

## Power Amplifier

2.7-3.5GHz/25dB Gain/56dBm Psat

Model: TLPA2.7G3.5G-25-56

TLPA2.7G3.5G-25-56 is a power amplifier with a typical small signal gain of 25 dB and a minimum Psat of 56 dBm across the frequency range of 2.7 to 3.5 GHz. The DC power requirement for the amplifier is +28 VDC/50 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

### Features:

- Frequency range: 2.7-3.5GHz
- Gain: 25dB Typ
- Output Power Psat: 56dBm 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	2.7		3.5	GHz
小信号增益 Small Signal Gain	20	25		dB
增益平坦度 Gain Flatness		±1	±2	dB
线性输出功率 Output P1dB		50		dBm
饱和输出功率 Output Psat	56	57		dBm
谐波抑制 Harmonics @Pout=56dBm			20	dBc
输入驻波 Input VSWR		1.5	2.0	:1
直流电压 DC Voltage	+26	+28	+30	V DC
直流电流 DC Supply Current		50	70	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/N Female	
直流供电接口 DC Power Supply Connector	Four core avionics	
尺寸 Size	366*358*141	mm
重量 Weight	14	Kg

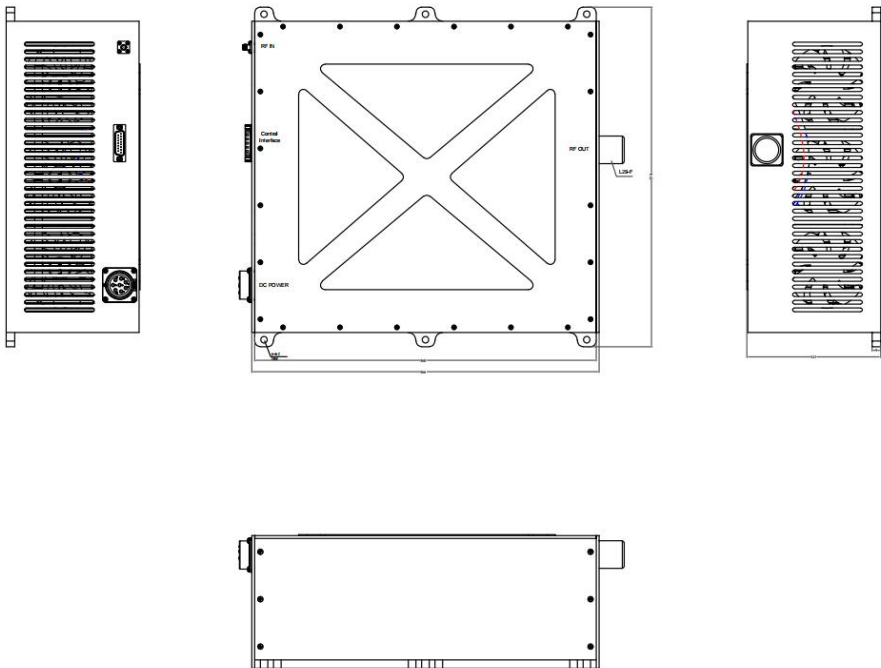
## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+30 V
输入功率 RF Input Power	+40 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.

## 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)	20g,11ms,saw-tooth			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

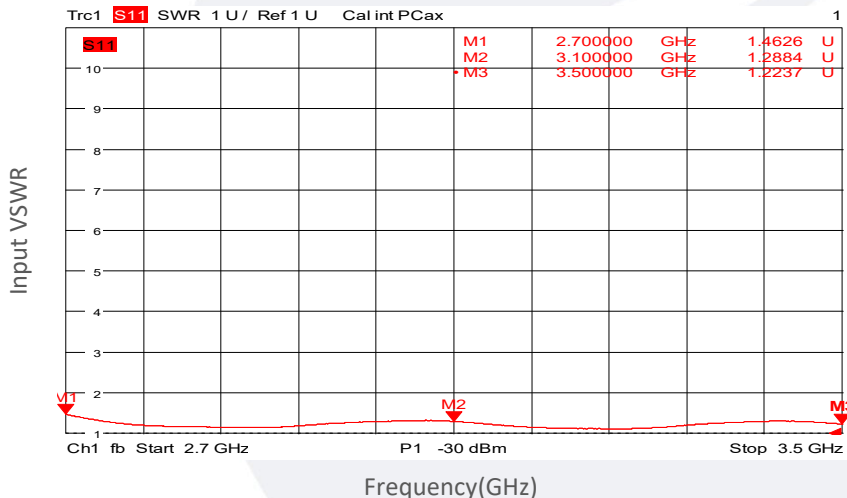
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA2.7G3.5G-25-56	Power amplifier 2.7-3.5GHz, Gain:25dB,Psat:56dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA2.7G3.5G-25-56-HS	Power amplifier 2.7-3.5GHz, Gain:25dB,Psat:56dBm,+28V DC,With Heatsink	Rev.1.1

