

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

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	8-18			GHz
Power Gain	GP	64			dB
Gain flatness	Δ GL		± 4.5		dB
Output Psat	Psat	64	65		dBm
Spurious	Spur			-60	dBc
Harmonics	HAM		-30		dBc
Input VSWR	VSWR		1.5	2	:1
AC Voltage	Vac		220		V AC
Power consumption@5% duty cycle	Pdiss			900	W
Power consumption@10% duty cycle	Pdiss			1700	W
Power consumption@20% duty cycle	Pdiss			3500	W
Impedance	I/O-IMP		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	N Female WRD750	
Forward/Reverse Coupling	SMA Female/SMA Female	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Size	19 Inch 5U	
Weight	≤45	Kg

Absolute Maximum Ratings:

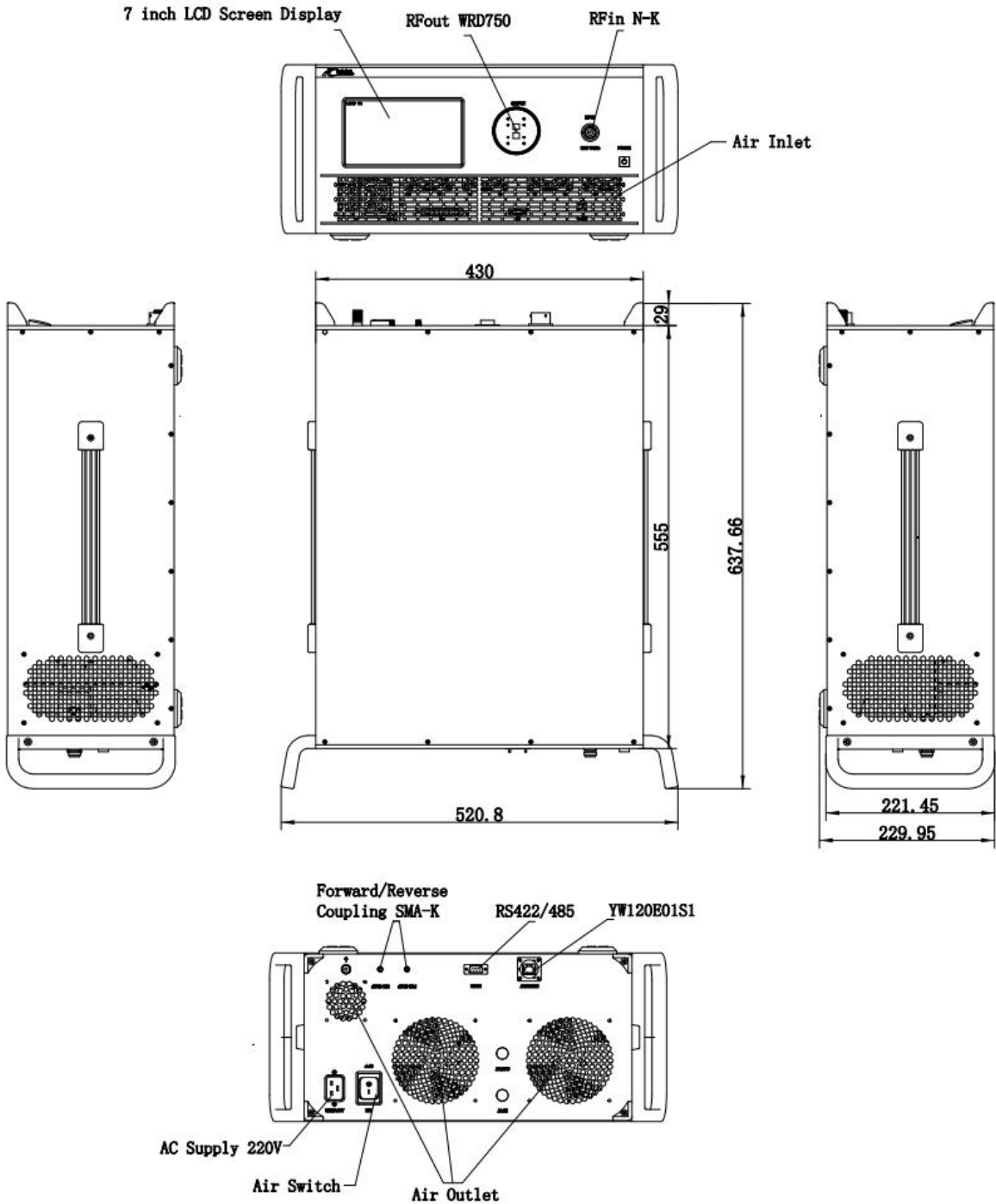
Parameter	Value
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Key Features:

