

## Solid State High Power Amplifier Systems

8-18GHz/64dB Gain/64dBm Psat/220V AC

Model: TLPA8G18G-64-64-P-BC

TLPA8G18G-64-64-P-BC is a solid state high power amplifier systems provides high output power and high gain across the 8 to 18 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: 8-18GHz
- Gain: 64dB Min
- Psat Output Power: 64dBm 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	8-18			GHz
功率增益 Power Gain	GP	64			dB
增益平坦度 Gain flatness	$\Delta$ GL		$\pm 4.5$		dB
饱和输出功率 Output Psat	Psat	64	65		dBm
杂散 Spurious	Spur			-60	dBc
谐波 Harmonics	HAM		-30		dBc
输入驻波 Input VSWR	VSWR		1.5	2	:1
交流电压 AC Voltage	Vac		220		V AC
5%占空比功耗 Power consumption@5% duty cycle	Pdiss			900	W
10%占空比功耗 Power consumption@10% duty cycle	Pdiss			1700	W
20%占空比功耗 Power consumption@20% duty cycle	Pdiss			3500	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 WRD750	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/SMA Female	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
尺寸 Size	19 Inch 5U	
重量 Weight	≤45	Kg

## 绝对最大值 Absolute Maximum Ratings:

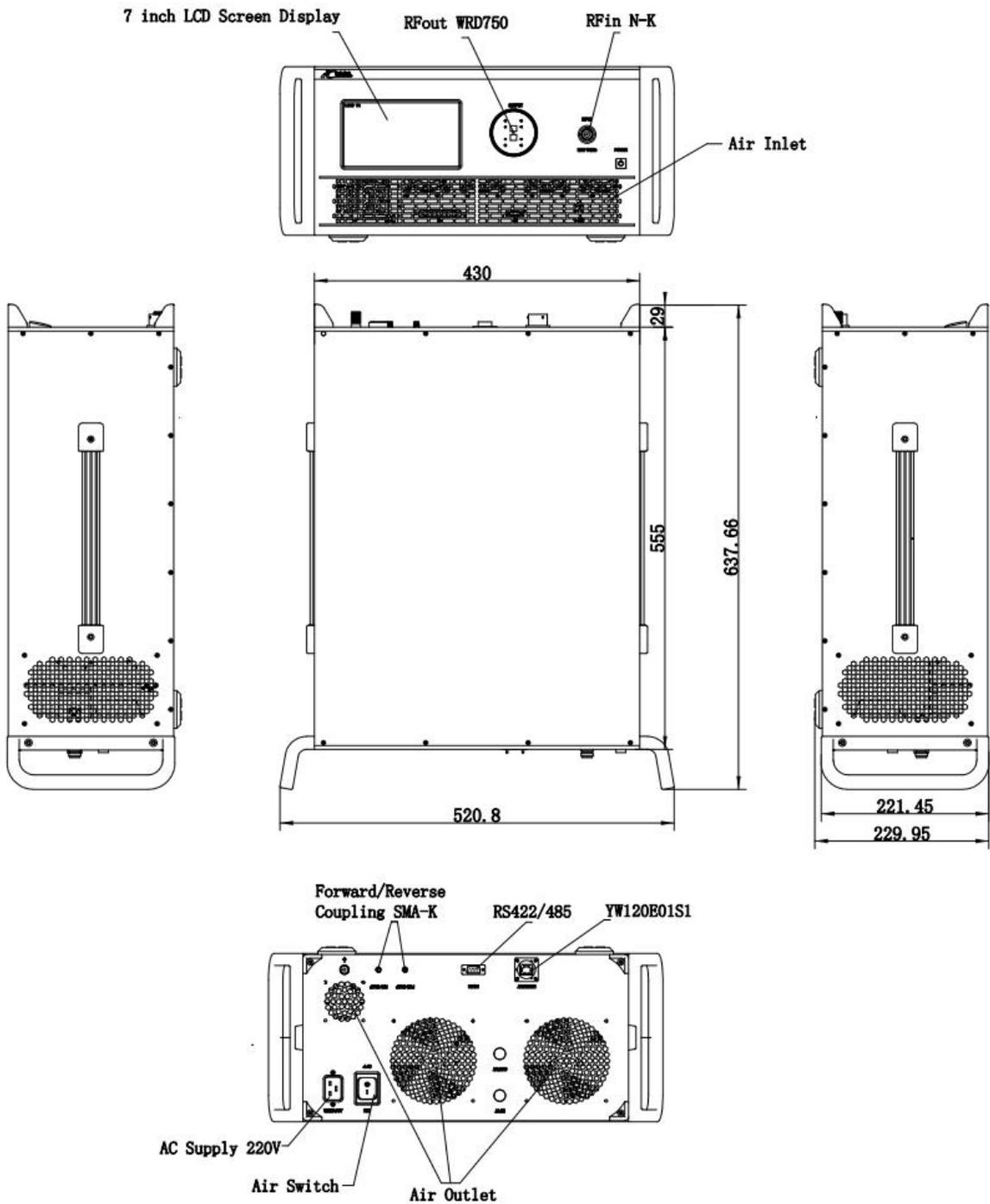
参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

