

Solid State High Power Amplifier Systems

0.3-6GHz/50dB Gain/50dBm Psat/220V AC

Model: TLPA0.3G6G-50-50-BC

TLPA0.3G6G-50-50-BC is a solid state high power amplifier systems provides high output power and high gain across the 0.3 to 6 GHz frequency range. The amplifier features a built-in 220V power supply, making it easy to use in most lab environments. This model features thermal self protection, preventing damage to the amplifier and providing added reliability.

Features:

- Frequency range: 0.3-6GHz
- Gain: 50dB Min
- Psat Output Power: 50dBm Min
- Protection: Over TEM, over voltage, over current, over VSWR protection
- 50 Ohm Matched Input / Output

电气特性 Electrical Characteristics:

参数 Parameter	代码 Symbol	Min	Typ	Max	单位 Units
频率范围 Frequency range	BW	Band A: 0.3-2; Band B: 2-6			GHz
功率增益 Power Gain	GP	50			dB
增益平坦度 Gain flatness	ΔGL		± 3.5		dB
增益调节范围 Gain adjust Range	ΔGR		31.5		dB
增益调节步进 Gain adjust Step	ΔGS		0.5		dB
饱和输出功率 Output Psat	Psat	50			dBm
杂散 Spurious@Pout=50dBm	Spur			-60	dBc
谐波 Harmonics@Pout=50dBm	HAM		-10		dBc
输入驻波 Input VSWR	VSWRin			2.0	:1
交流电压 AC Voltage	Vac		220		V AC
交流电流 AC Supply Current	Iac		4		A
功耗 Power Consumption	Pdiss			850	W
阻抗 Impedance	I/O-IMP	50			Ohms

机械特性 Mechanical Specifications:

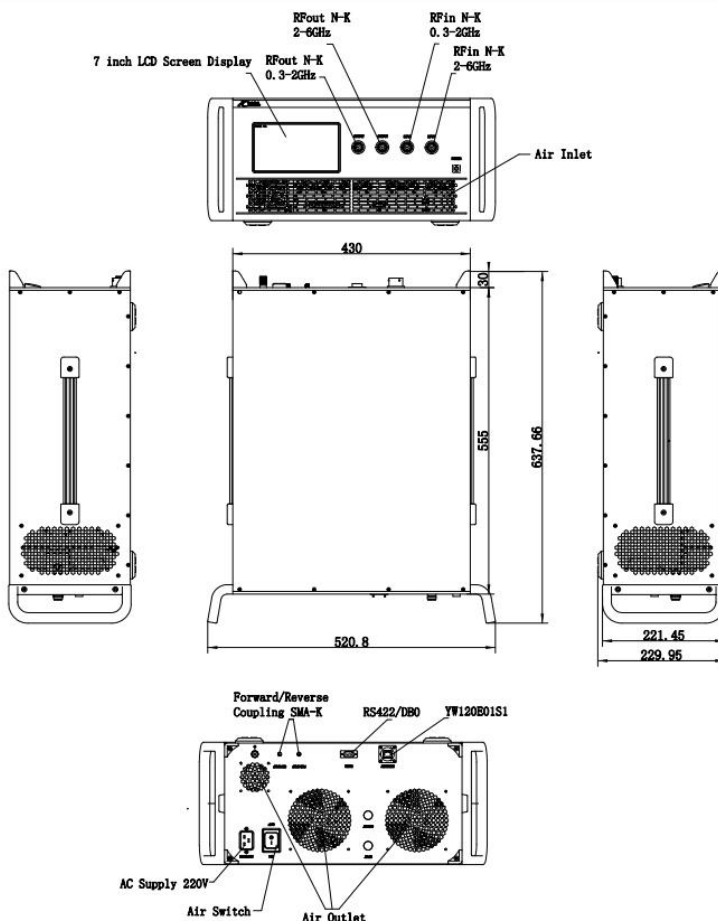
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/N Female	
交流供电接口 AC Power Interface	Air switch	
尺寸 Size	19 Inch 4U*550	mm
重量 Weight	≤35	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
供电偏置电压 Supply Bias Voltage	260V AC
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting On/Off 2, ALC automatic level control
内置保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
监控和控制 Remote control	RS422/Ethernet
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*	-20		+40	°C
存储温度 Non-operating Temperature*	-30		+50	°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			