## 典型曲线 Typical Performance Data(T=25°C):

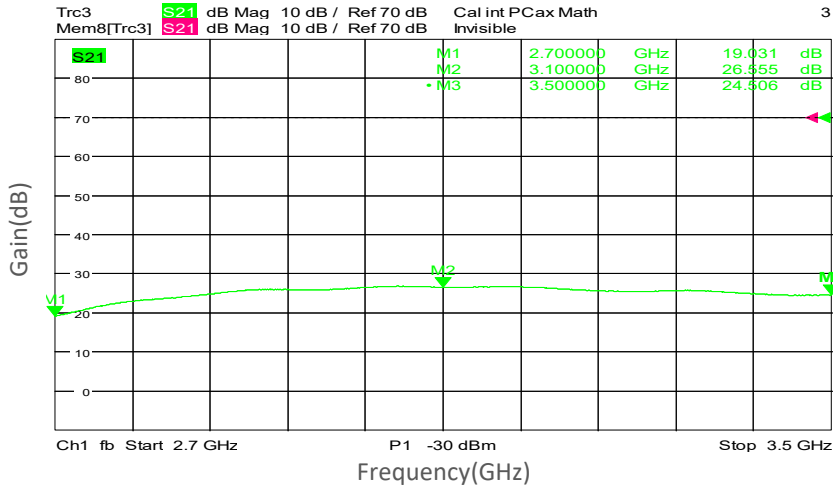
### Input VSWR vs Frequency



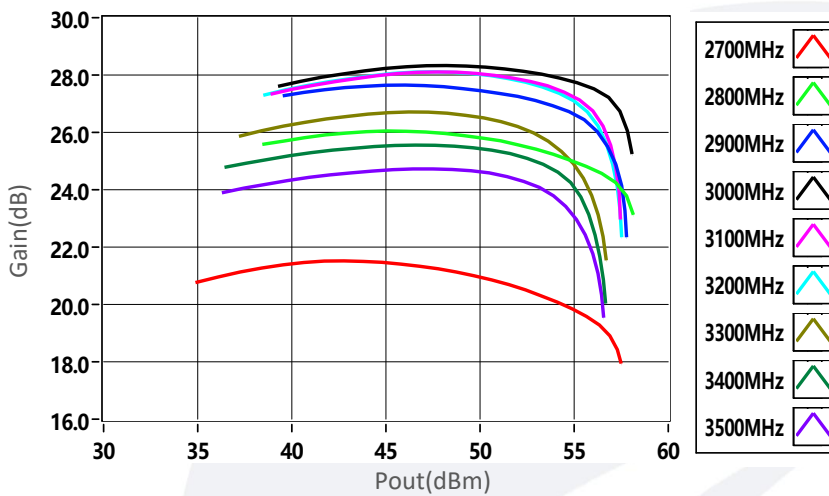
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data(T=25°C):

