

Power Amplifier

400MHz-8GHz/35dB Gain/22dBm Psat

Model: TLPA400M8G-35-20

TLPA400M8G-35-20 is a power amplifier with a typical small signal gain of 35 dB and a nominal Psat of 22 dBm across the frequency range of 400MHz to 8 GHz. The DC power requirement for the amplifier is +12 VDC/200 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 400MHz-8GHz
- Gain: 35dB Typ
- Output Power Psat: 22dBm 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	400MHz		8GHz	
小信号增益 Small Signal Gain	32	35		dB
增益平坦度 Gain Flatness		±2	±3	dB
线性输出功率 Output P1dB	20	21		dBm
饱和输出功率 Output Psat		22		dBm
输入驻波 Input VSWR		1.5	2	:1
谐波 Harmonics		-15		dBc
直流电压 DC Voltage		+12	+15	V DC
直流电流 DC Supply Current		200	250	mA
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	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	60*40*12	mm
重量 Weight	150	g

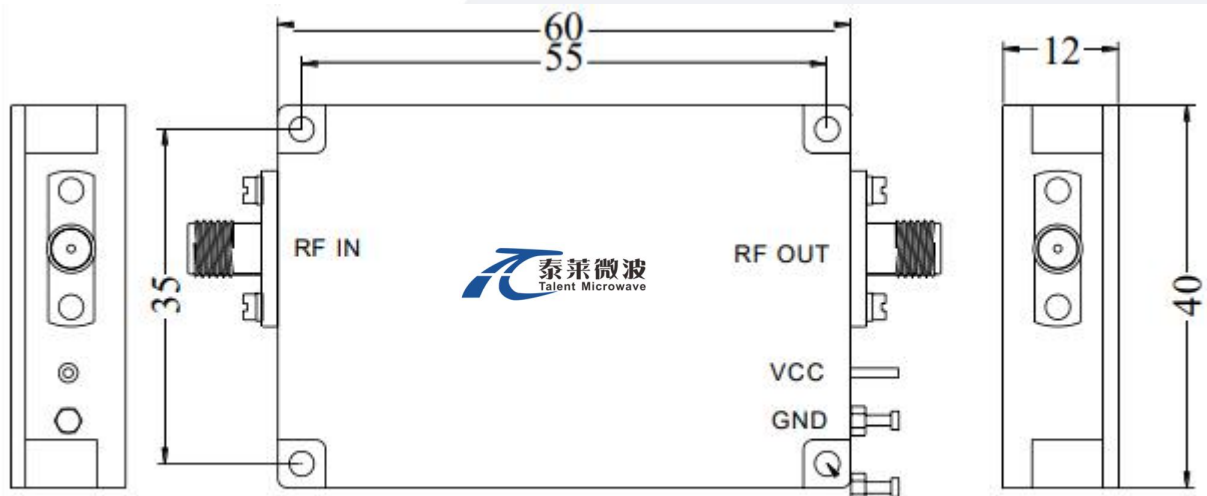
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	0 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



外形图 Outline Drawing:

Unit:mm



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THRU

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



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

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+60	°C
存储温度 Non-operating Temperature*	-50		+70	°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			

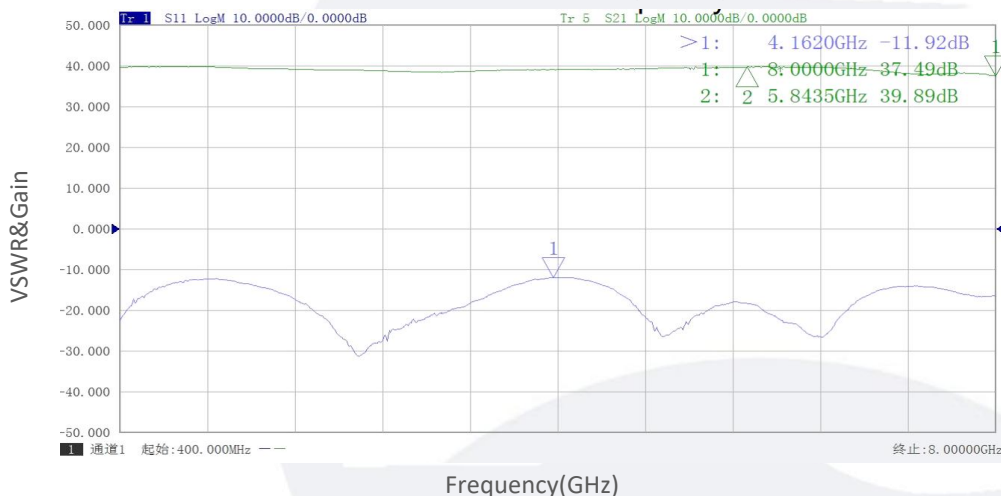
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA400M8G-35-20	Power amplifier 400MHz-8GHz, Gain:35dB,Psat:22dBm,+12V DC,Without Heatsink	Rev.1.1
TLPA400M8G-35-20-HS	Power amplifier 400MHz-8GHz, Gain:35dB,Psat:22dBm,+12V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