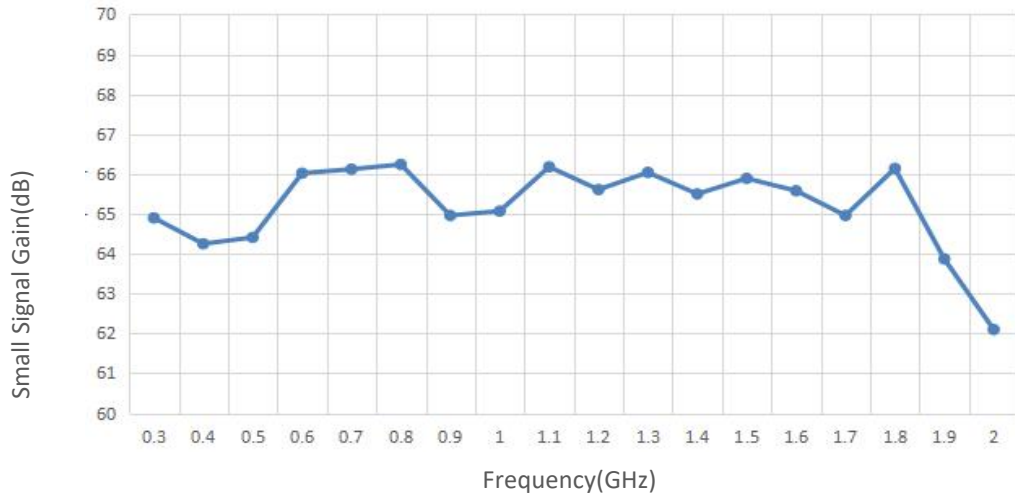
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

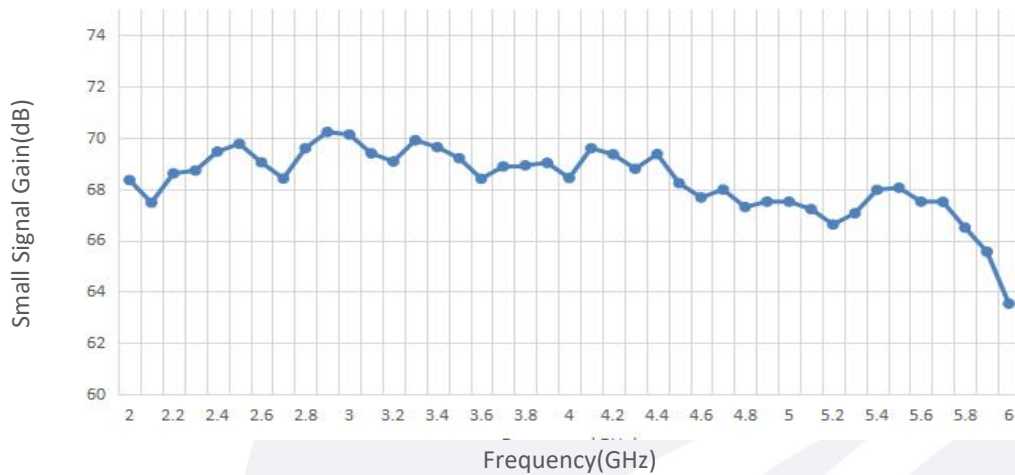
标准型号 Base Number	描述 Description	版本号 Revision
TLPA0.3G6G-50-50-BC	Solid State High Power Amplifier Systems 0.3-2GHz, Gain:50dB, Psat:50 dBm, 220V AC, Built in Fan Cooling	Rev.1.1

典型曲线 Typical Performance Data:

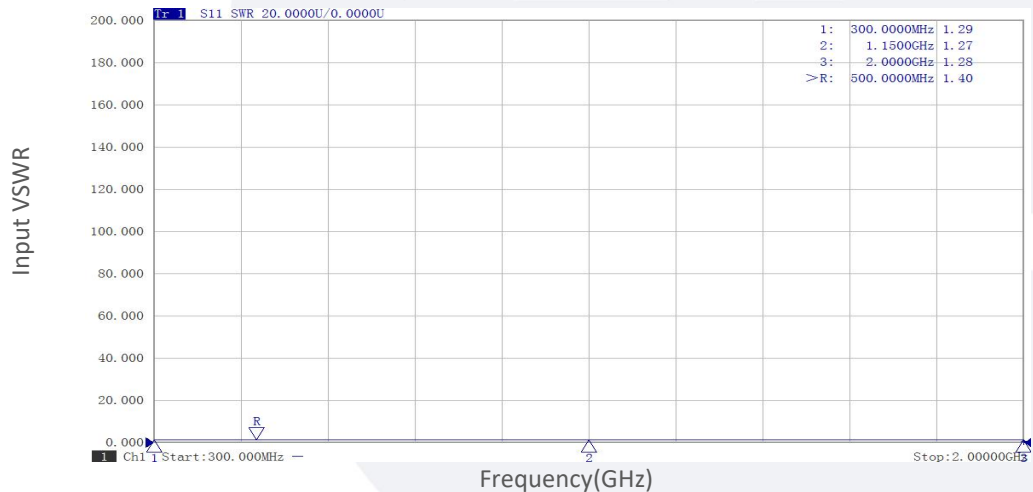
Small Signal Gain vs Frequency



Small Signal Gain vs Frequency



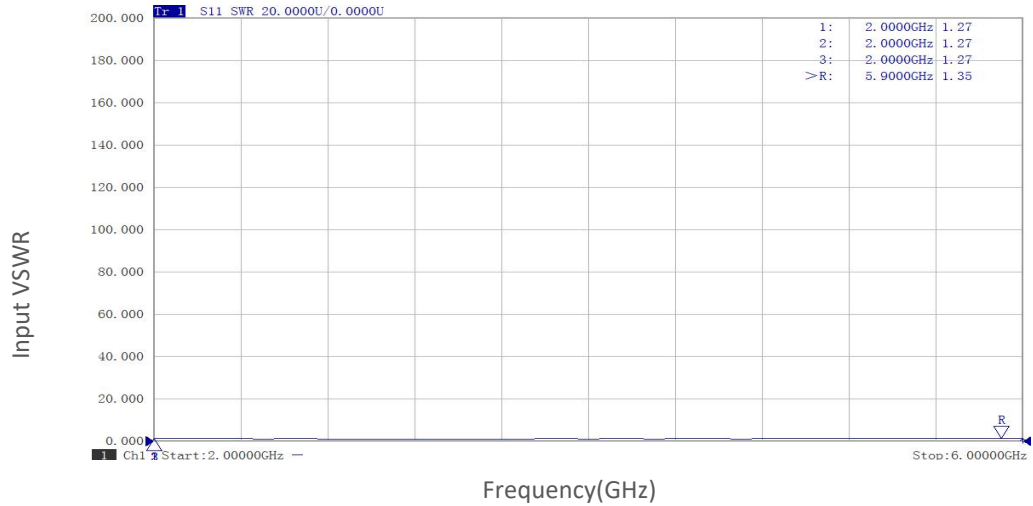
Input VSWR vs Frequency