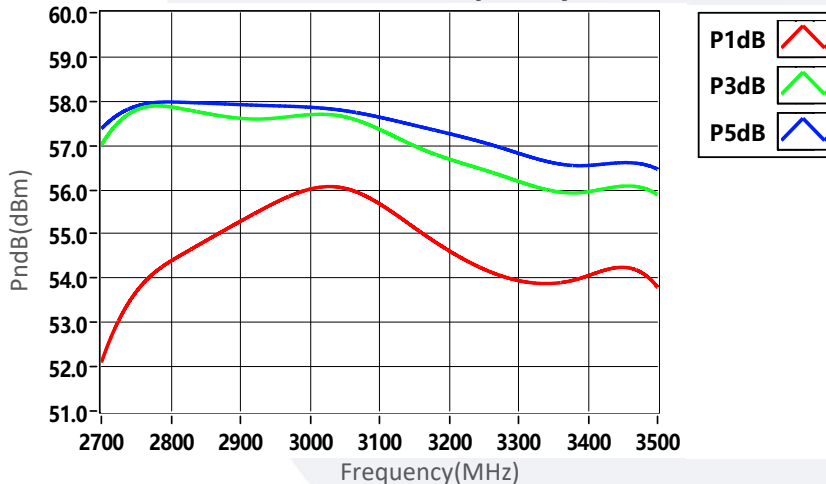
Small Signal Gain vs Frequency



Small Signal Gain vs Output Power



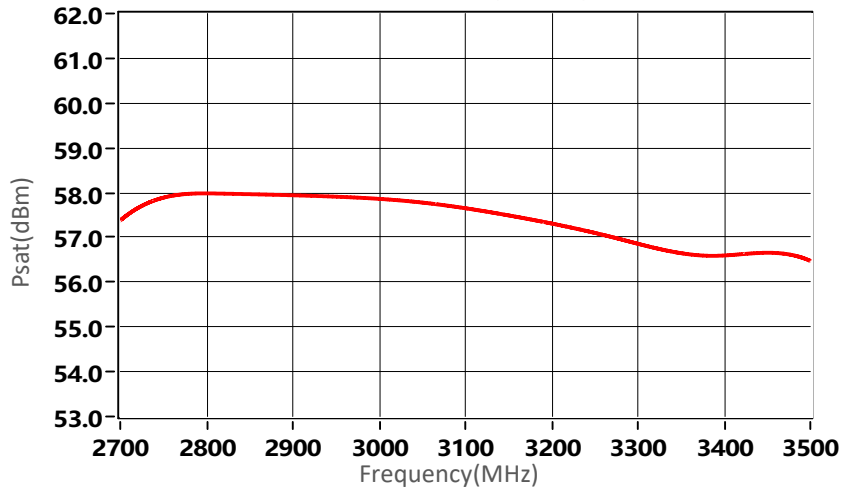
PndB vs Frequency



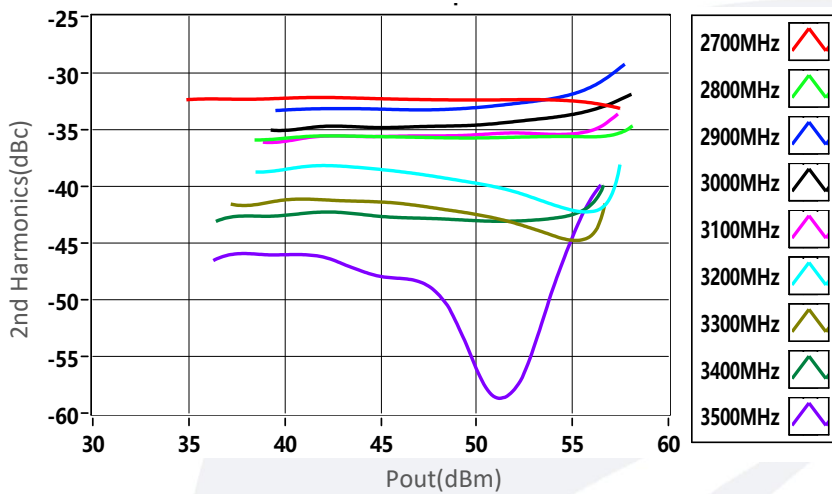
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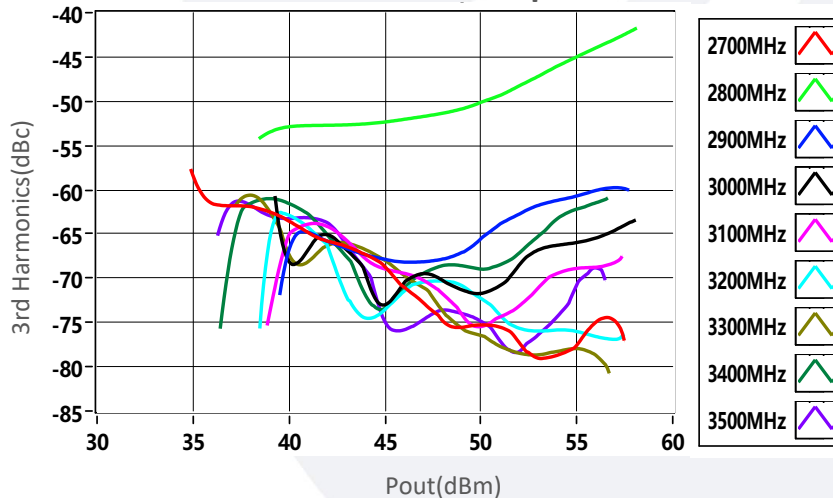
Psat vs Frequency