Parameter	Advantages
Control functions	1, Power setting On/Off 2, ALC automatic level control
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
Remote control	RS422/Ethernet
Cooling system	Built in Cooling system, forced air cooling

Outline Drawing:

Unit:mm



Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+40	°C
Non-operating Temperature*	-30		+50	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

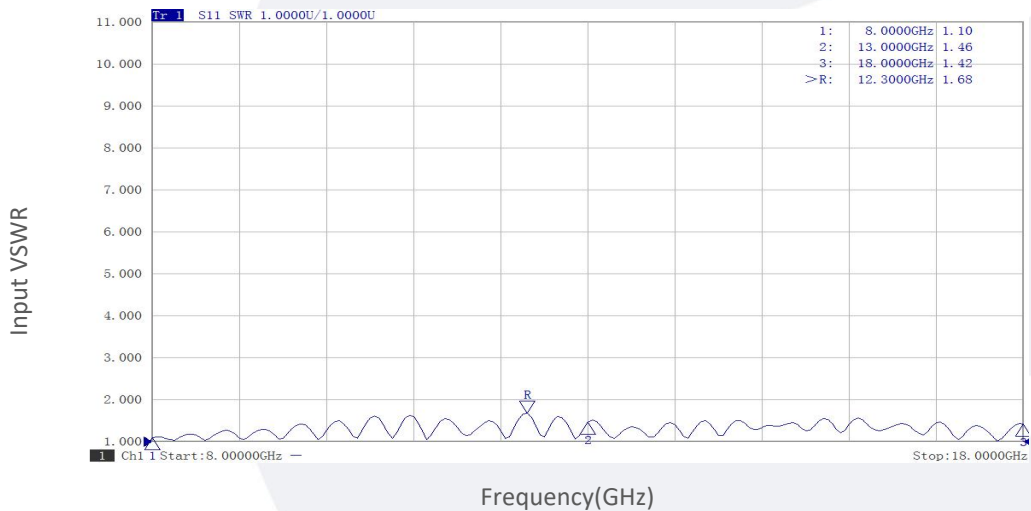
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	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

Typical Performance Data:

