

Power Amplifier

8-12GHz /47dB Gain/46 dBm Psat

Model: TLPA8G12G-47-46

TLPA8G12G-47-46 is a power amplifier with small signal gain of 47 dB and Psat of 46 dBm across the frequency range of 8 to 12 GHz. The DC power requirement for the amplifier is +28 VDC/9.3 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 8-12 GHz
- Gain: 47dB min
- Output Power Psat: 46dBm Min
- 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	8-12			GHz
小信号增益 Small Signal Gain	47			dB
增益平坦度 Gain Flatness		±2		dB
饱和输出功率 Output Psat	46			dBm
杂散 Spurious@Pout=46dBm			-60	dBc
谐波抑制 Harmonic@Pout=46dBm		-25		dBc
输入驻波 Input VSWR			2	:1
直流电压 DC Voltage	26	28	30	V DC
直流电流 DC Supply Current			9.3	A
阻抗 Impedance	50			Ohms

机械特性 Mechanical Specifications:

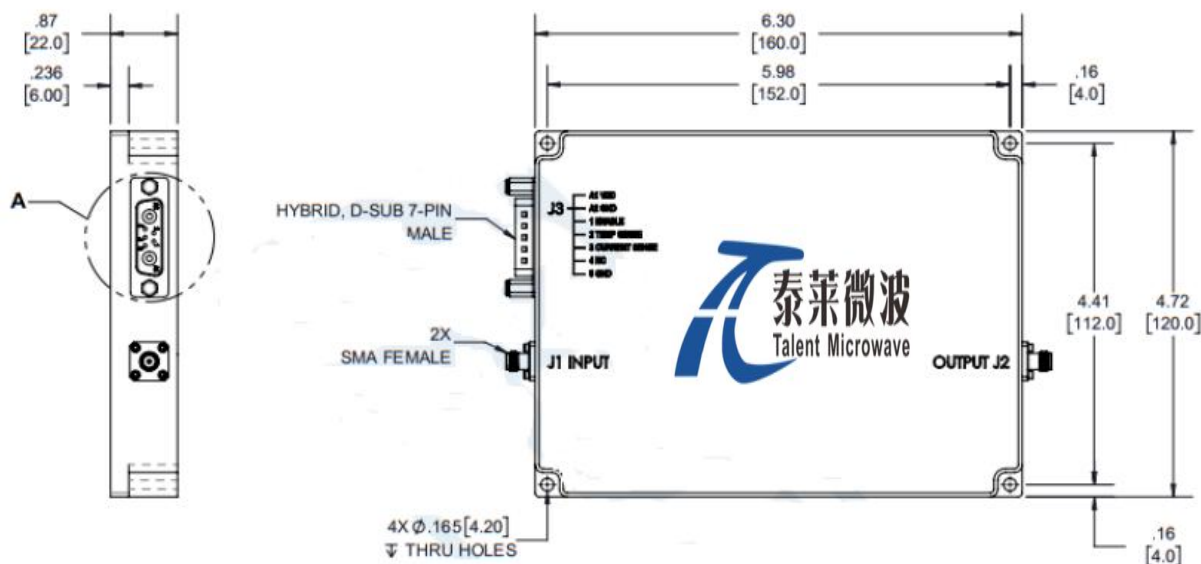
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流供电接口 DC Supply Connector	DSUB-7W2	
尺寸 Size	160*120*22(Without Heatsink) 258*125*135(Heatsink Size)	mm
重量 Weight	≤620	g

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

外形图 Outline Drawing:

Unit:mm



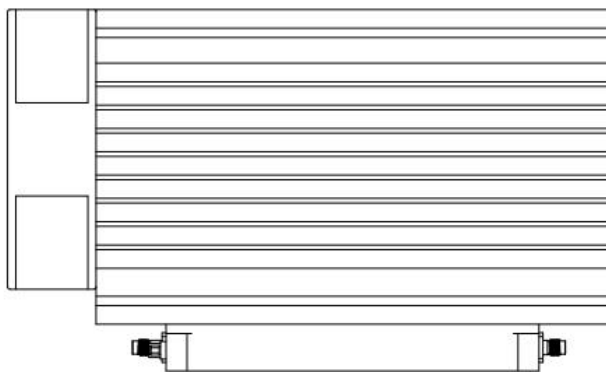
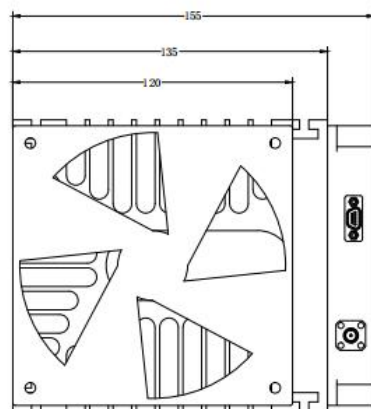
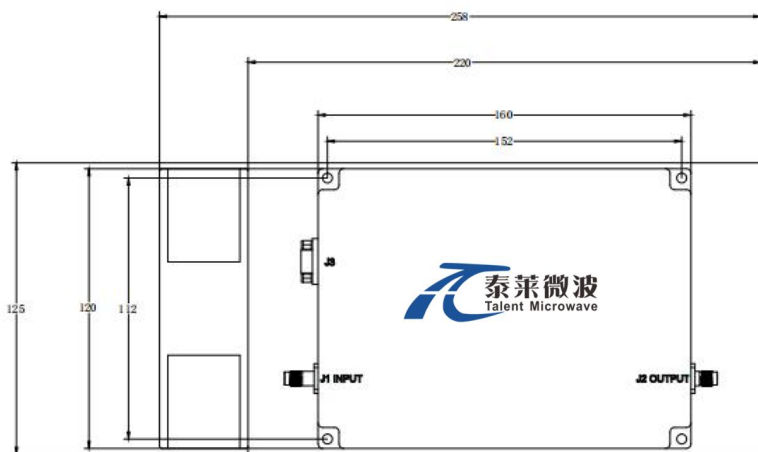
*****Heat Sink Required During Operation**



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

外形图 Outline Drawing:

Unit:mm



直流供电接口 DC Supply Connector(DSUB-7W2):

DSUB-7W2 Define	
引脚 Pin	功能 Function
A1	+28V
A2	GND
Pin1	Enable
Pin2	Temperature Sensor
Pin3	Current Sensor
Pin4	NC
Pin5	GND

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			

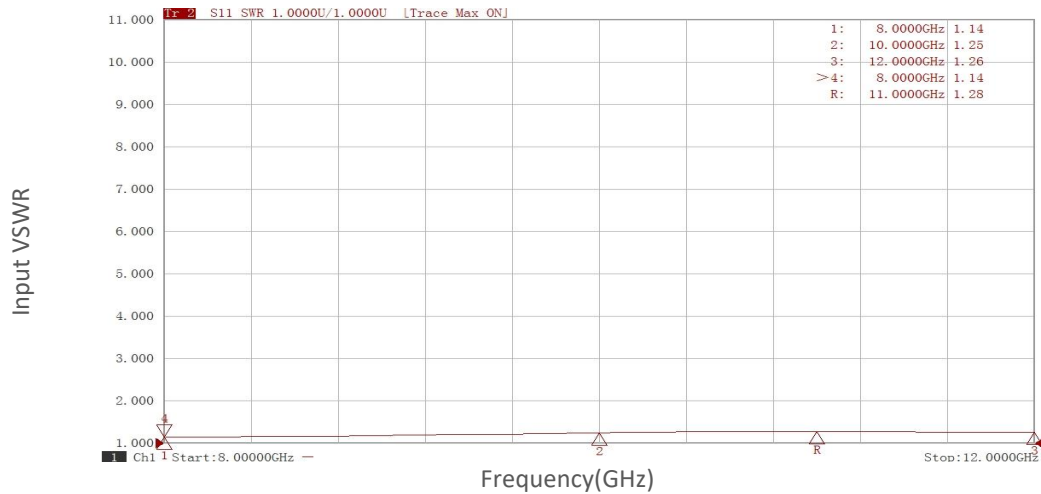
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

