

Power Source Specification

13.75-14.5GHz/57dBm Psat

Model: TLS13.75G14.5G-57-57-BC

TLS13.75G14.5G-57-57-BC is a power source specification with a minimum Psat of 57 dBm across the frequency range of 13.75 to 14.5 GHz. The power source specification features a built-in 380V or 220V power supply, making it easy to use in most lab environments. The RF output port is WR62.

Features:

- Frequency point: 13.75-14.5GHz
- Output Power Psat: 57dBm Min
- Protection: Over TEM, over voltage, under 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		13.75		14.5	GHz
频率误差 Frequency error			±50		ppm
工作模式 Working Mode		CW/PULSE compatible			
参考信号 Reference Signal		Internal Reference			
饱和输出功率 Output Psat		57			dBm
输出功率平坦度 Pout Flatness	@40MHz		±0.3		dB
	@500MHz		±1.5		
功率稳定度 Power Stability@24h				±0.1	dB
ALC范围 ALC Range		20			dB
ALC步进 ALC Step	@1~10W range		0.5		W
	@10~50W range		1		
	@50~300W range		2.5		
	@300~500W range		5		
杂散抑制 Spurious Sppression@Pout=57dBm		60			dBc

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
输出驻波 Output VSWR			1.5	:1
交流电压 AC Voltage		220 or 380		V AC
阻抗 Impedance		50		Ohms

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
频综输出接口 Frequency Synthesizer Output Connector	SMA Female	
功放调试口 PA Adjustment Connector	SMA Female	
RF输出接口 RF Output Connector	WR62	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/SMA Female	
控制接口 M&C connectors	Serial:DB9 Ethernet: RJ-45	
供电接口 Power Supply Connector	Y50DX-1405	
液冷接口 Liquid Interfaces	ZFS-08	
尺寸 Size	19 Inch 6U*550 depth	mm
重量 Weight	≤50	Kg

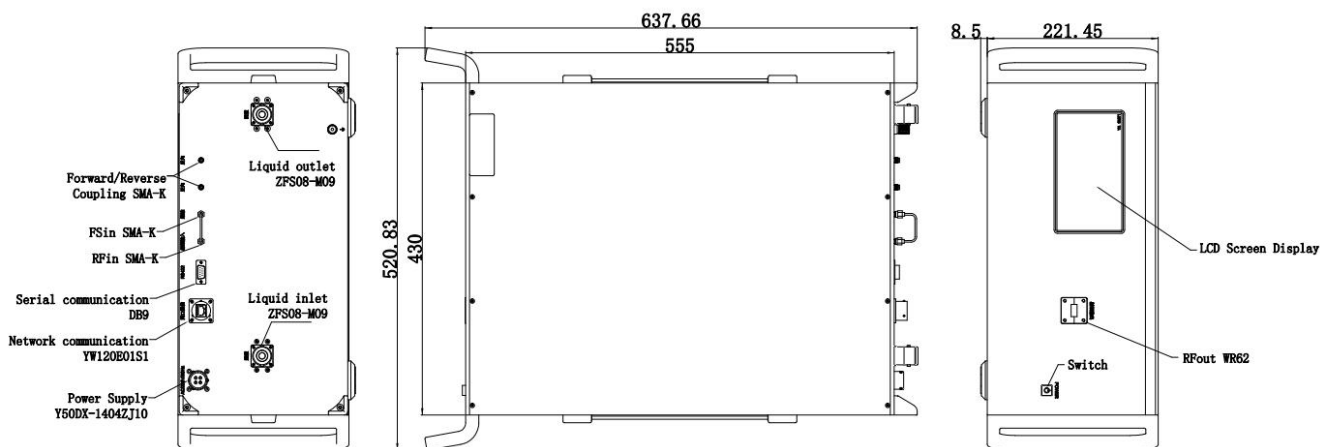
*Note:The frequency synthesizer output connector and the PA adjustment connector are connected in the factory state

主要功能 Key Features:

参数 Parameter	特点 Advantages
内置保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
显示功能 Display functions	1, Output/reflected power 2, Fault informations
监控和控制 Remote control	RS422/Ethernet
冷却系统 Cooling system	Built in Cooling system,forced liquid cooling

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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	3,000			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			