## 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

外形图 Outline Drawing:

Unit:mm



## 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			

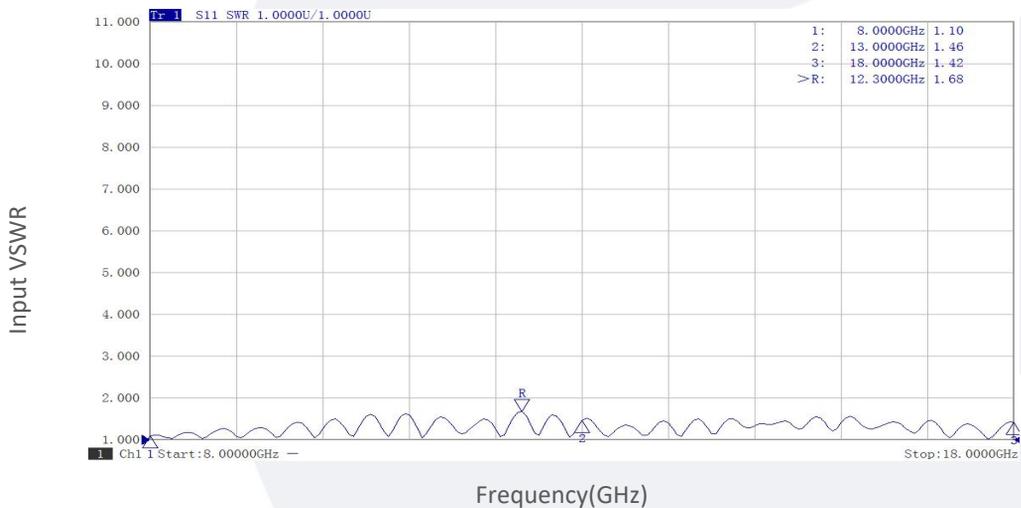
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA8G18G-64-64-P-BC	Solid State High Power Amplifier Systems 8-18GHz, Gain:64dB, Psat:64dBm, 220V AC, Built in Fan Cooling	Rev.1.1

