泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Power Amplifier

8-12GHz/50dB Gain/50dBm Psat

Model: TLPA8G12G-50-50-IP67

TLPA8G12G-50-50-IP67 is a power amplifier with power gain of 50 dB and a nominal Psat of 50 dBm across the frequency range of 8 to 12 GHz. The DC power requirement for the amplifier is +28 VDC/650 W. 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: 8-12 GHz
- Gain: 50dB Min
- Output Power Psat: 50dBm Min
- Protection:Over TEM,over current,over voltage, load VSWR protection
- 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
线性增益调节范围 Linear Gain adjustment range	30			dB
线性增益调节步进 Linear Gain adjustment step		0.5		dB
功率增益 Power Gain@Pout=50dBm	50			dB
功率增益平坦度 Power Gain Flatness		±4.5		dB
线性输出功率 Output P1dB	45			dBm
饱和输出功率 Output Psat	50			dBm
饱和输出功率平坦度 Output Psat Flatness		±1.5		dB
杂散 Spurious@Pout=50dBm			-60	dBc
谐波 Harmonics@Pout=50dBm			-25	dBc
输入驻波 Input VSWR			1.5	:1
输出驻波 Output VSWR			2	:1
匹配负载驻波 Load VSWR			5	:1

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电气特性 Electrical Characteristics:

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直流电压 DC Voltage		28	29	V DC
功耗 Power Consumption@Pout=50dBm		600		W
功耗 Power Consumption@Psat			650	W
防护等级 Ingress Protection Grade	IP-67(Power off)			
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 Supply Connector	Y50DX-1404	Pin1~2:+28V Pin3~4:GND
通信及控制接口 M&C Connector	Ethernet:RJ-45;Serial:Y50X-1007	
尺寸 Size	280*180*120	mm
重量 Weight	≤7	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+29 V
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

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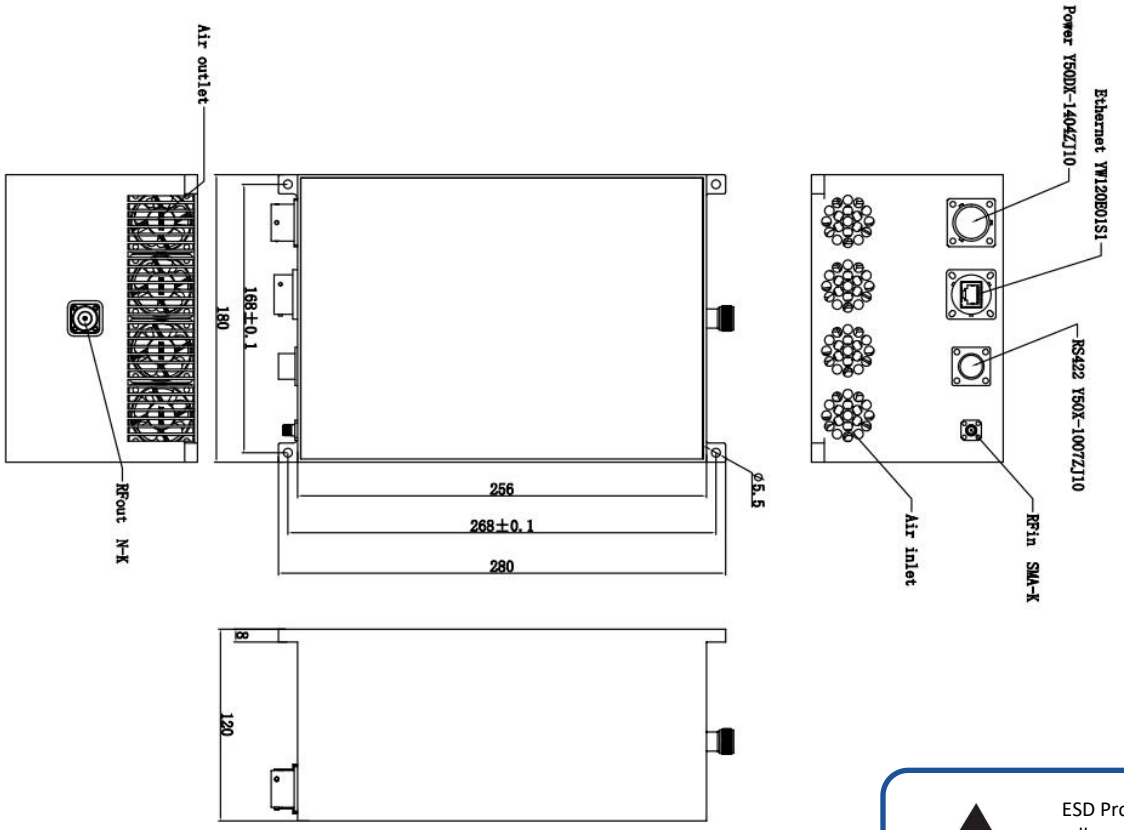
外形图 Outline Drawing:

Unit:mm



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

主要功能 Key Features:

参数 Parameter	特点 Advantages
内置保护功能 Protection functions	1,Over TEM: environment temperature ≥+70℃ shutdown;case temperature ≥+95℃ shutdown 2,Over DC voltage: ≥29.5V shutdown 3,Over current: ≥120% rated current shutdown 4,Load VSWR protection: The unit disables RF when reverse power exceeds the safe level of 3:1 VSWR or reduces power by 6dB
通信功能 Communication function	RS422;DCP/UDP（choose one）
监视功能 Monitor function	Chip-level: status of power chip(gate voltage, drain current, case-temp); System-level: output power, reverse power, load VSWR, DC voltage, DC current, environment temp.
冷却系统 Cooling system	Built in Cooling system,forced air cooling

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温度环境 Environmental Conditions:

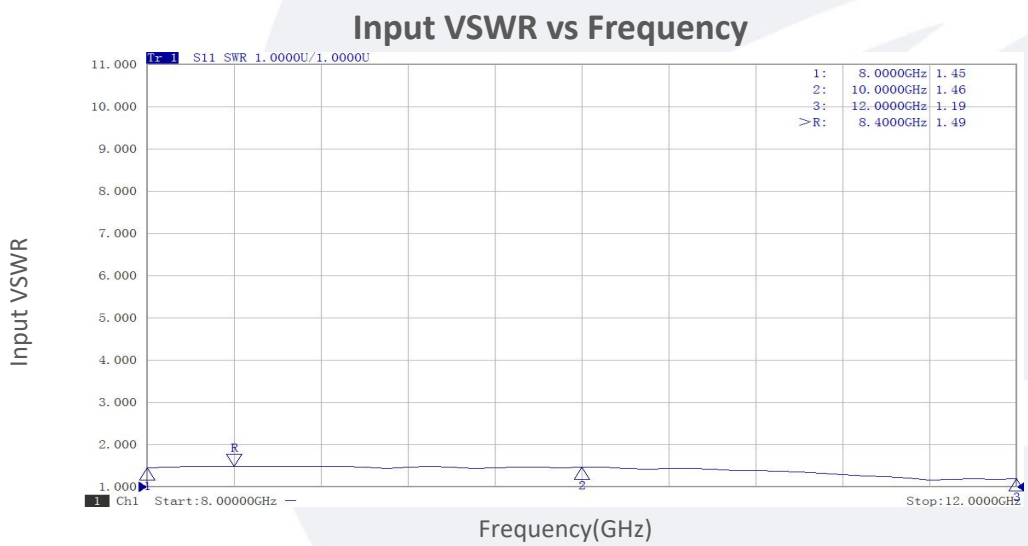
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+65	℃
存储温度 Non-operating Temperature*	-40		+70	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	3,000			meters
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc 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-50-50-IP67	Power amplifier 8-12GHz, Gain:50dB,Psat:50dBm,+28V DC,forced air cooling	Rev.1.1

典型曲线 Typical Performance Data:



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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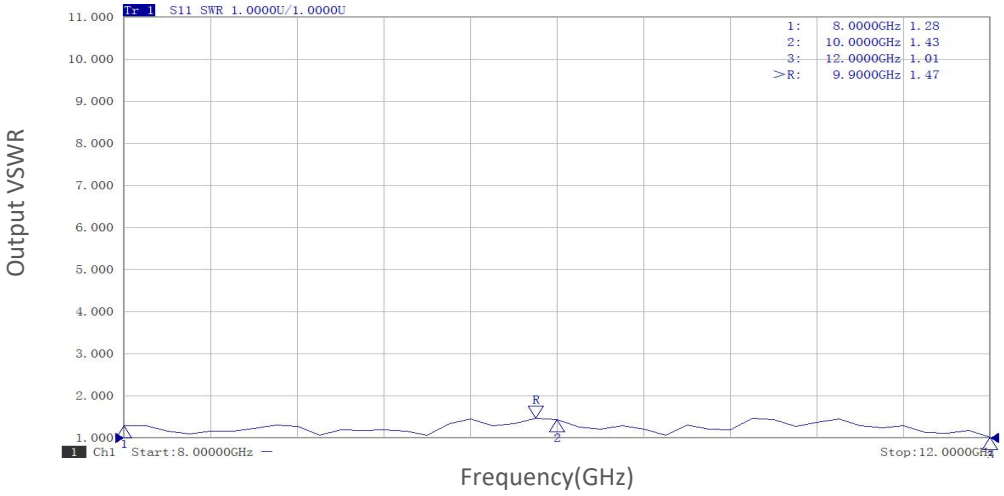
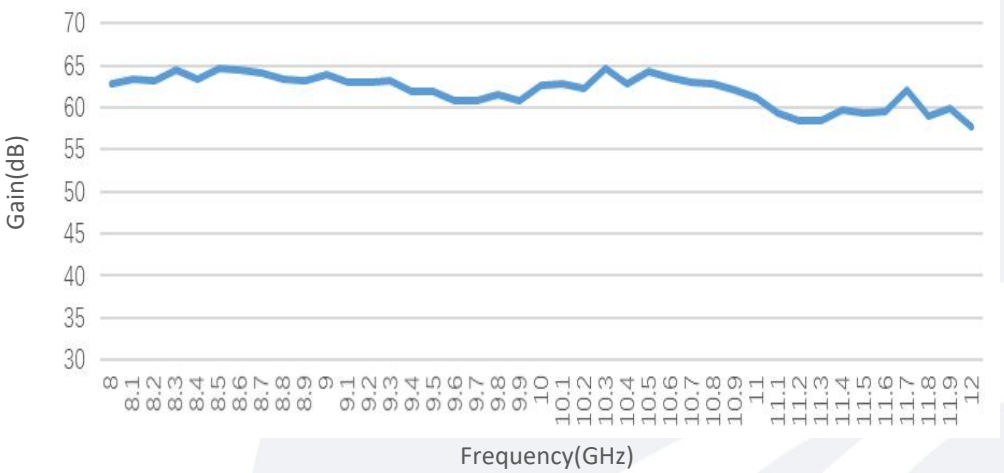
典型曲线 Typical Performance Data:

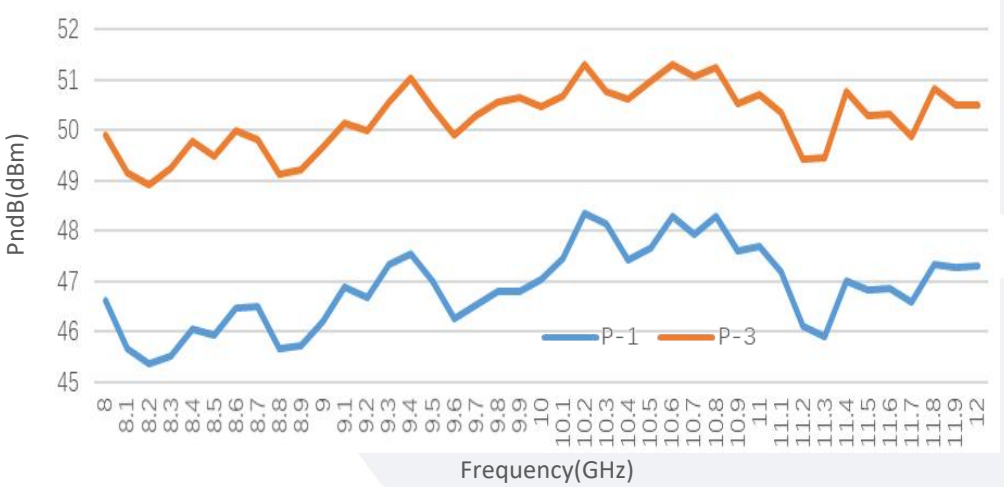
Output VSWR vs Frequency



Small Signal Gain vs Frequency



PndB vs Frequency



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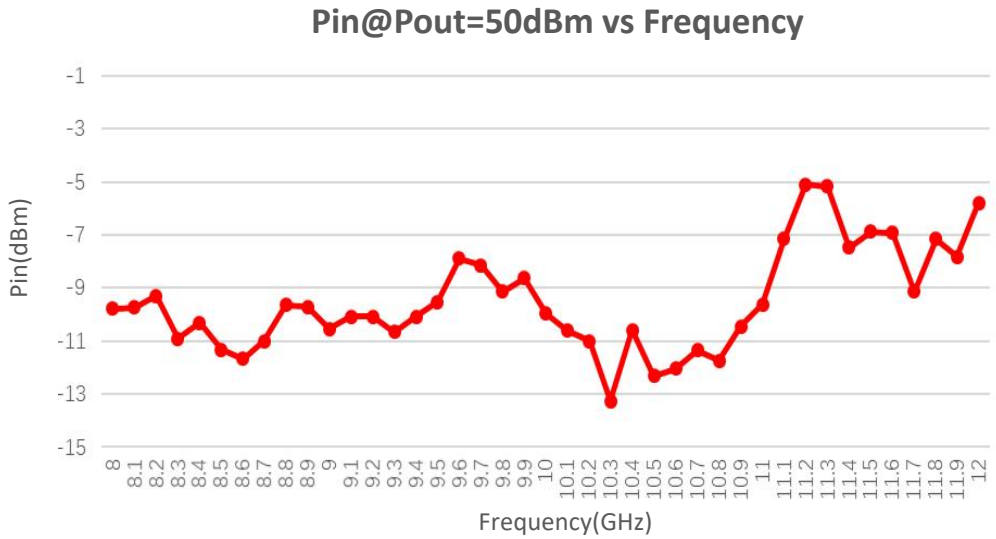