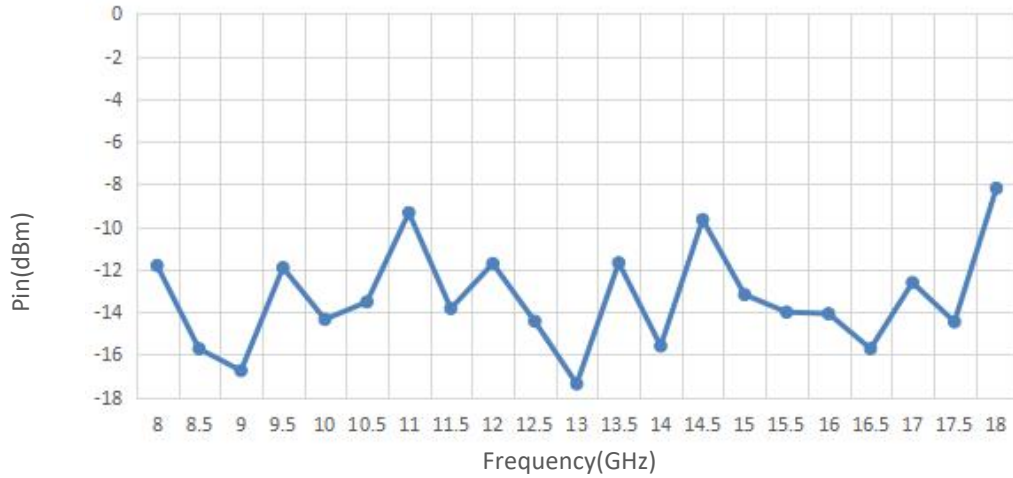
Input VSWR vs Frequency



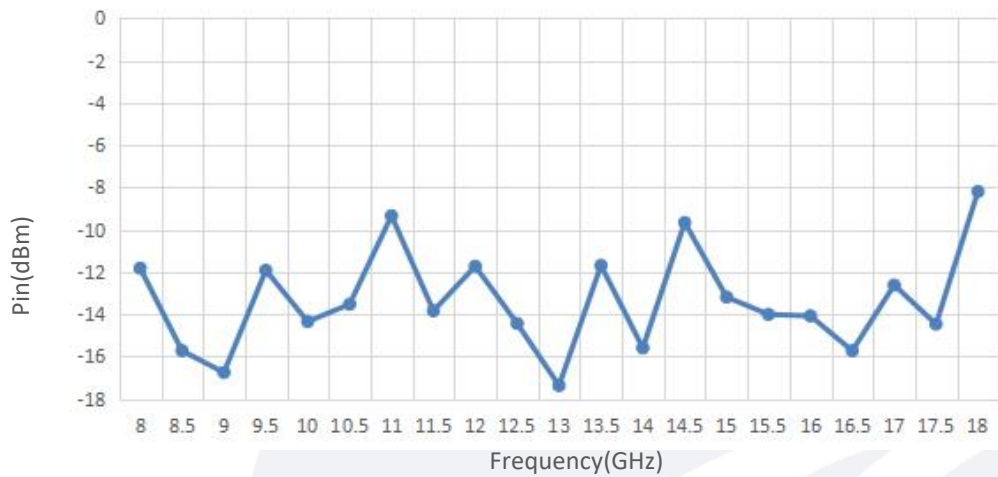
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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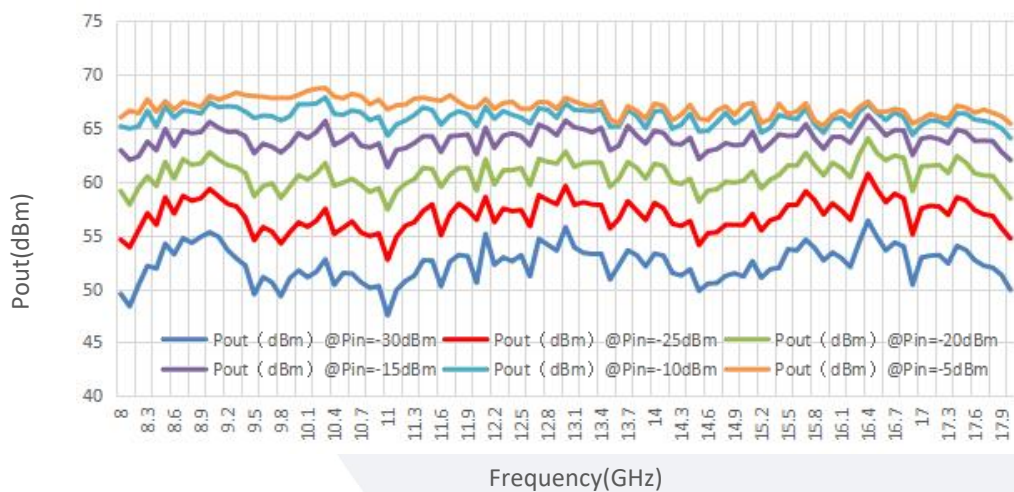
Pin@Equal_Pout,PF=1KHz,τ=5%