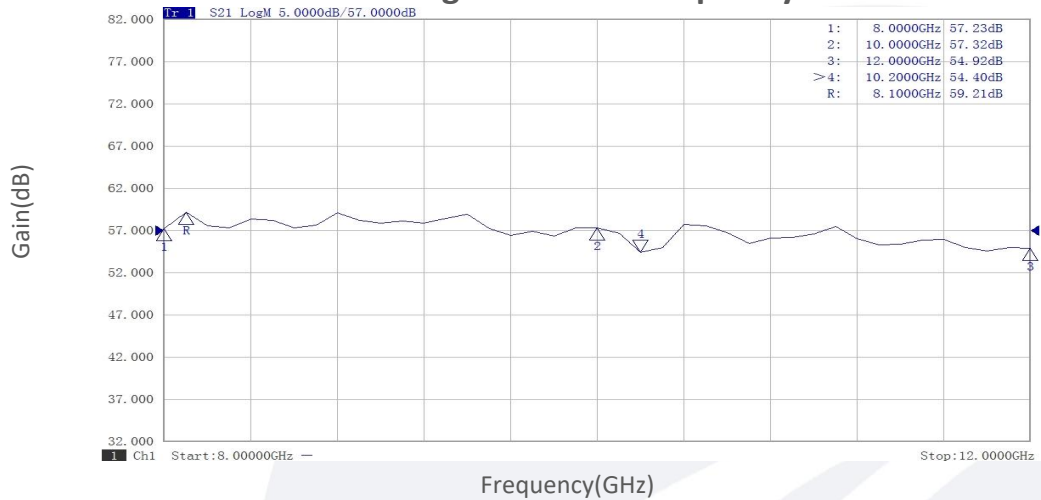
标准型号 Base Number	描述 Description	版本号 Revision
TLPA8G12G-47-46	Power amplifier 8-12GHz,Gain:47dB,Psat:46dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA8G12G-47-46-HS	Power amplifier 8-12GHz,Gain:47dB,Psat:46dBm, +28V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

