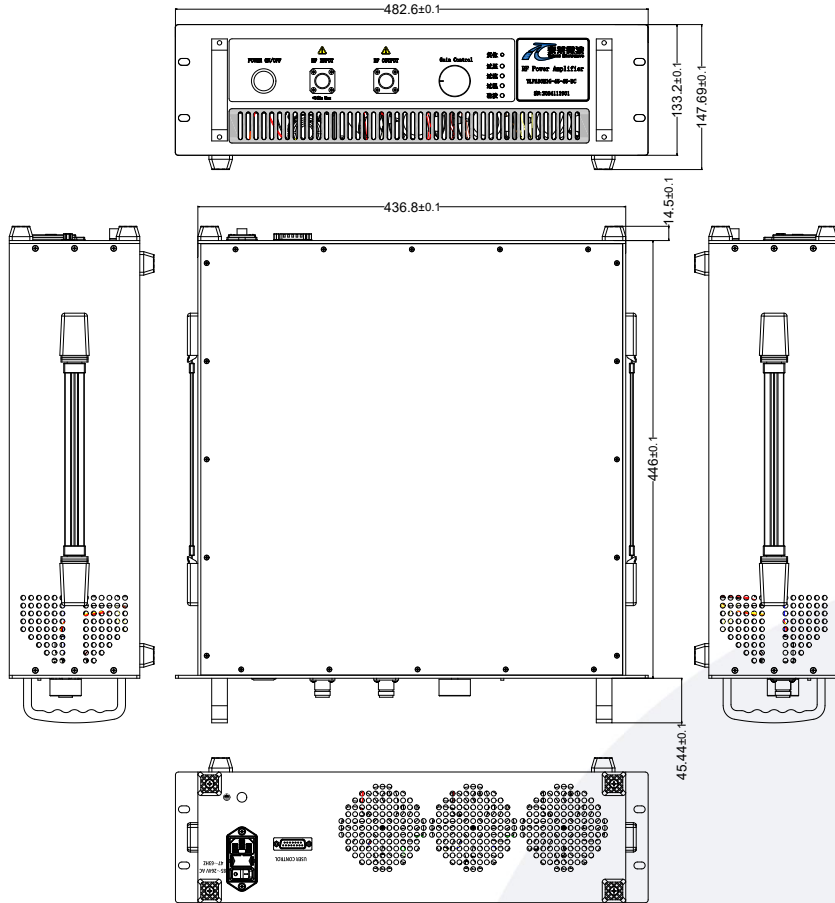
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/N Female	
尺寸 Size	3U*500	mm
重量 Weight	$\leq 35$	Kg

**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

外形尺寸 Outline Drawing:

Unit: mm



**控制接口连接器 D-SUB,15-Pin,Female:**

Pin #	Description	Specification
1	复位	Resets PA when logic LOW is applied and released (Internally Pulled-High)
2	过压报警	TTL Logic High (5V) = Fault (Internally Pulled-Low)
3	过流报警	TTL Logic High (5V) = Fault (Internally Pulled-Low)
4	温度报警	TTL Logic High (5V) = Fault (Internally Pulled-Low)
5	驻波报警	TTL Logic High (5V) = Fault (Internally Pulled-Low)
6	功放使能	Amplifier Enable: TTL High (5V) (Internally Pulled-High)
7	GND	Ground
8-15	NC	No Connection

**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 protection 4,Over VSWR
冷却系统 Cooling system	Built in Cooling system,forced air cooling

**温度环境 Environmental Conditions:**

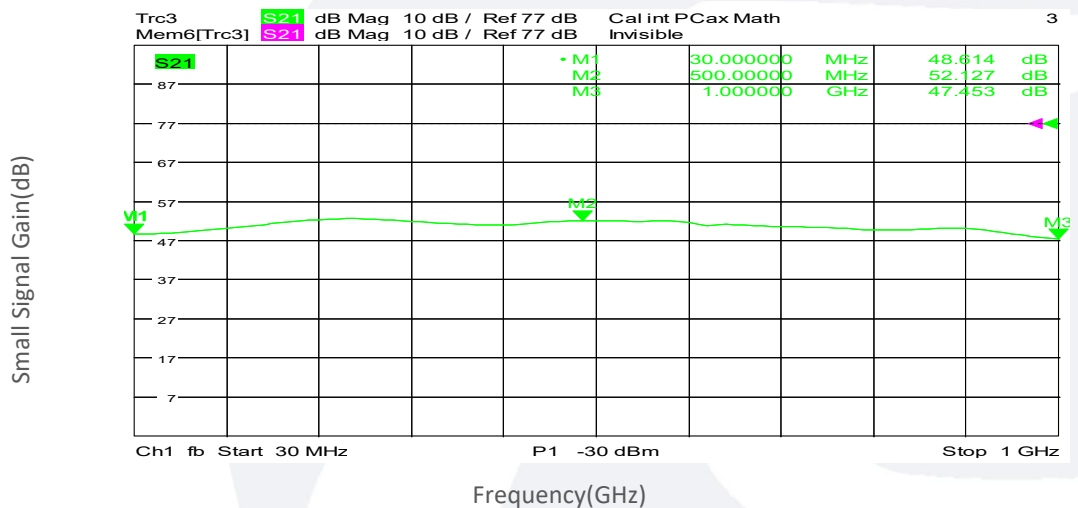
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+50	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	50000			feet
震动 Shock / Vibration(MIL-STD- 810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