Pin@Equal_Pout,PF=1KHz,τ=10%



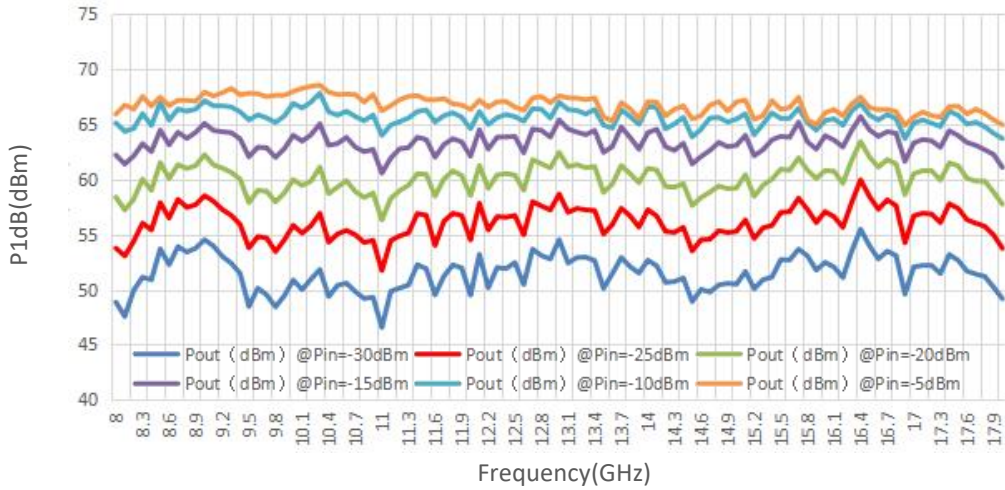
Pout@Equal_Pin;PF=1KHz,τ=5%



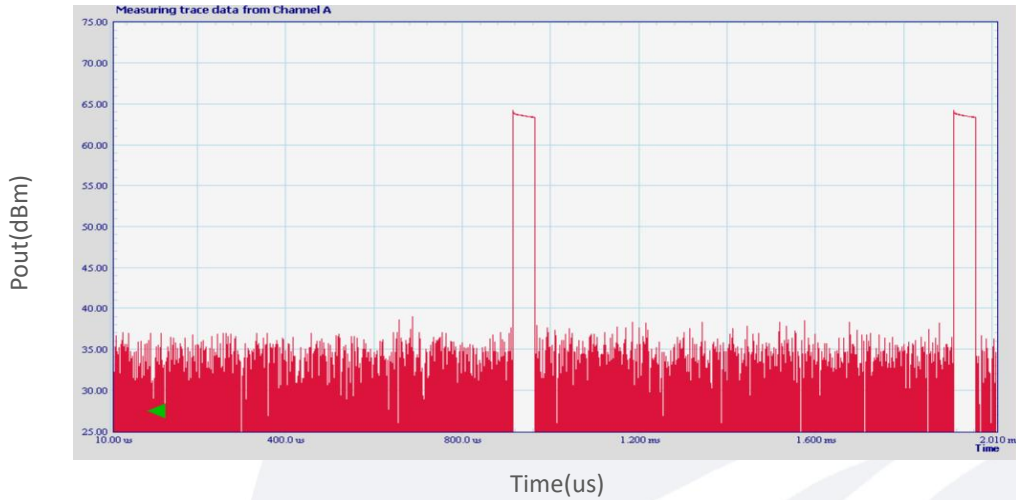
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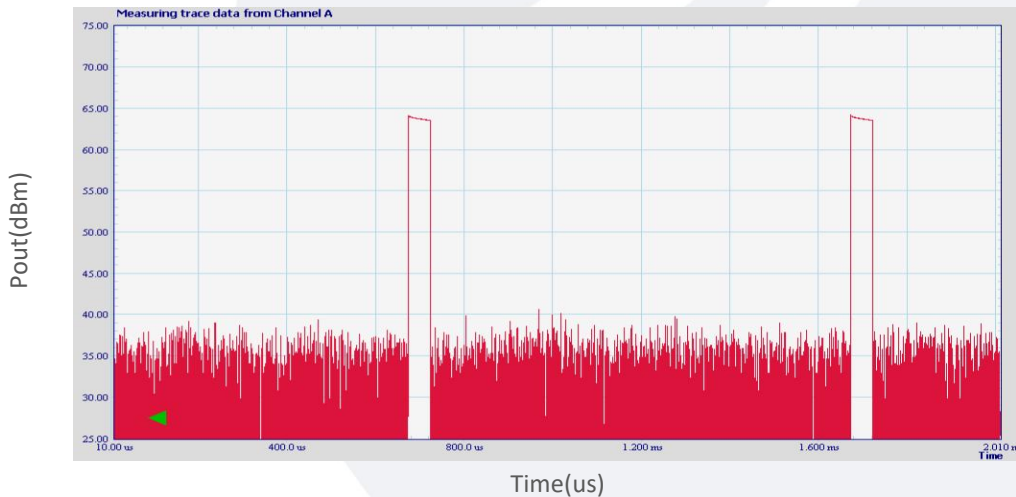
Pout@Equal_Pin;PF=1KHz, τ =10%