## 典型曲线 Typical Performance Data:

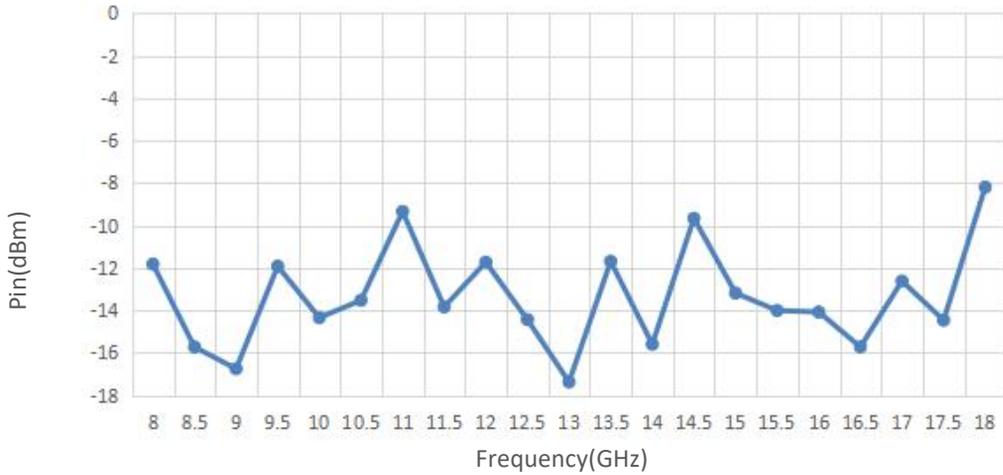
Input VSWR vs Frequency



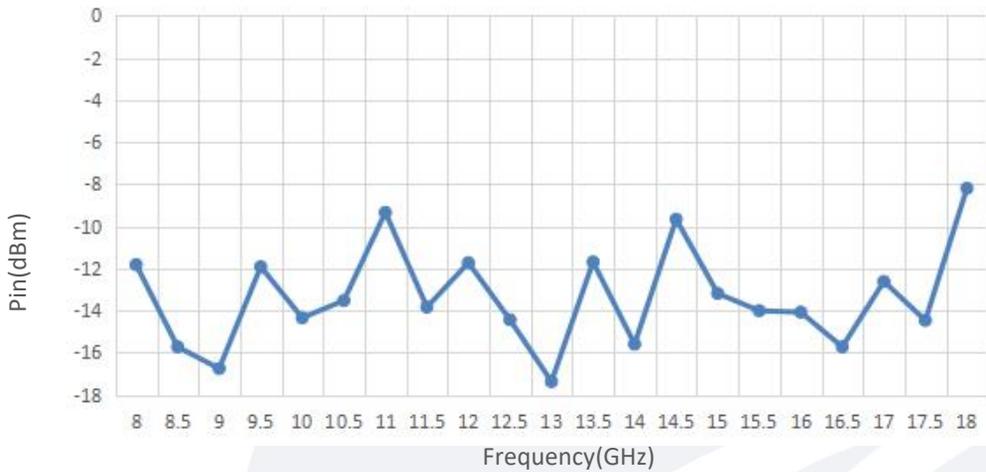
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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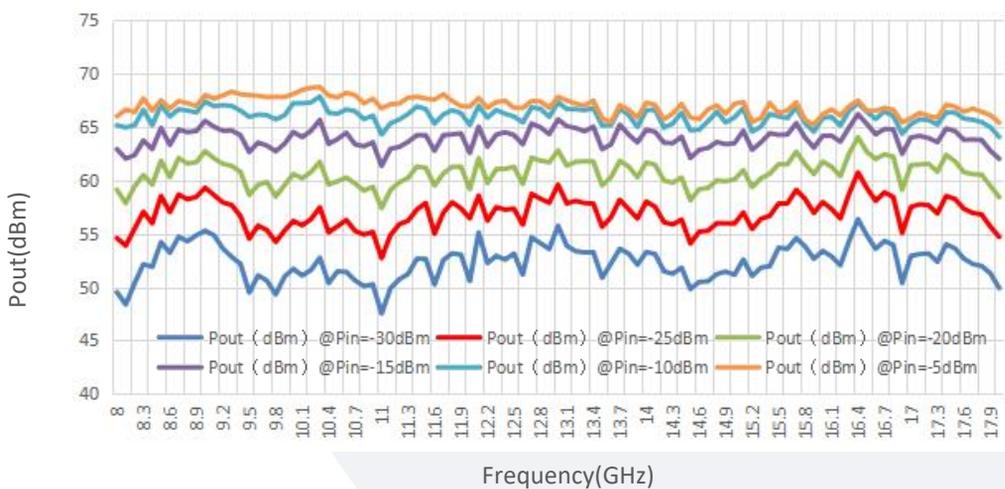
**Pin@Equal\_Pout,PF=1KHz,τ=5%**