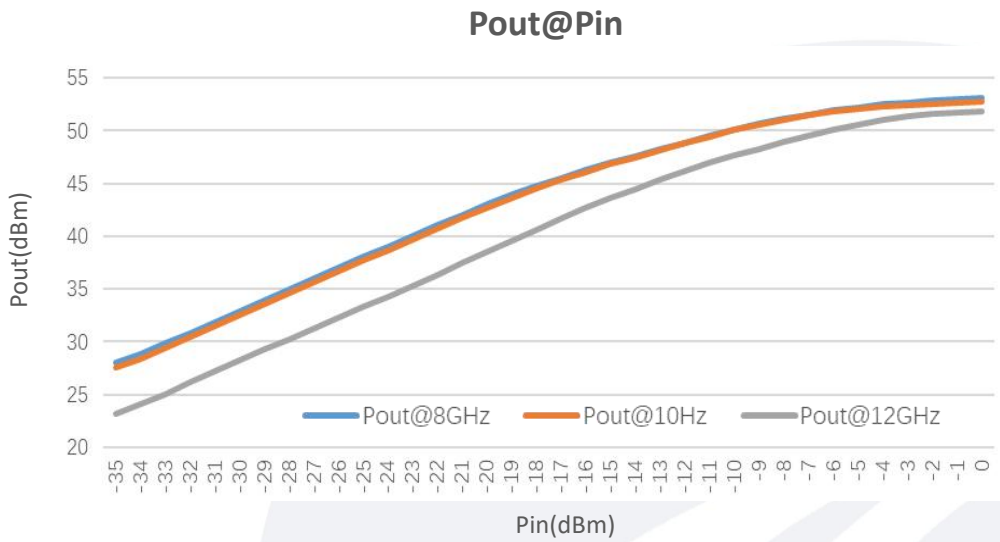

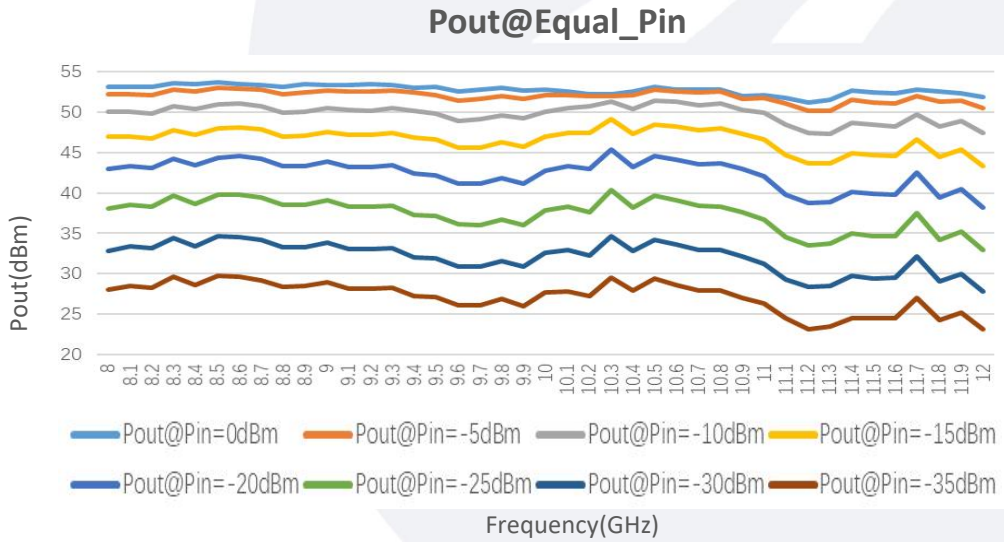

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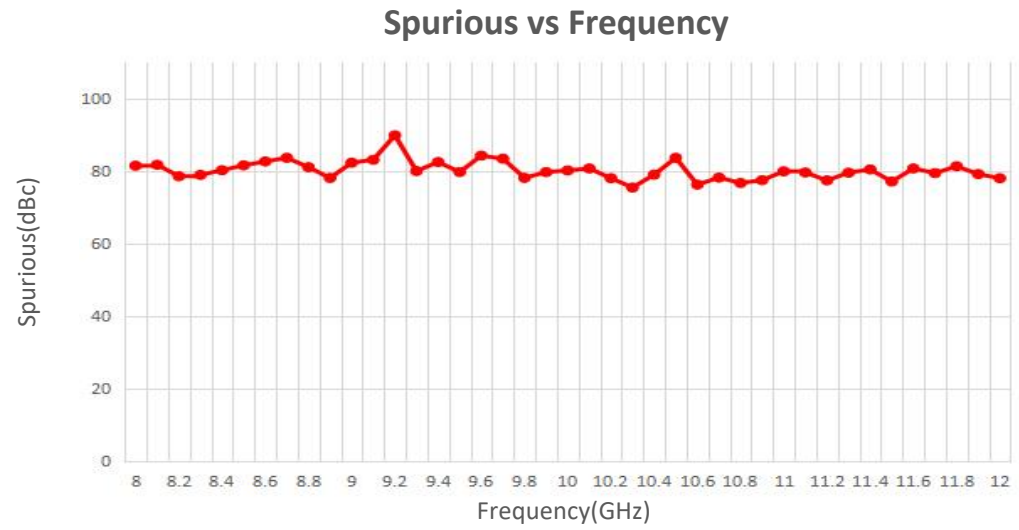