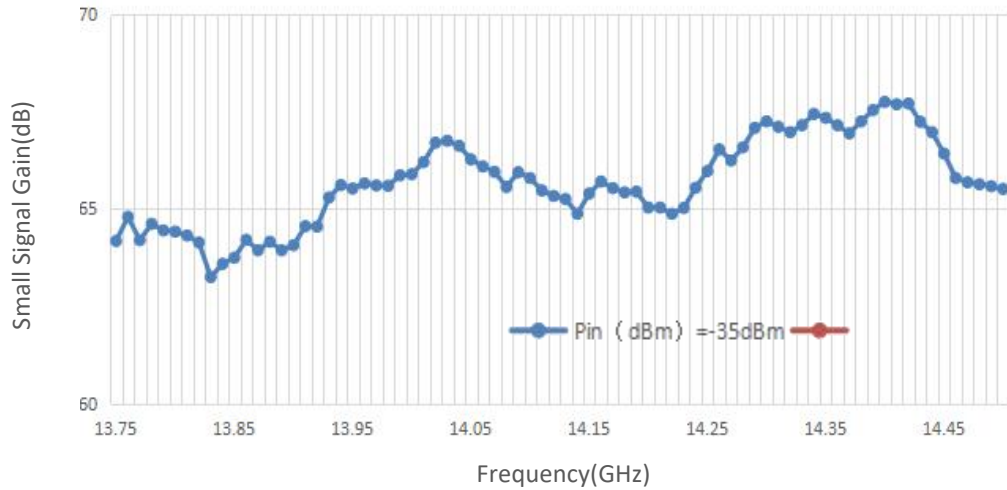
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

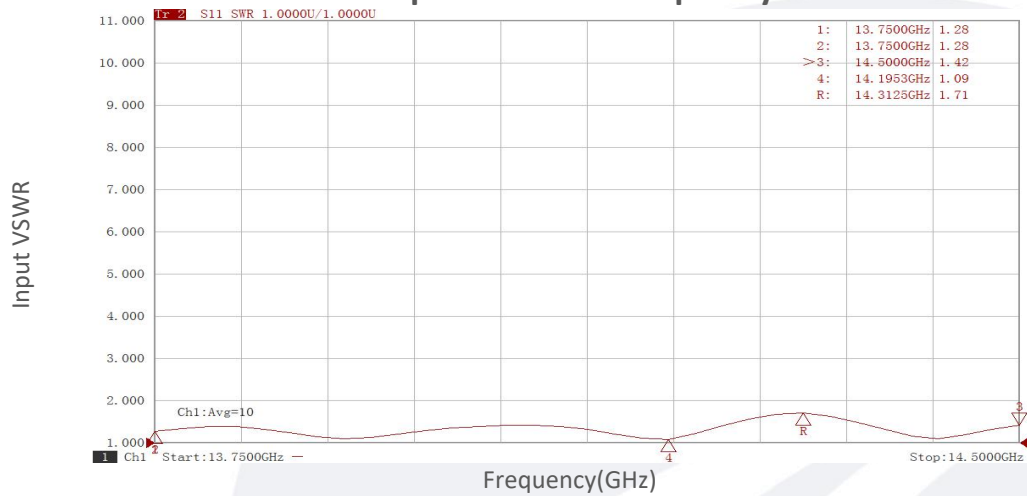
标准型号 Base Number	描述 Description	版本号 Revision
TLS13.75G14.5G-57-57-BC	Power Source Specification, 13.75-14.5GHz, Psat:57dBm, 220 or 380V AC,Built in liquid Cooling	Rev.1.0

典型曲线 Typical Performance Data:

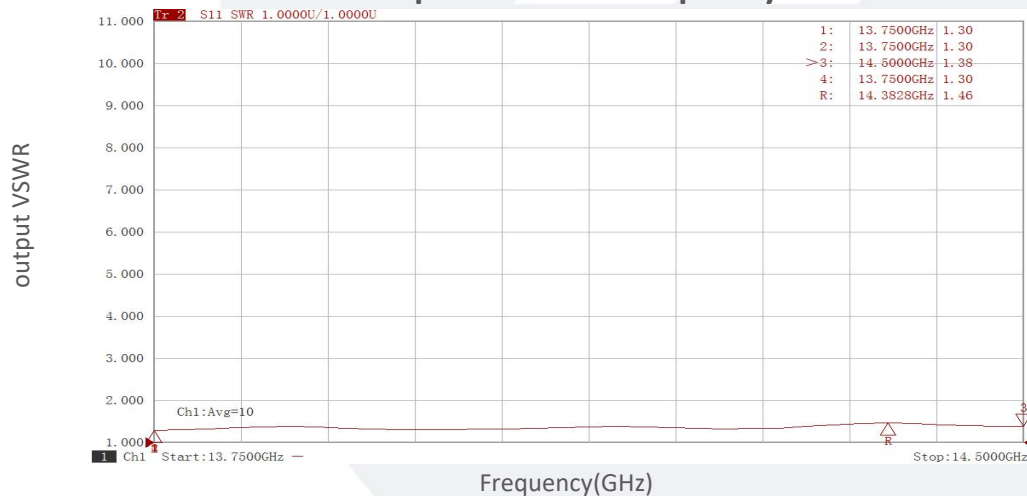
Small Signal Gain vs Frequency



Input VSWR vs Frequency



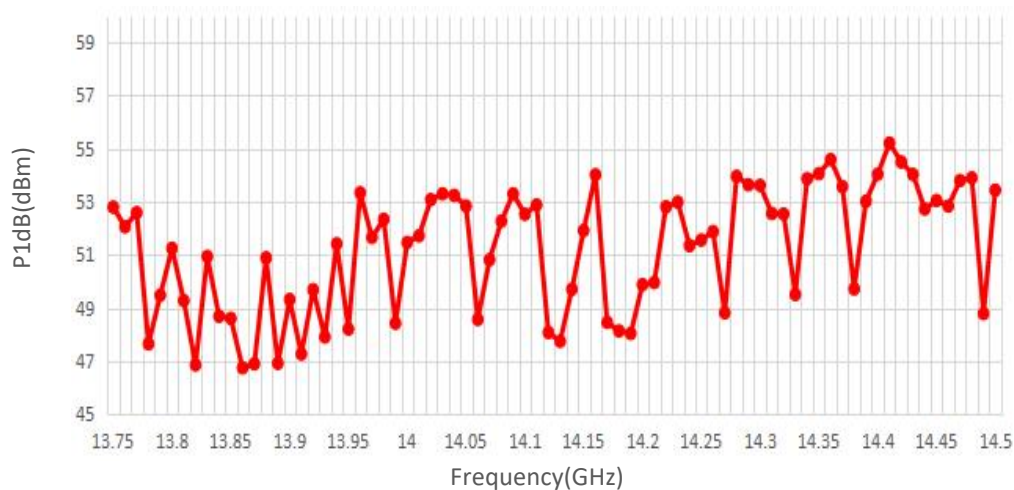
Output VSWR vs Frequency



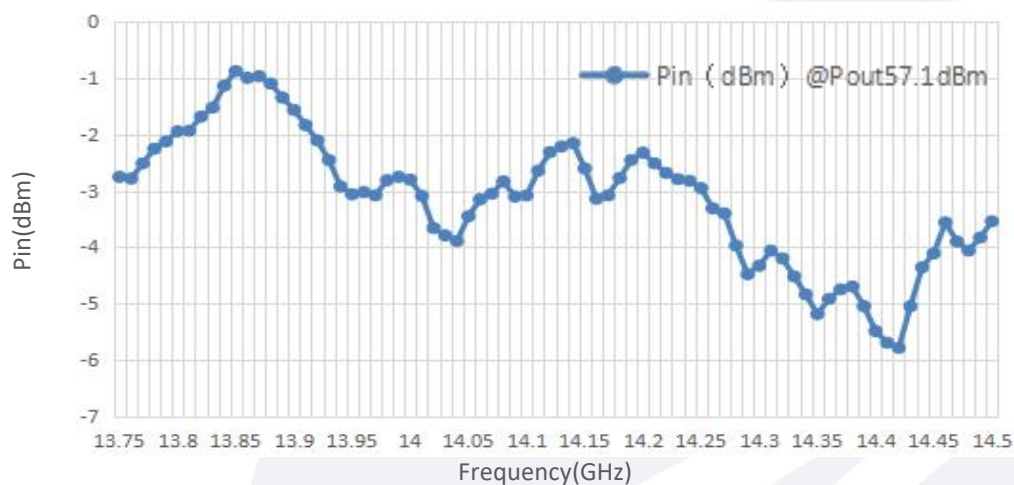
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