2nd Harmonics vs Output Power

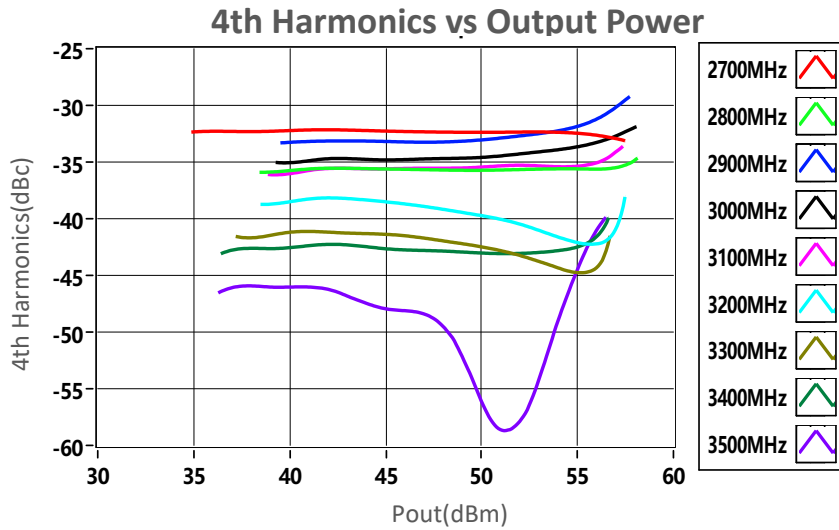


3rd Harmonics vs Output Power

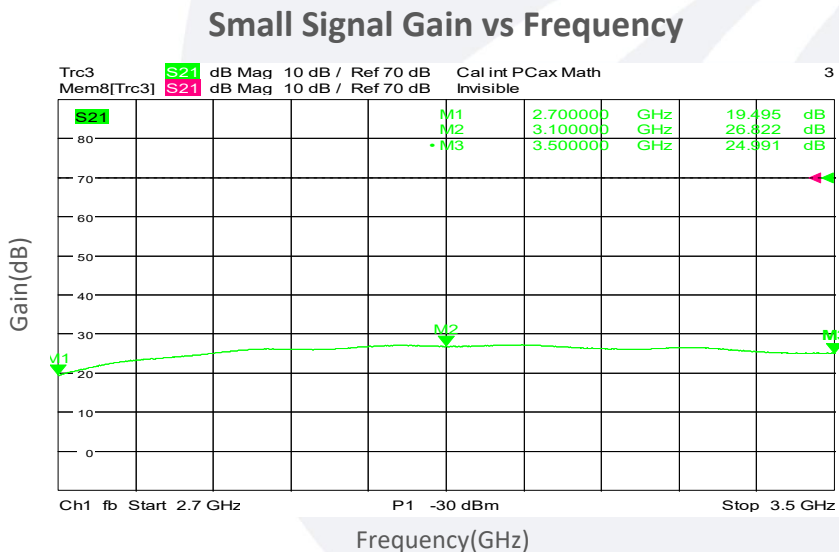
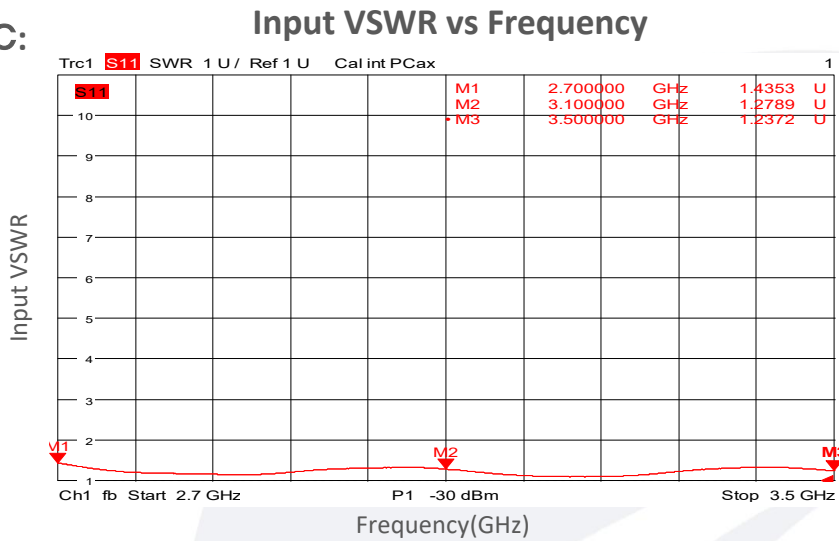


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典型曲线 Typical Performance Data(T=25/20°C):



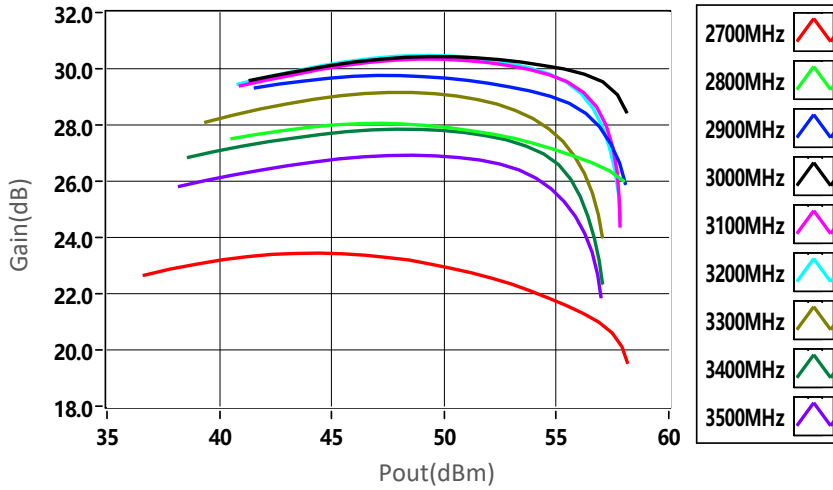
Test TEM=20°C:



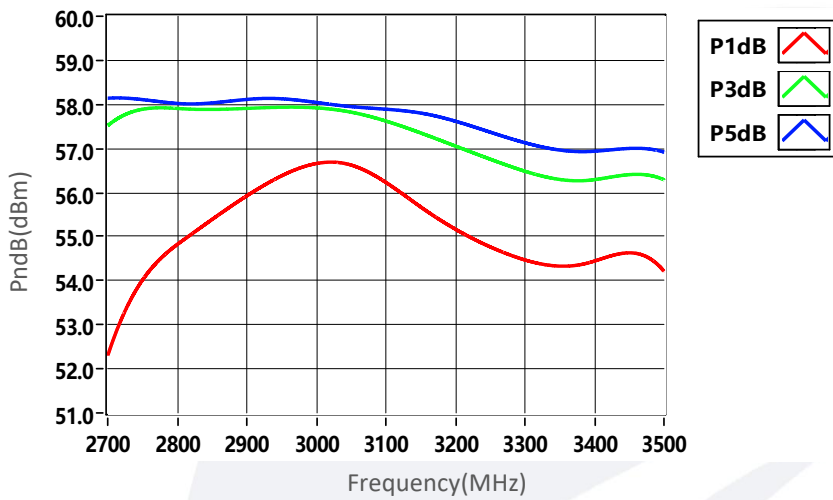
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典型曲线 Typical Performance Data(T=20°C):