**订货信息 Ordering Information:**

标准型号 Part Number	描述 Description	版本号 Revision
TLPA30M1G-45-45-BC	Solid State High Power Amplifier Systems 0.03-1GHz,Gain:45dB,Psat:45 dBm,220V AC,Built in Fan Cooling	Rev.1.0

**典型曲线 Typical Performance Data:**

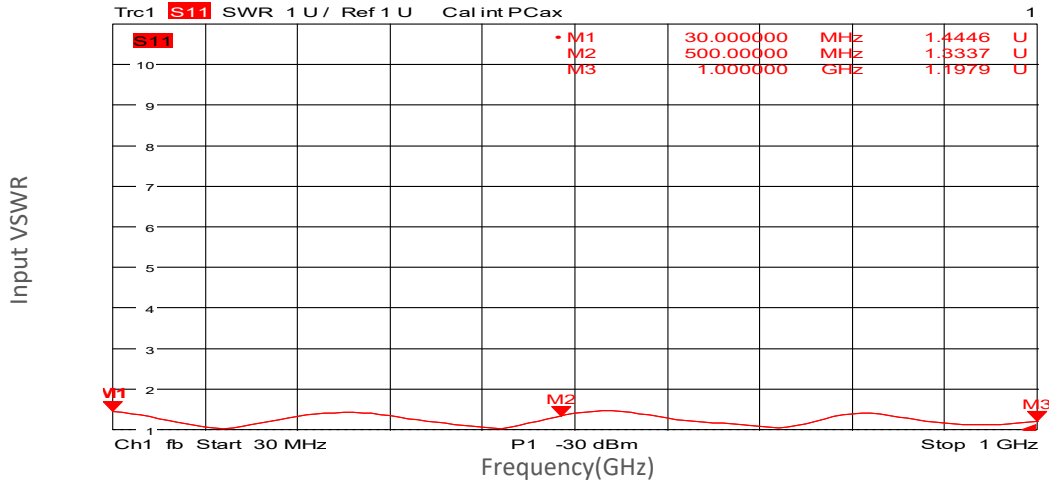
**Small Signal Gain vs Frequency**



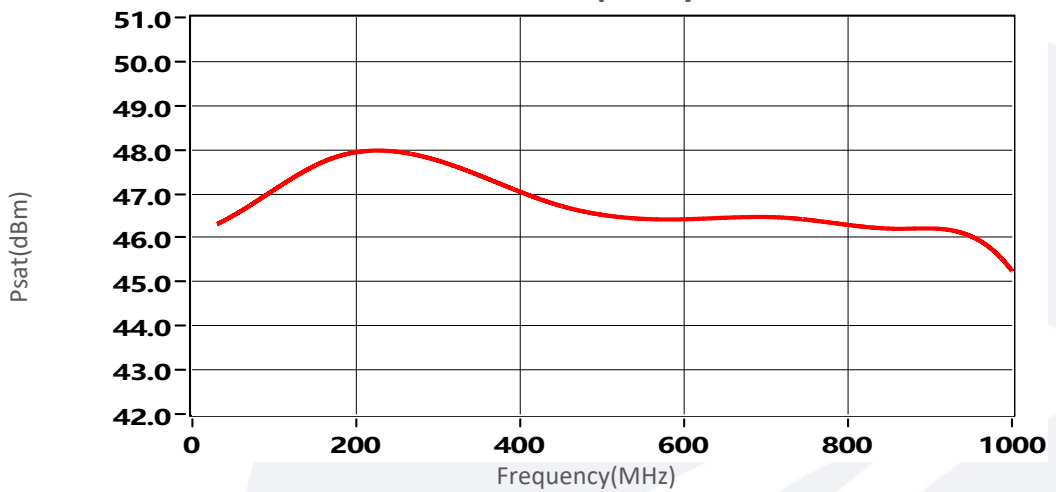
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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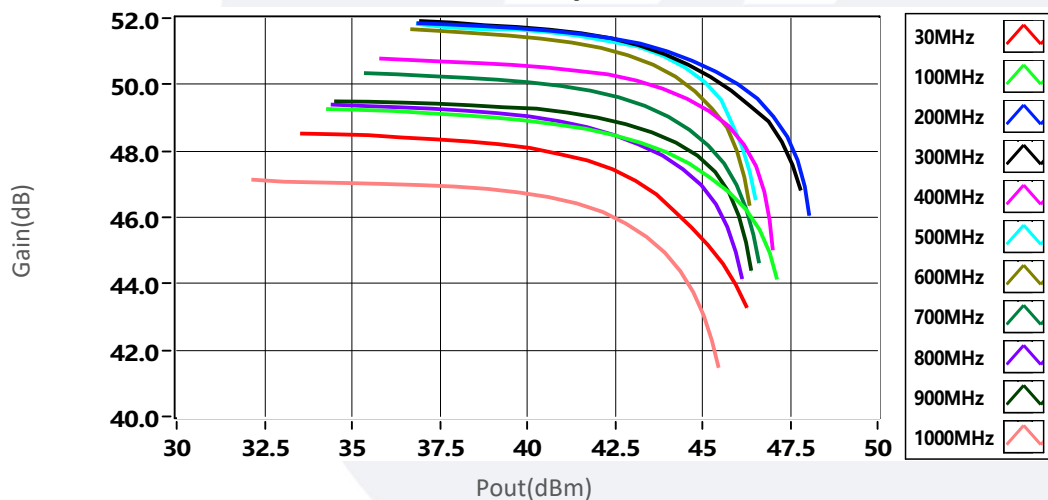
Input VSWR vs Frequency