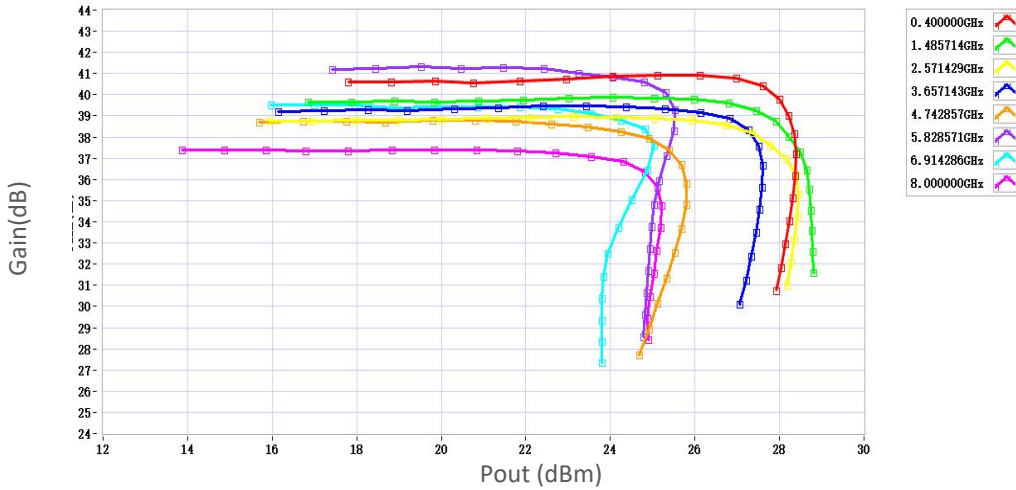
VSWR&Gain vs Frequency



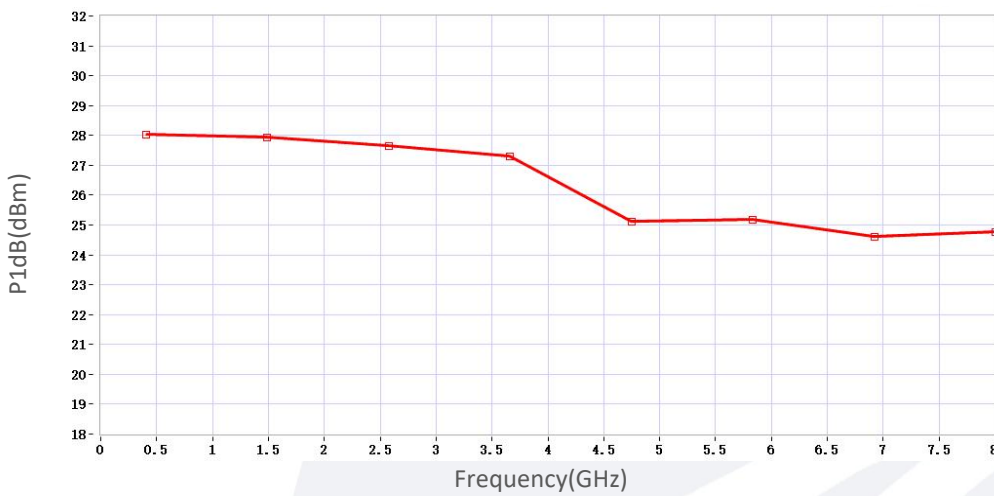
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