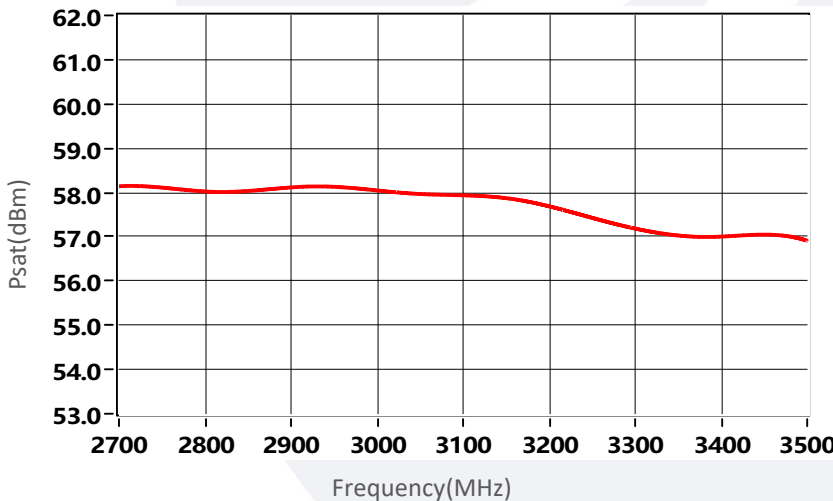
Gain vs Output Power



PndB vs Frequency



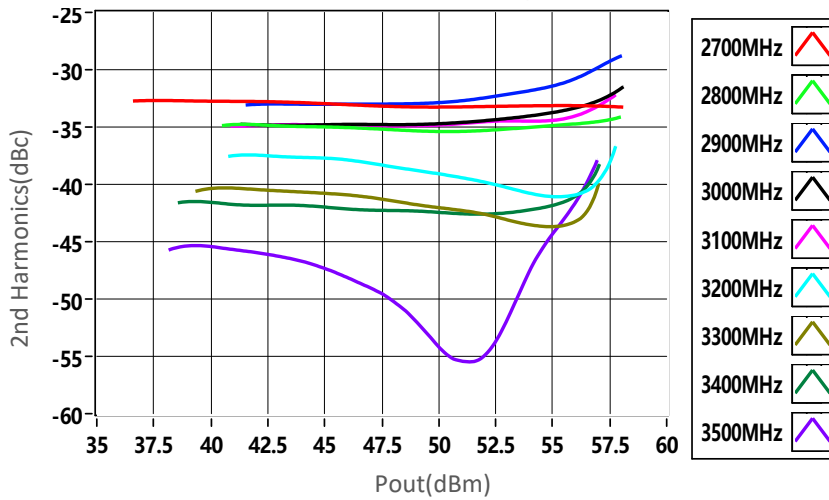
Psat vs Frequency



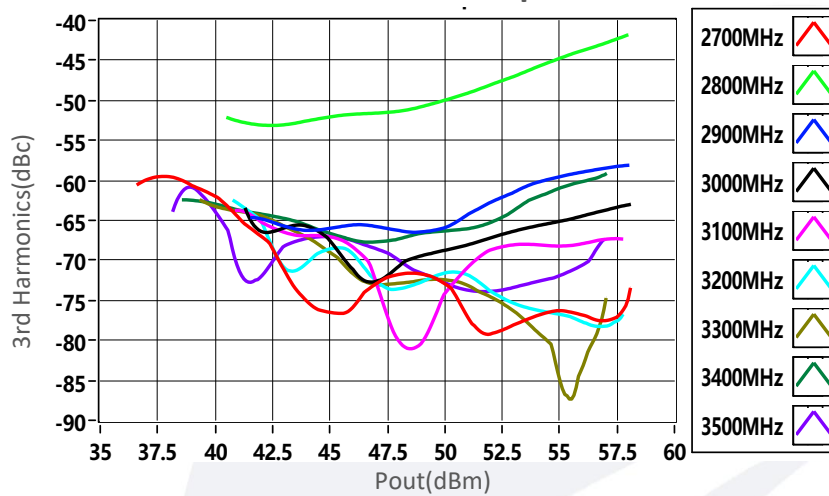
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典型曲线 Typical Performance Data(T=20°C):