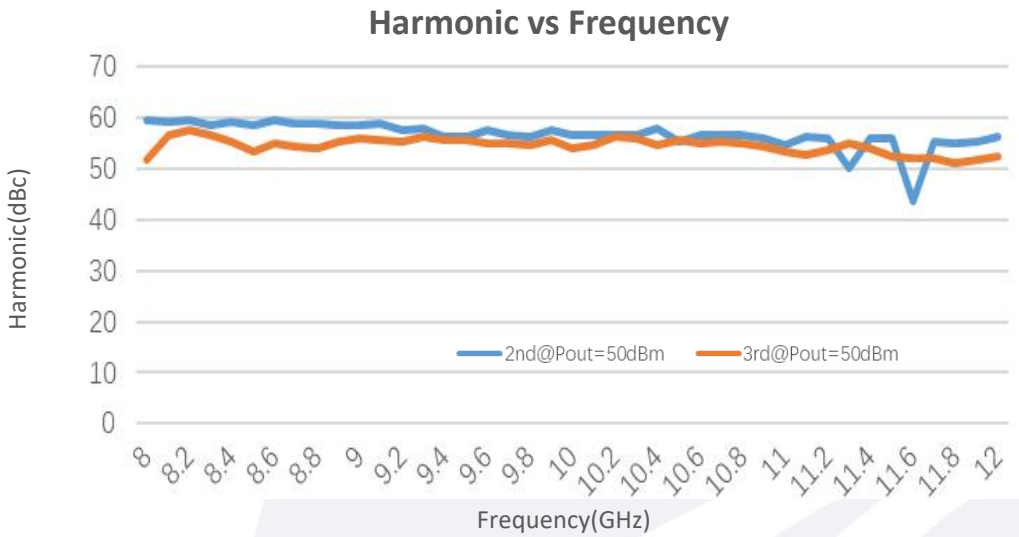

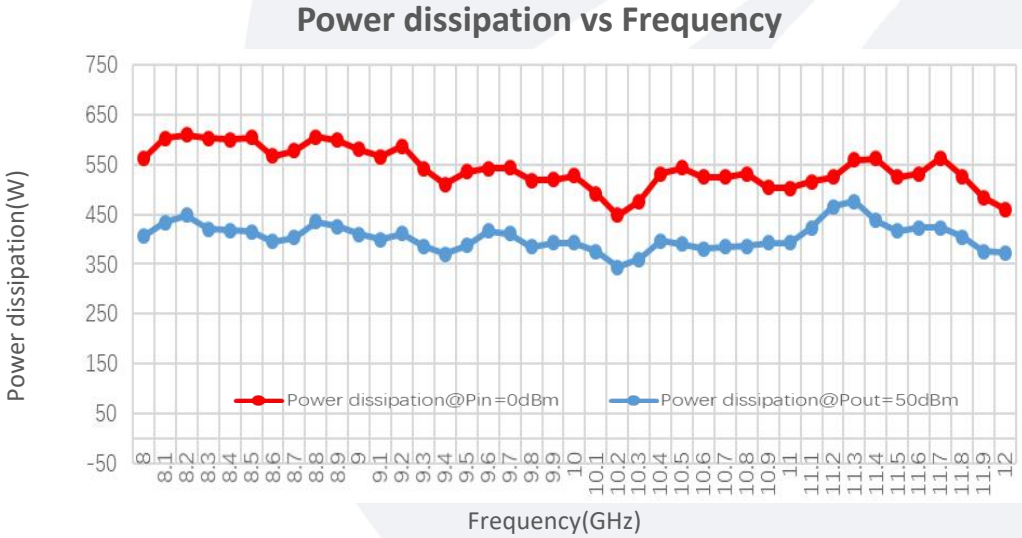

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