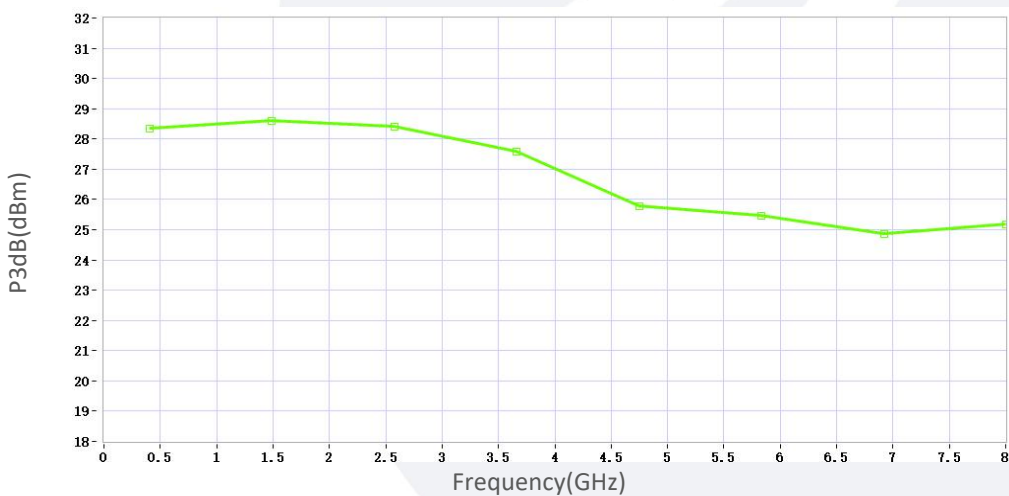
Gain vs Output Power



P1dB vs Frequency



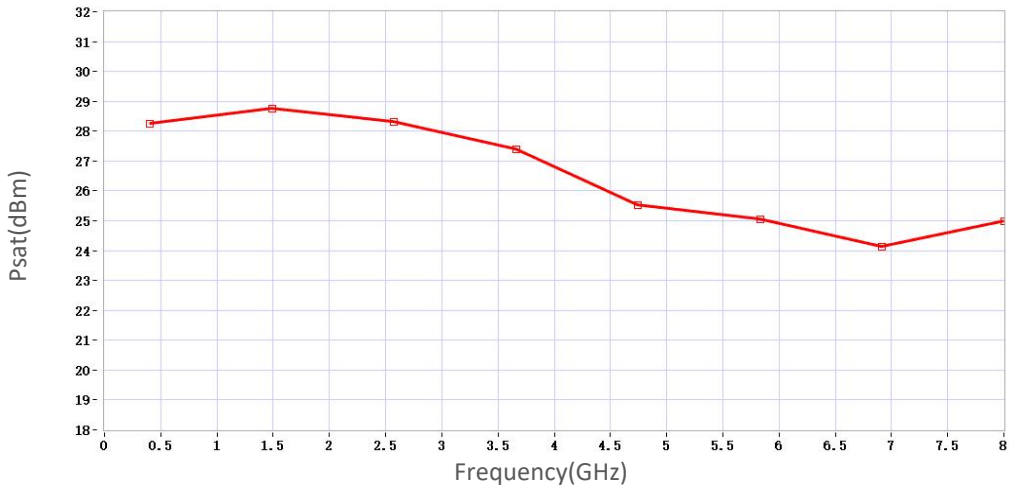
P3dB vs Frequency



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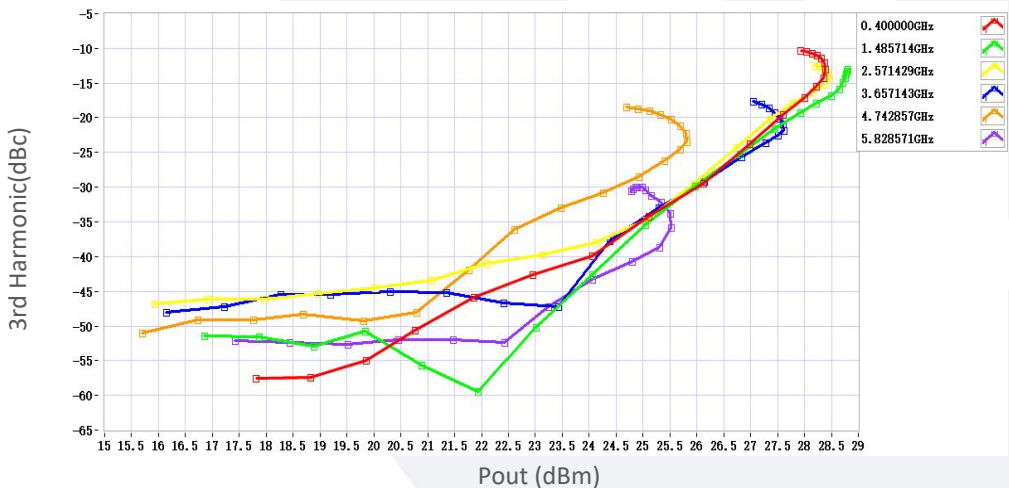
Psat vs Frequency



2nd Harmonic vs Output Power



3rd Harmonic vs Output Power



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