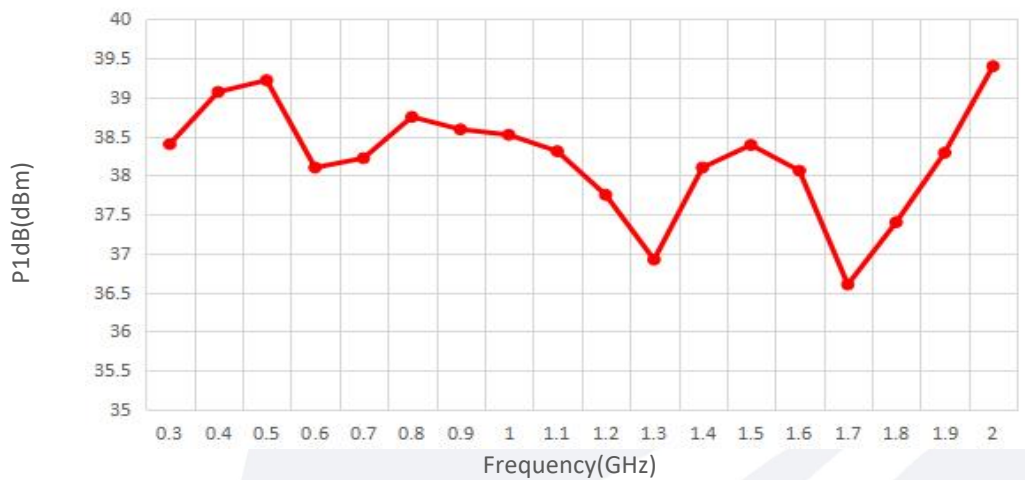
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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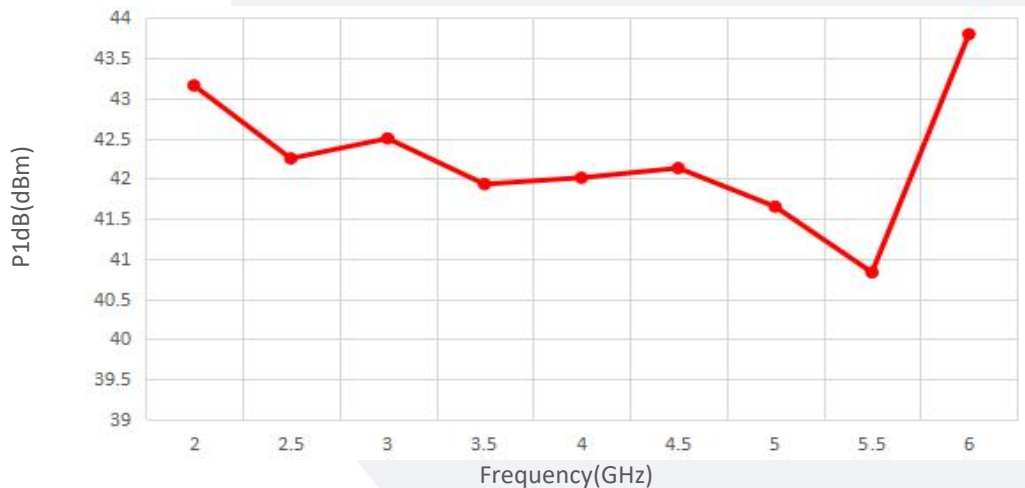
Input VSWR vs Frequency