Pout@PF=1KHz, τ =5%,F=8GHz,Pin=-5dBm



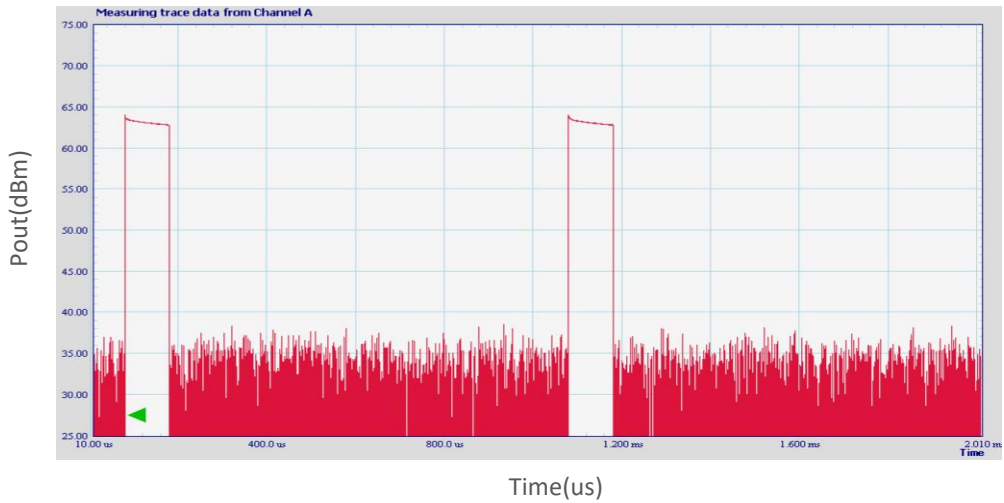
Pout@PF=1KHz, τ =5%,F=18GHz,Pin=-5dBm



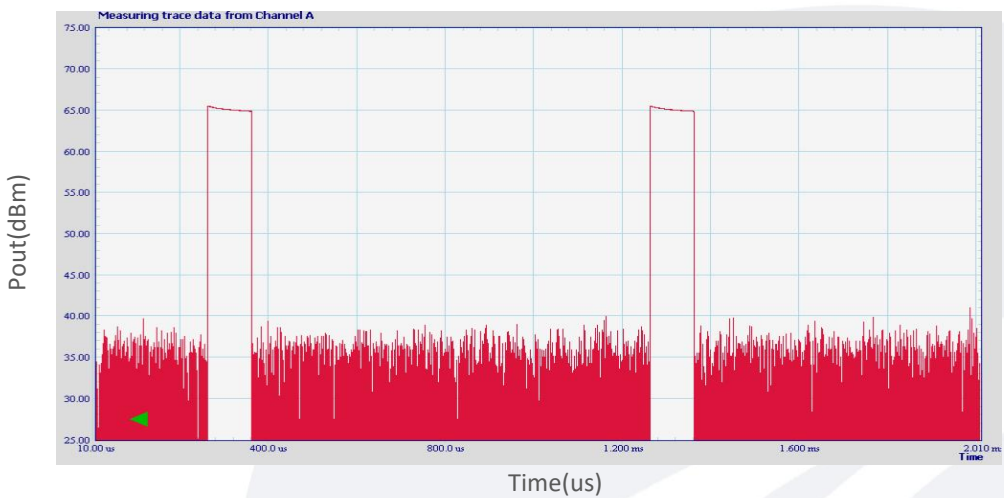
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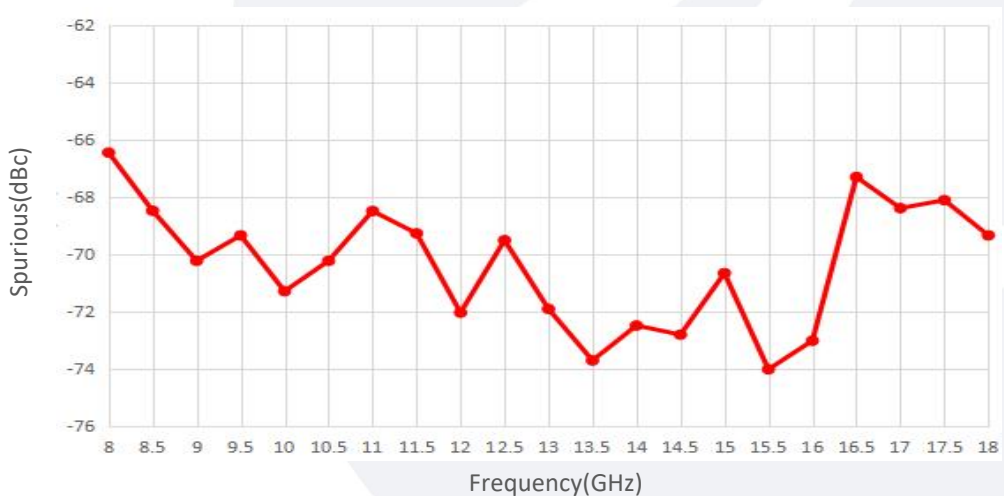