Psat vs Frequency



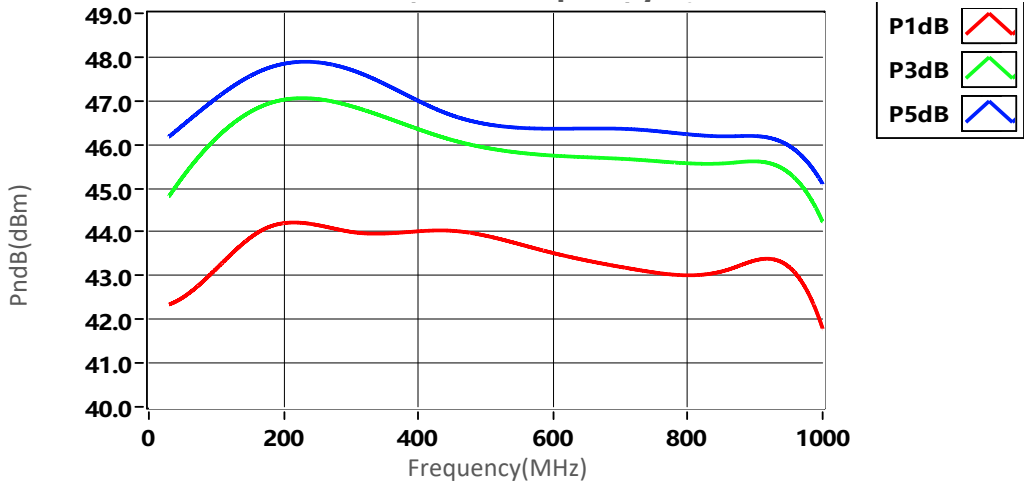
Gain vs Output Power



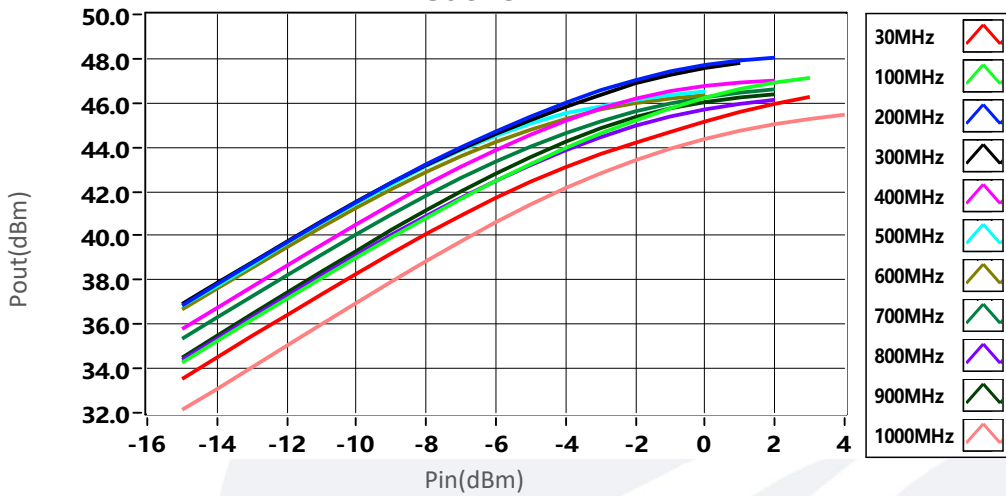
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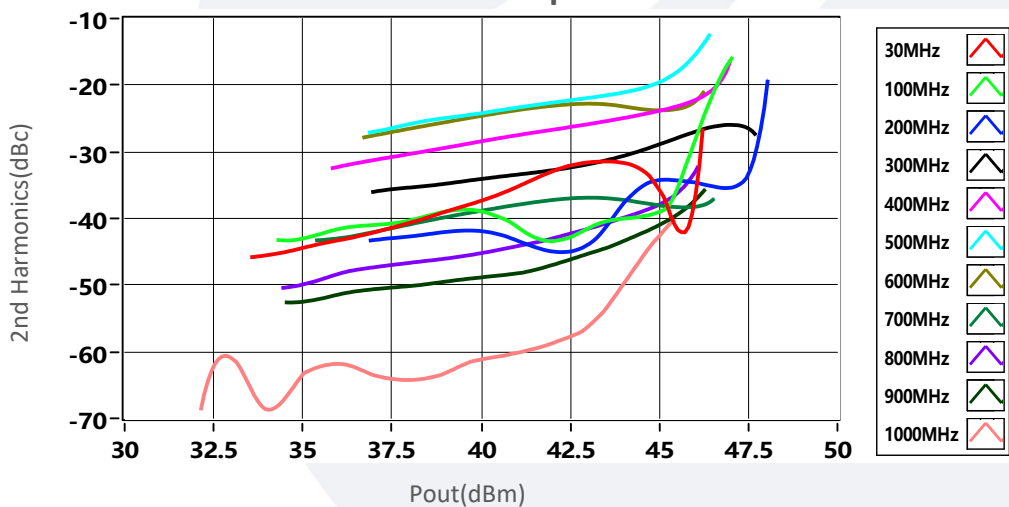