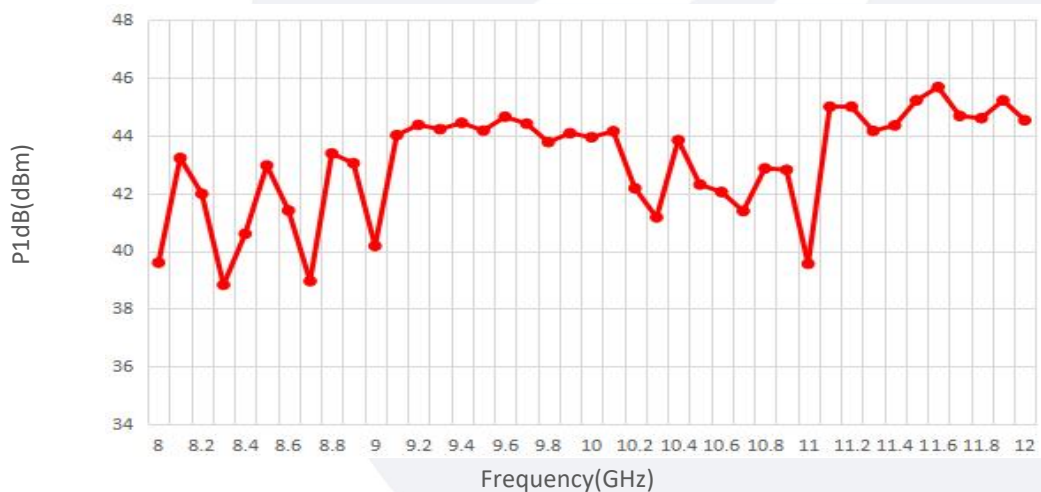
Input VSWR vs Frequency



Small Signal Gain vs Frequency

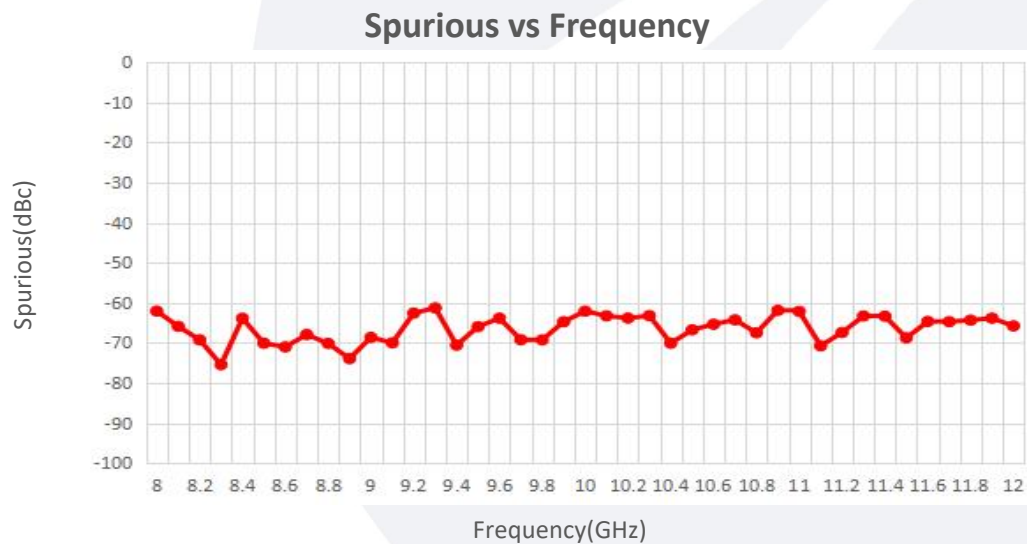
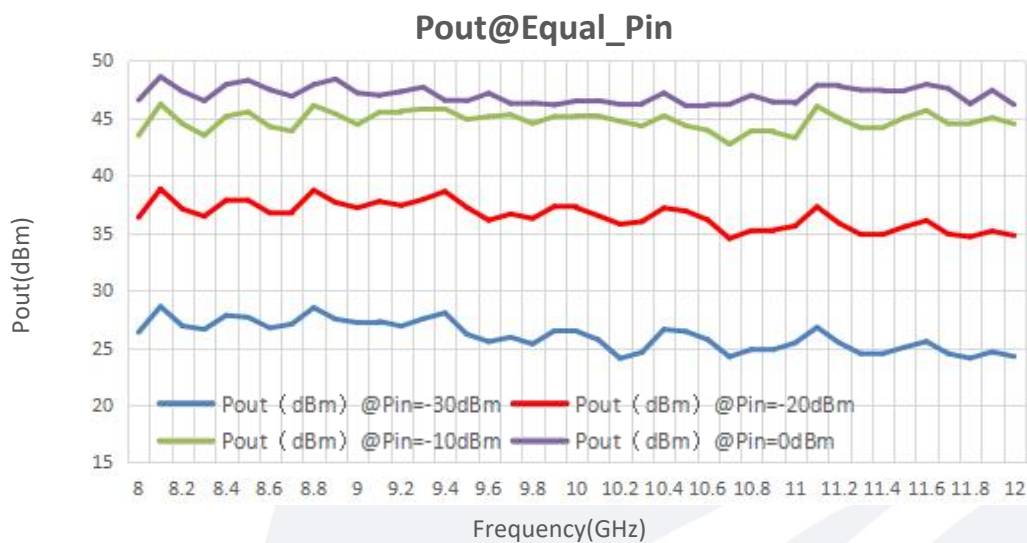
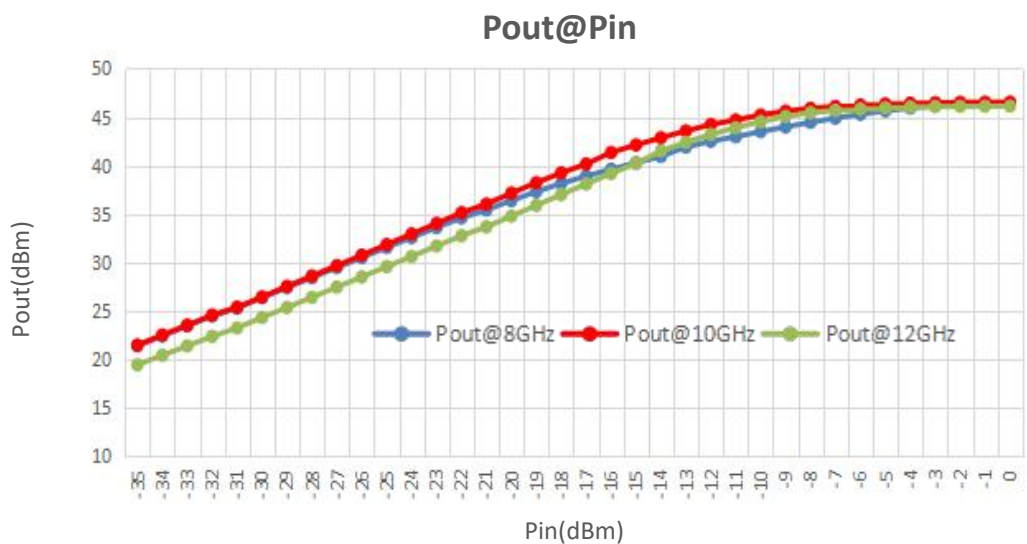