**Pin@Equal\_Pout,PF=1KHz,τ=10%**



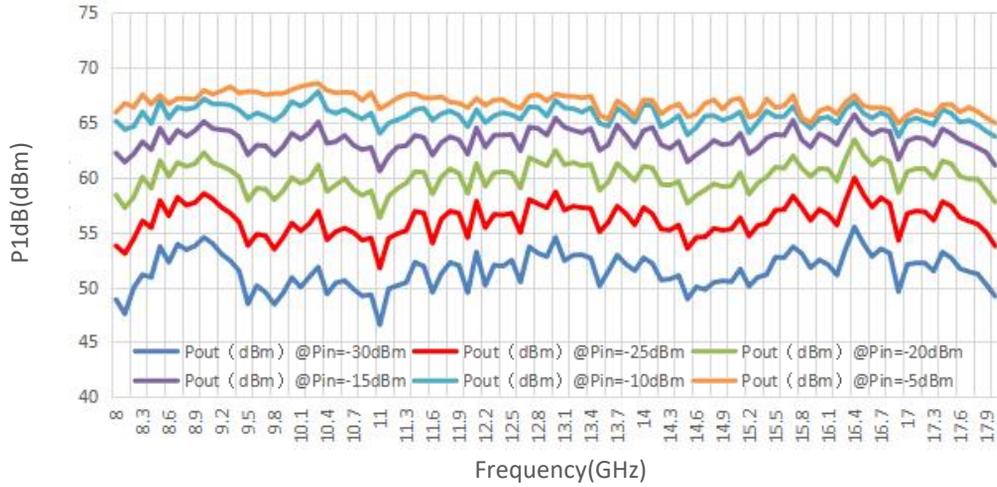
**Pout@Equal\_Pin;PF=1KHz,τ=5%**



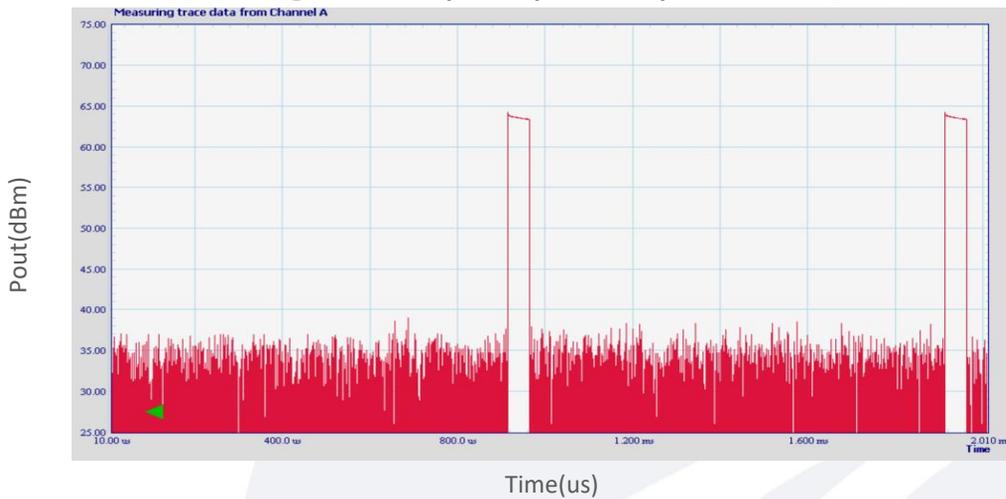
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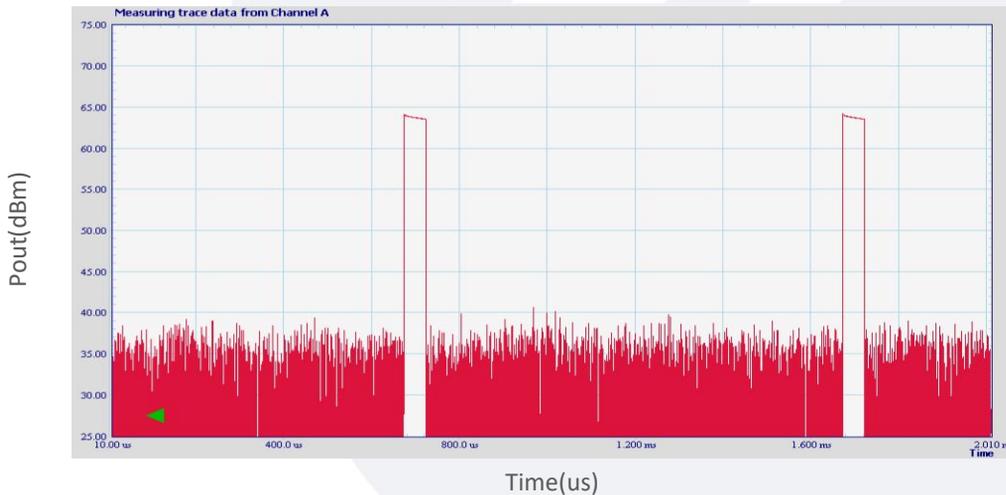
**Pout@Equal\_Pin;PF=1KHz,τ=10%**