PndB vs Frequency



Pout vs Pin

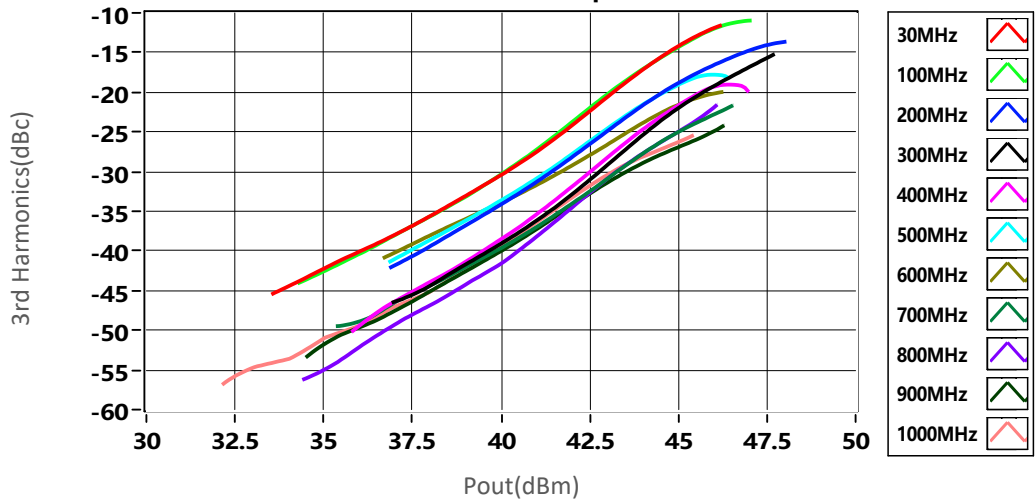


2nd Harmonics vs Output Power



典型曲线 Typical Performance Data:

3rd Harmonics vs Output Power



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