P1dB vs Frequency



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.

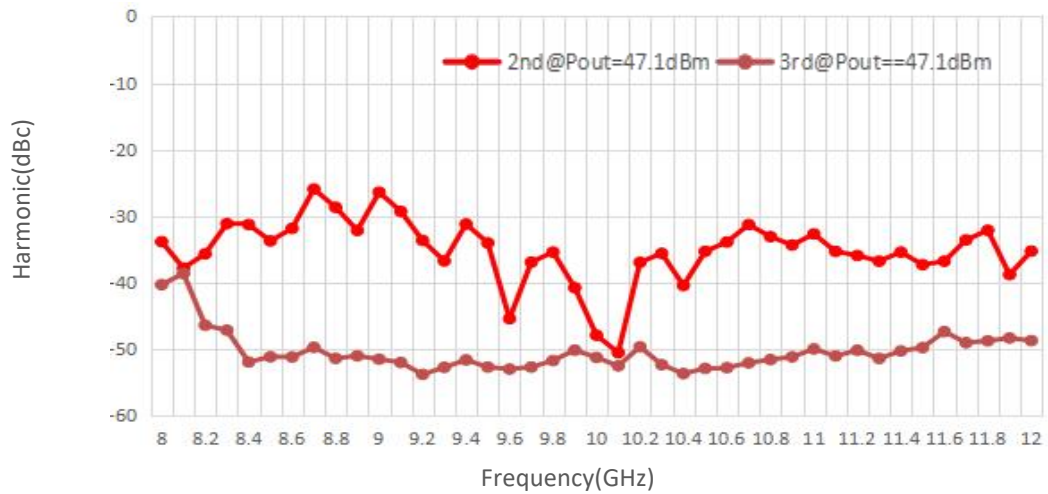
典型曲线 Typical Performance Data:



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典型曲线 Typical Performance Data:

Harmonic vs Frequency



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