**Pout@PF=1KHz,τ=5%,F=8GHz,Pin=-5dBm**



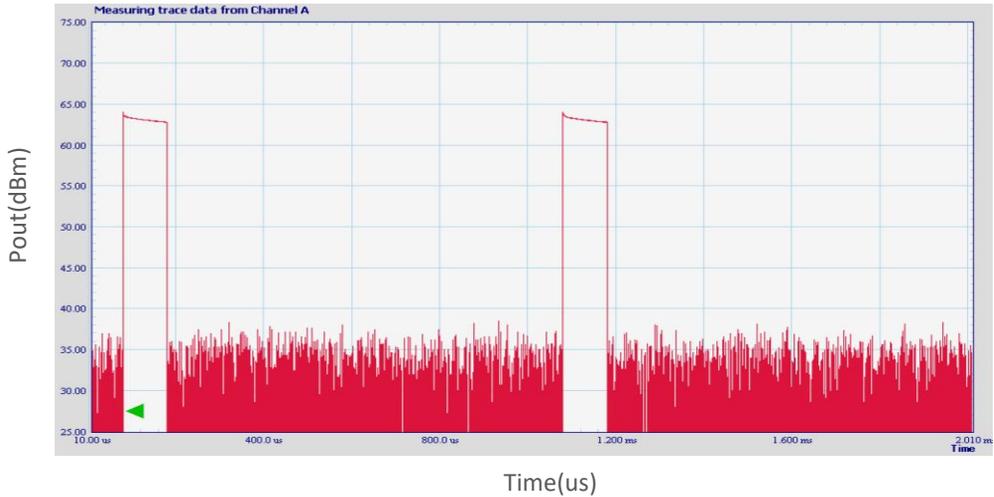
**Pout@PF=1KHz,τ=5%,F=18GHz,Pin=-5dBm**



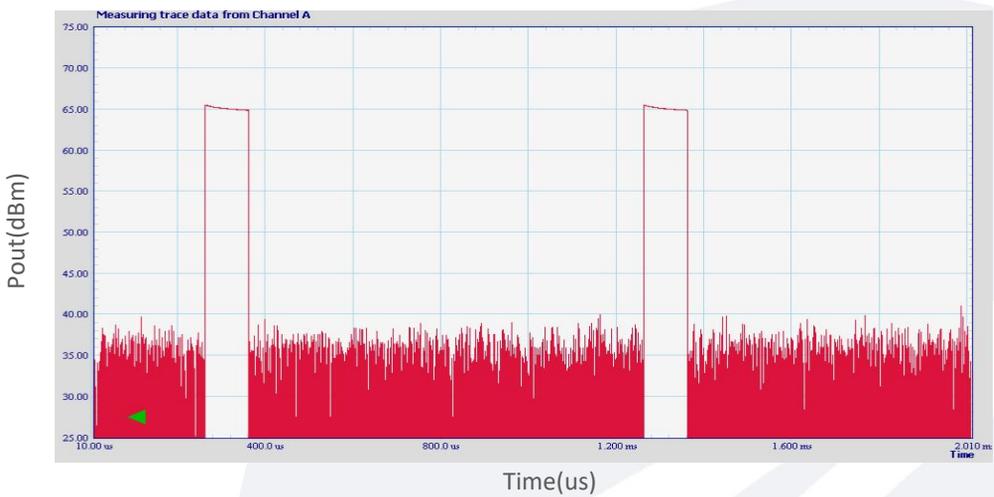
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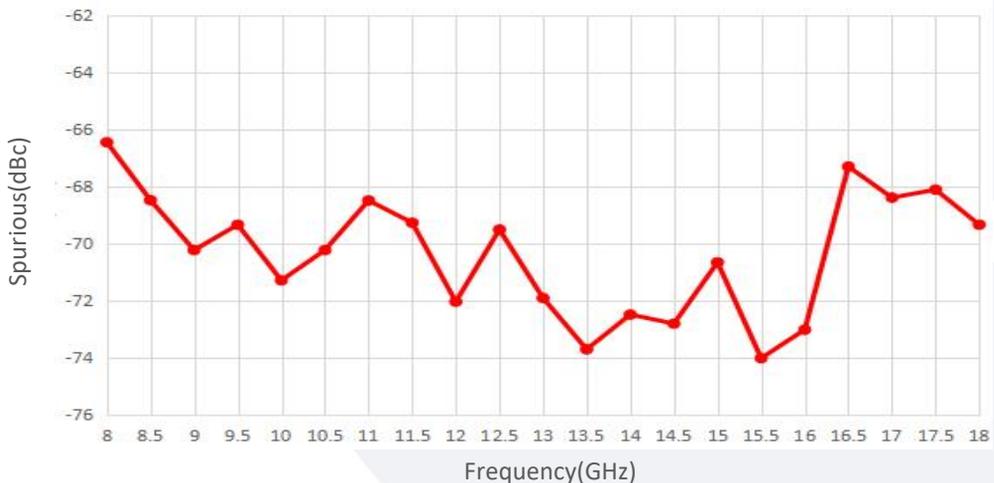