P1dB vs Frequency



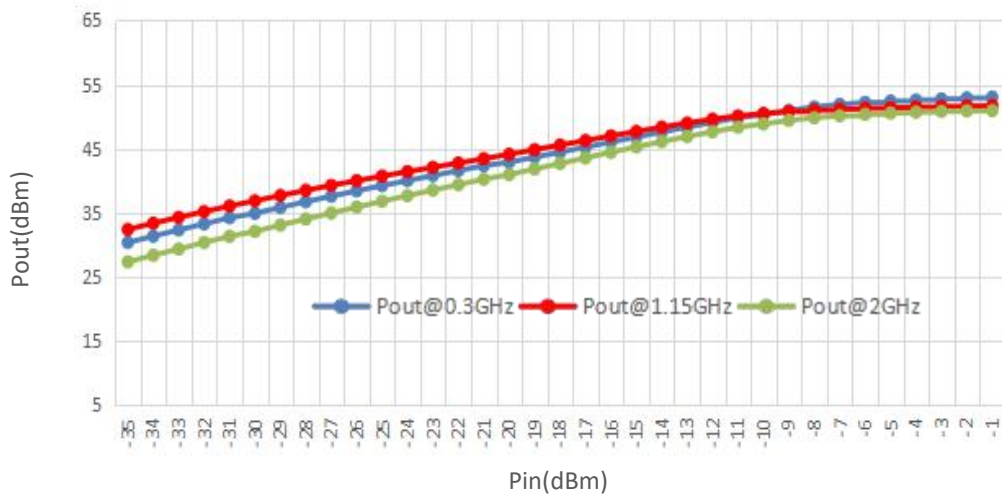
P1dB vs Frequency



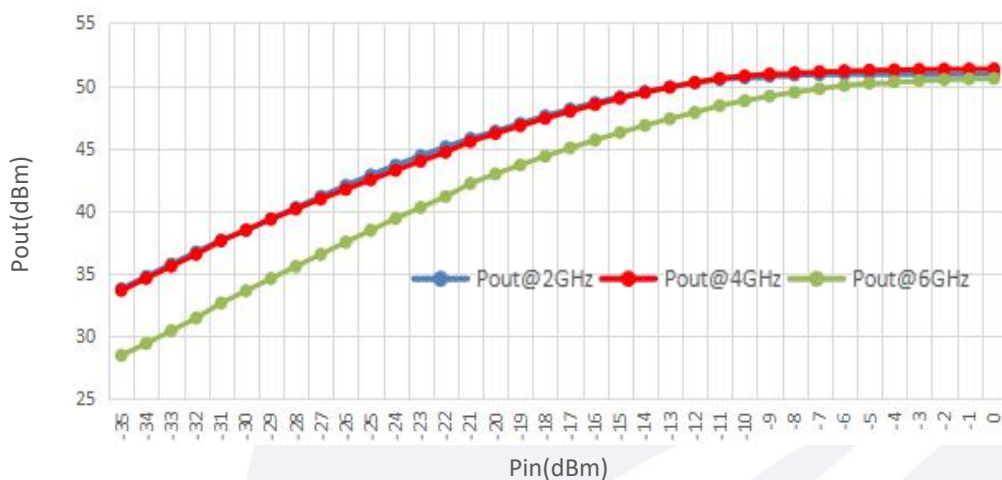
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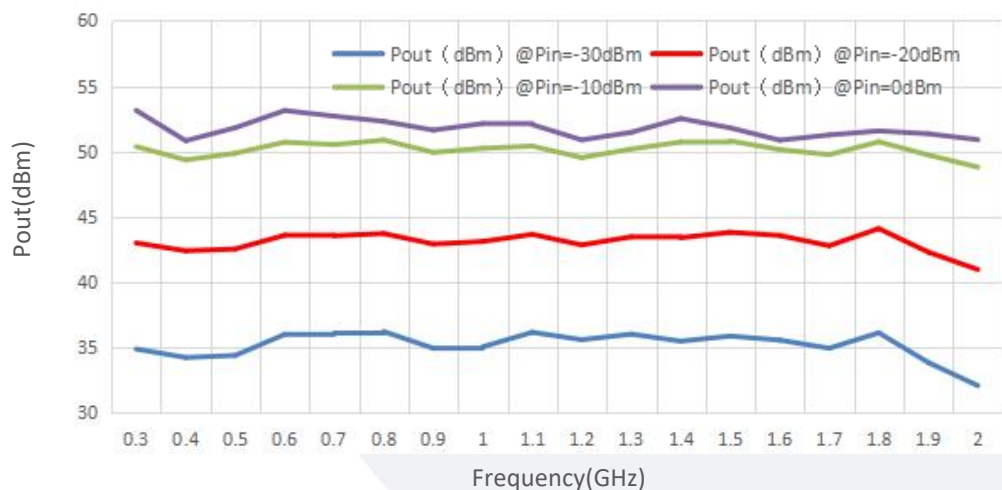
Pout@Pin