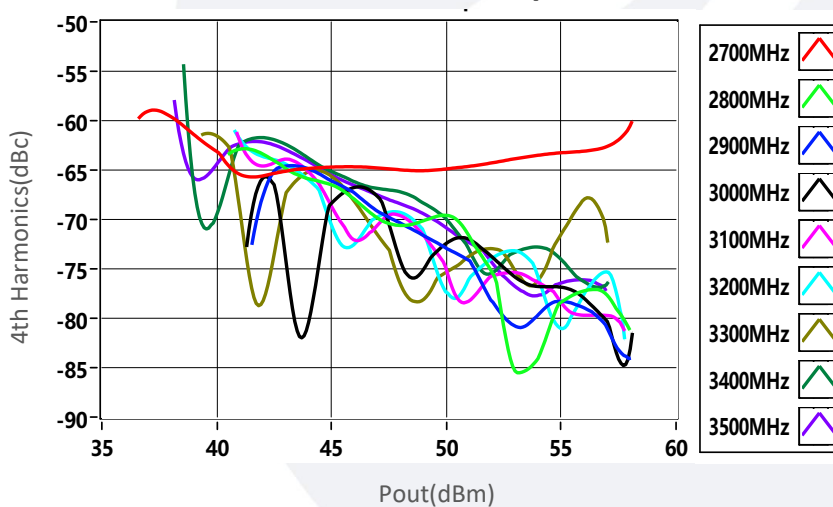
2nd Harmonics vs Output Power



3rd Harmonics vs Output Power



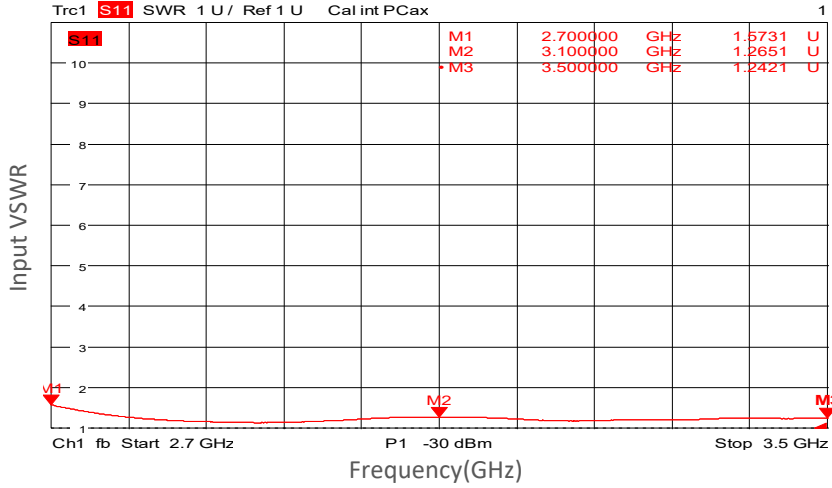
4th Harmonics vs Output Power



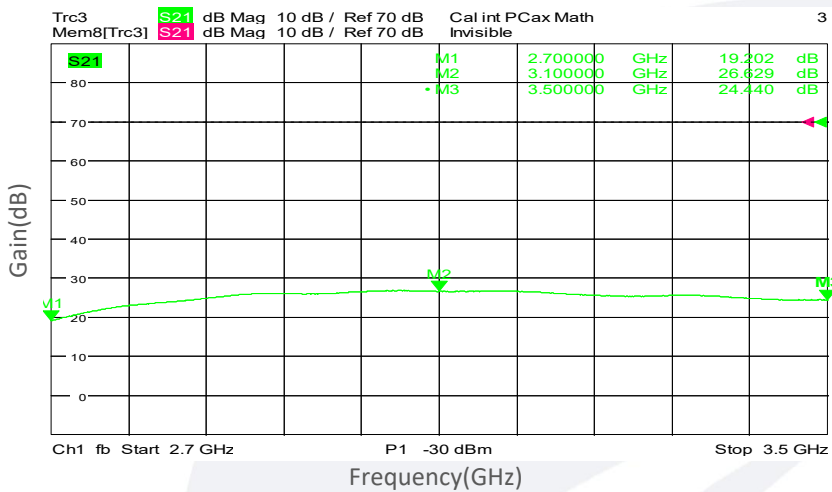
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典型曲线 Typical Performance Data(T=50°C):

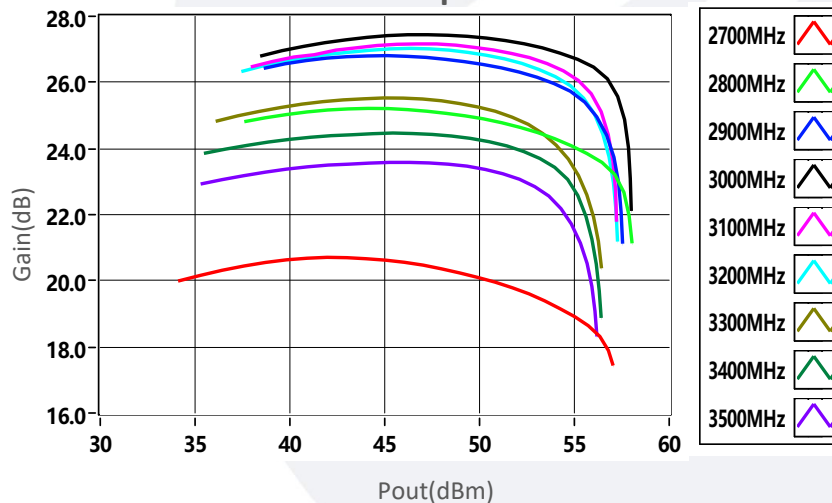
Input VSWR vs Frequency



Small Signal Gain vs Frequency



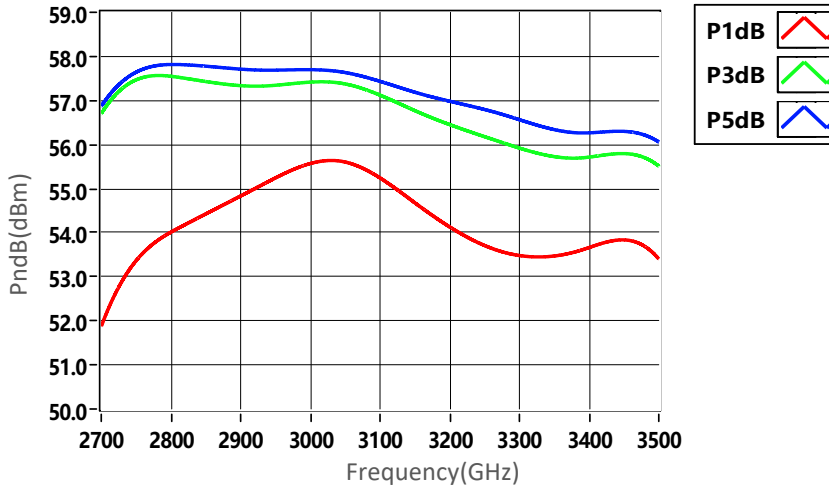
Gain vs Output Power



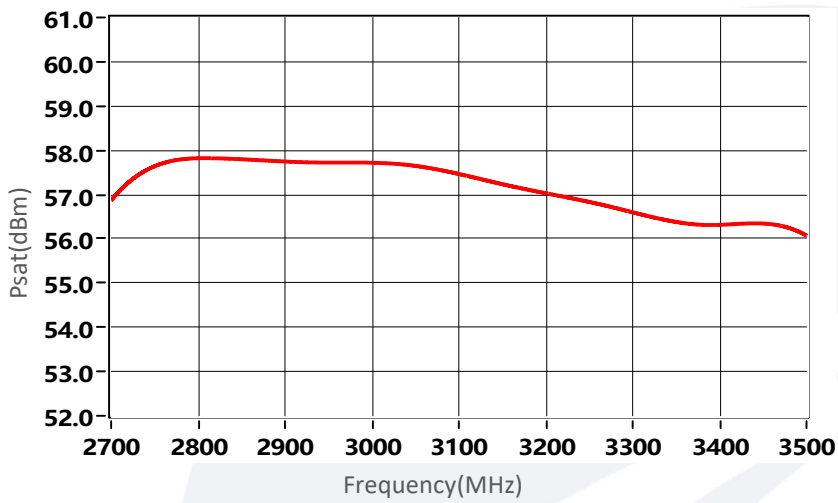
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典型曲线 Typical Performance Data(T=50°C):