**Pout@PF=1KHz,τ=10%,F=8GHz,Pin=-5dBm**



**Pout@PF=1KHz,τ=10%,F=18GHz,Pin=-5dBm**

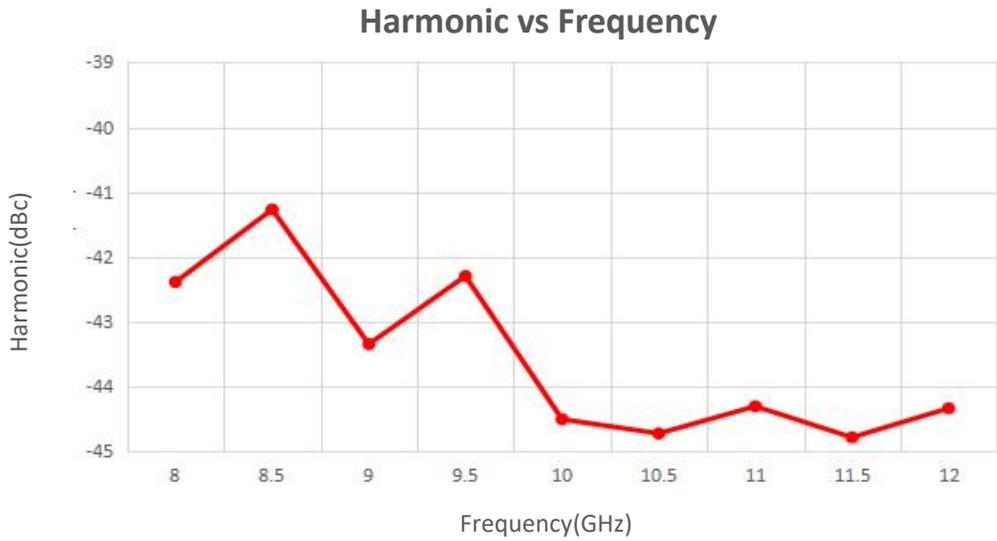


**Spurious vs Frequency**



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