Pout@Pin



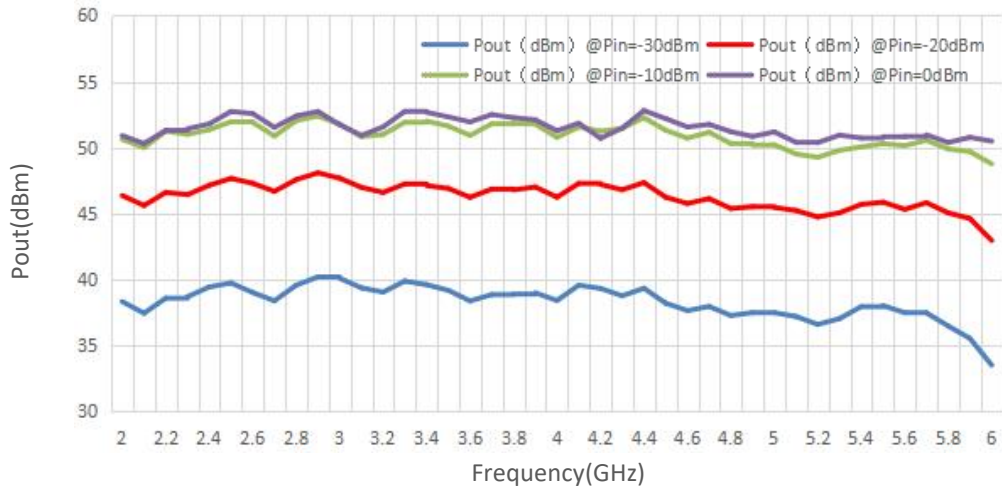
Pout@Equal_Pin



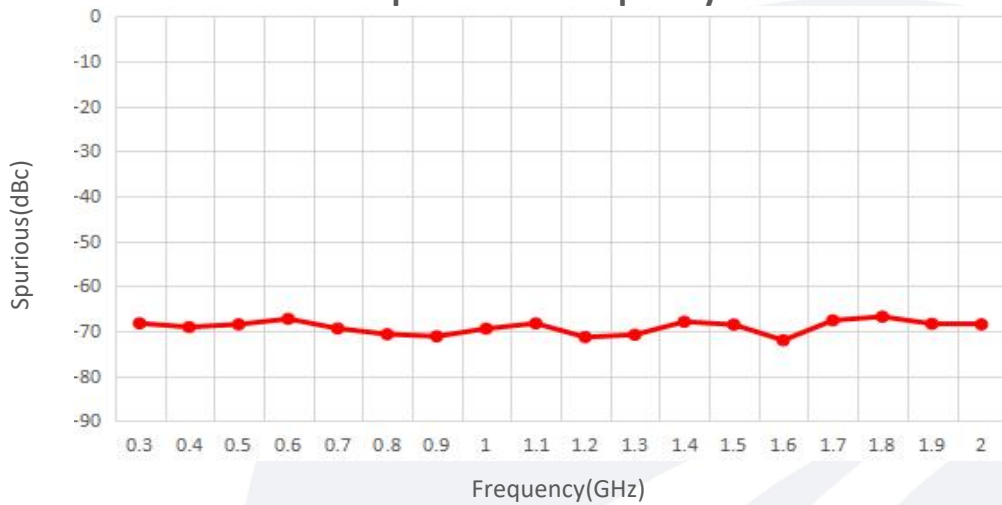
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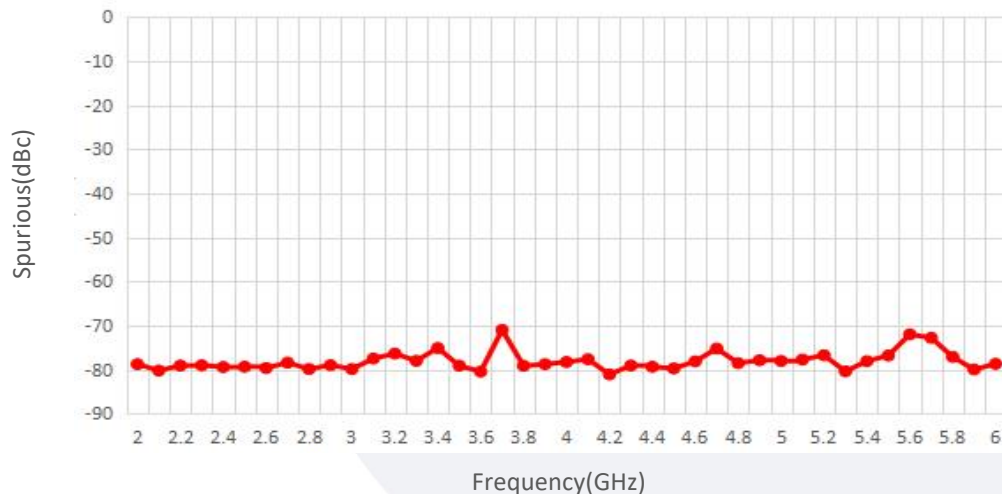
Pout@Equal_Pin