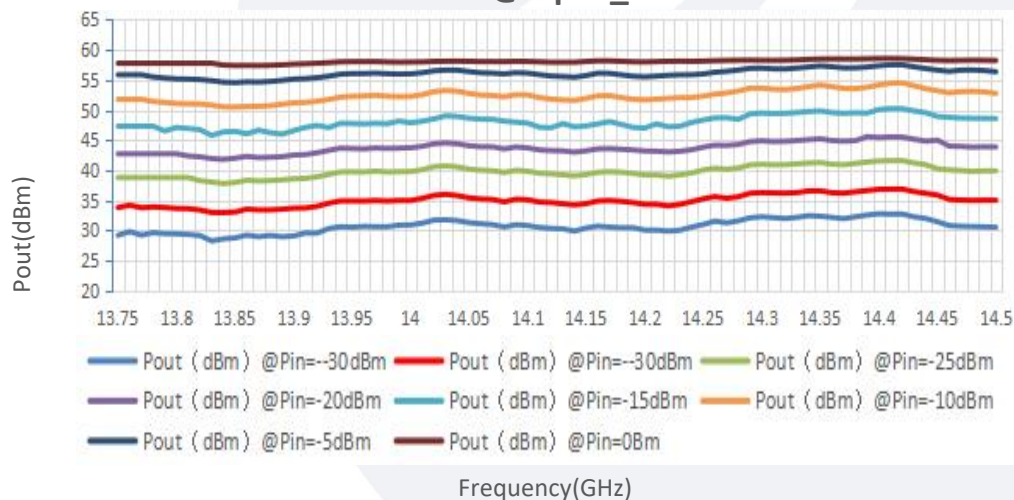
P1dB vs Frequency



Pin@@Equal_Pout



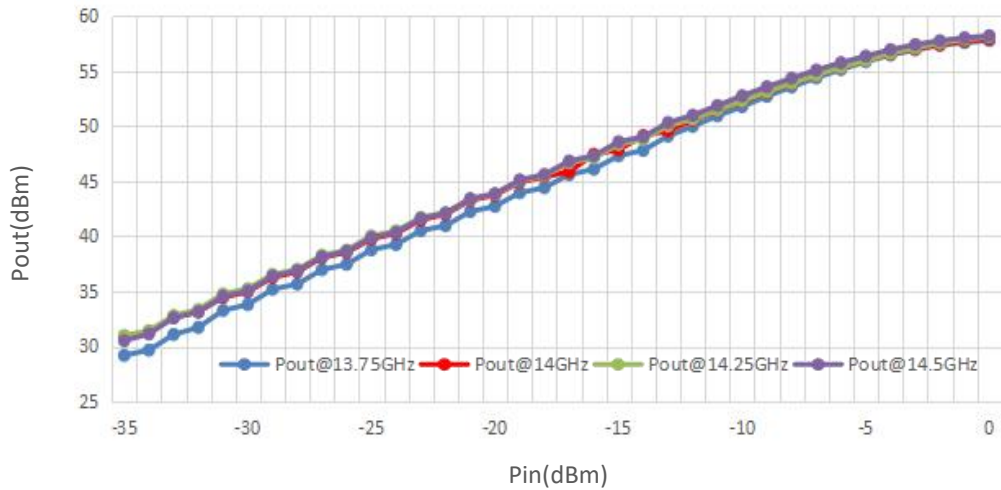
Pout@Equal_Pin



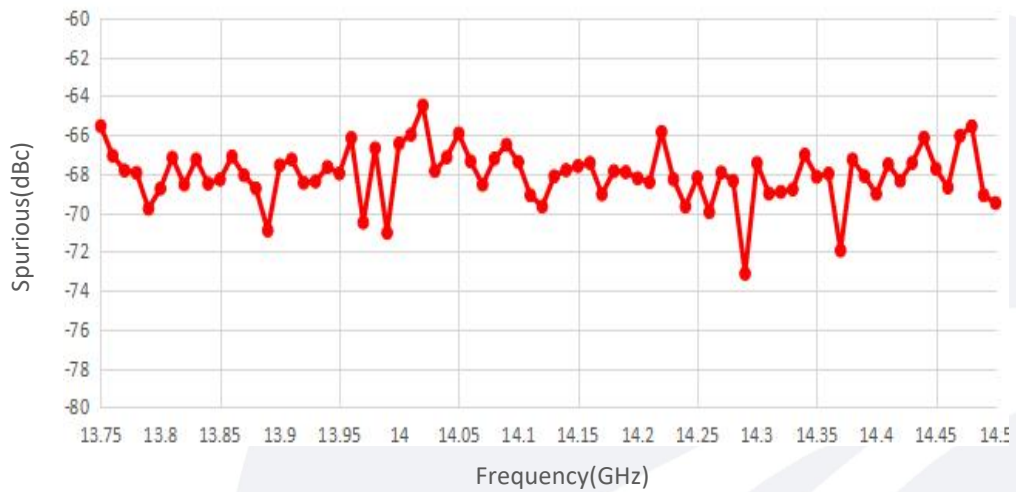