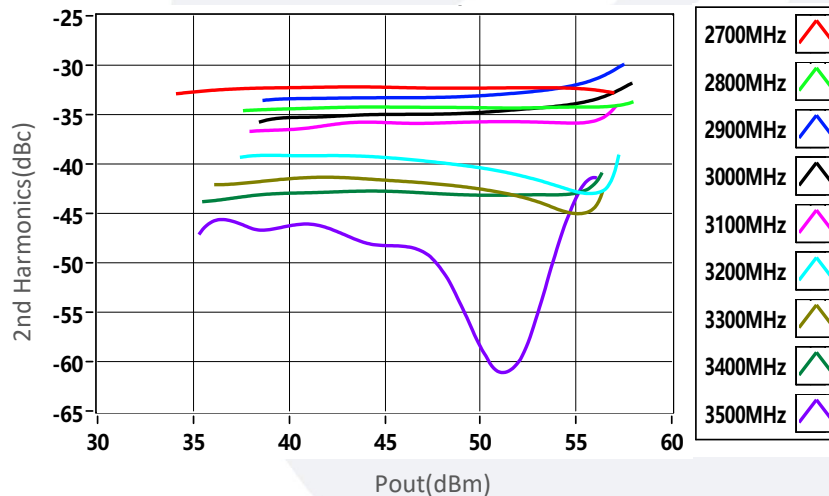
PndB vs Frequency



Psat vs Frequency



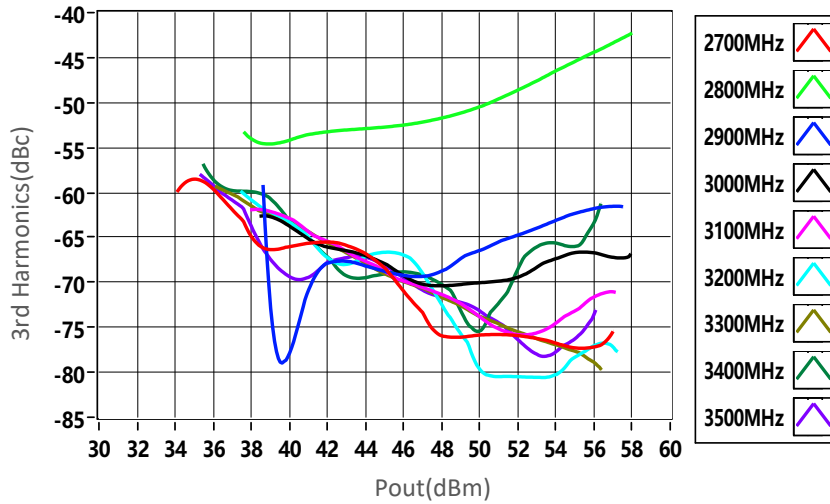
2nd Harmonics vs Output Power



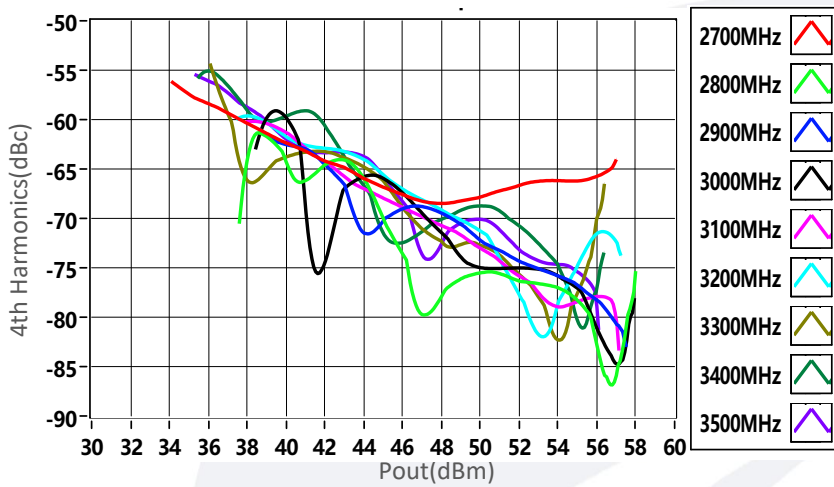
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典型曲线 Typical Performance Data(T=50°C):

3rd Harmonics vs Output Power



4th Harmonics vs Output Power



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