Spurious vs Frequency



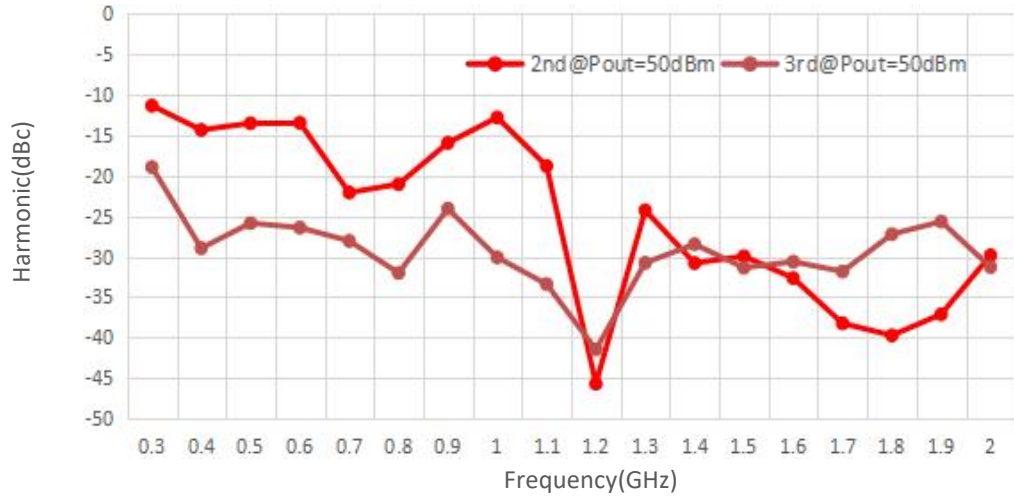
Spurious vs Frequency



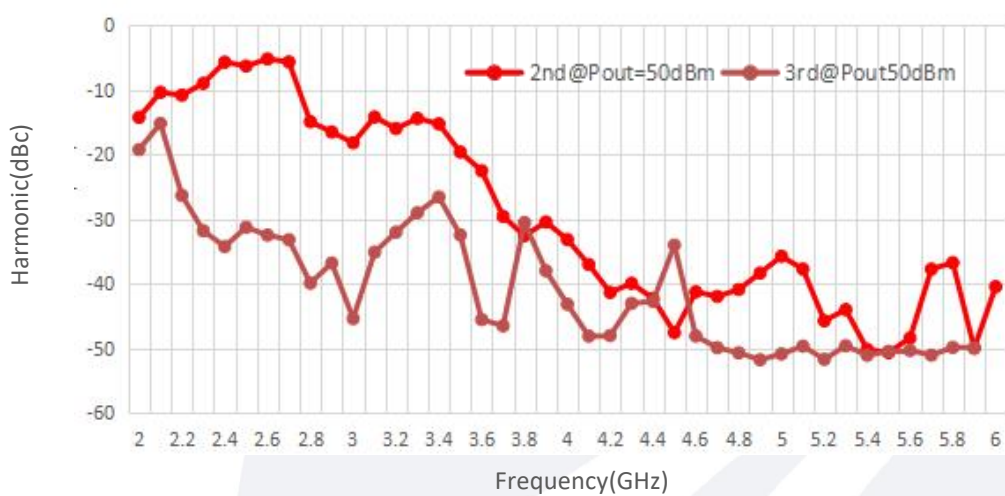
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典型曲线 Typical Performance Data:

Harmonic vs Frequency



Harmonic vs Frequency



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