Pout@PF=1KHz,τ=10%,F=8GHz,Pin=-5dBm



Pout@PF=1KHz,τ=10%,F=18GHz,Pin=-5dBm

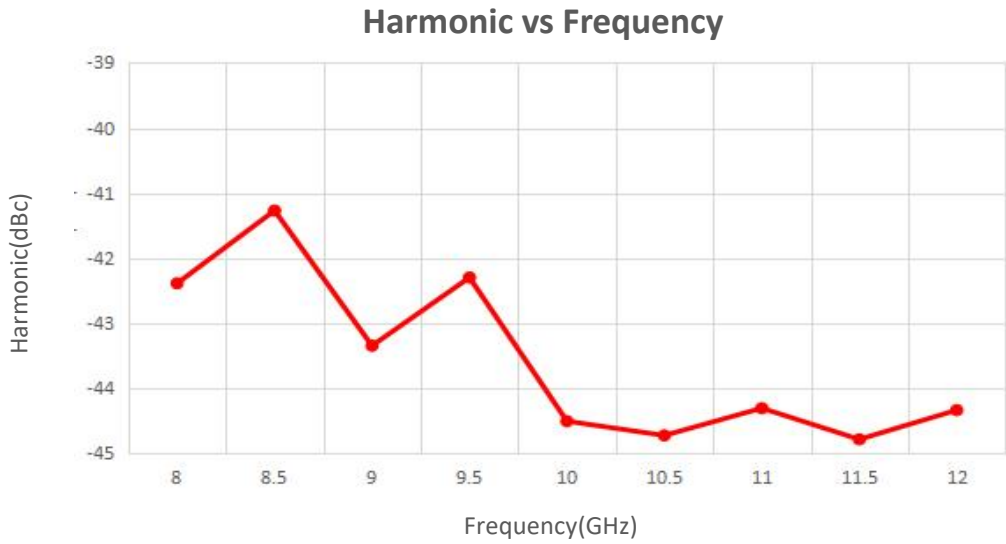


Spurious vs Frequency



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