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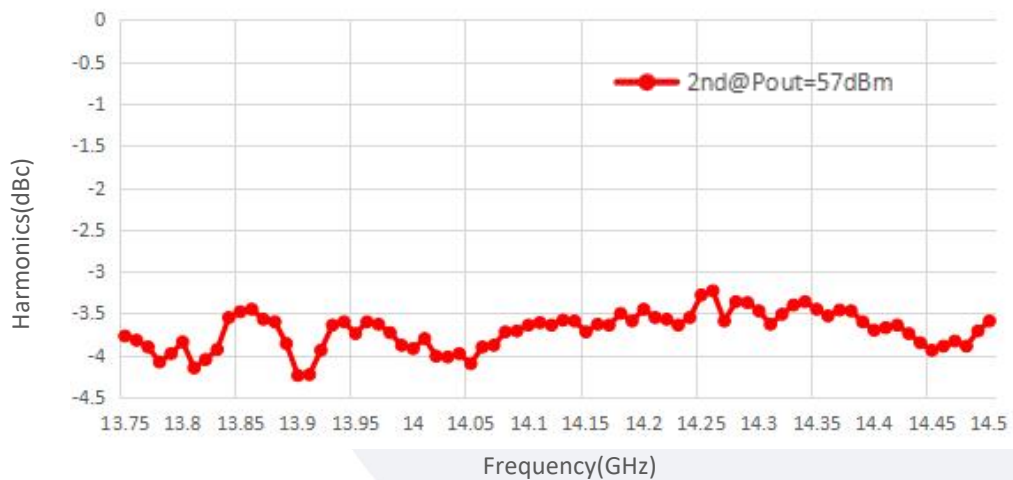
Pout@Pin



Spurious vs Frequency



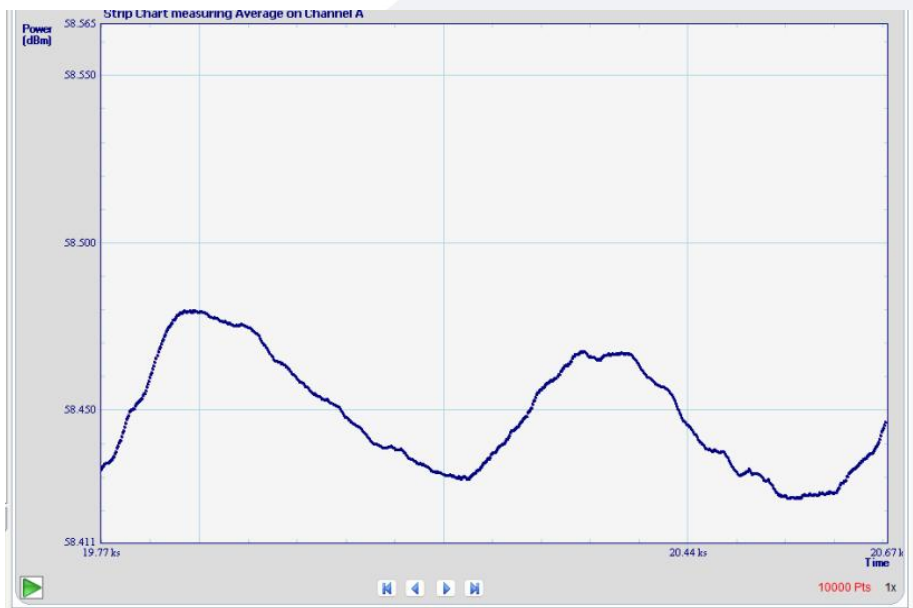
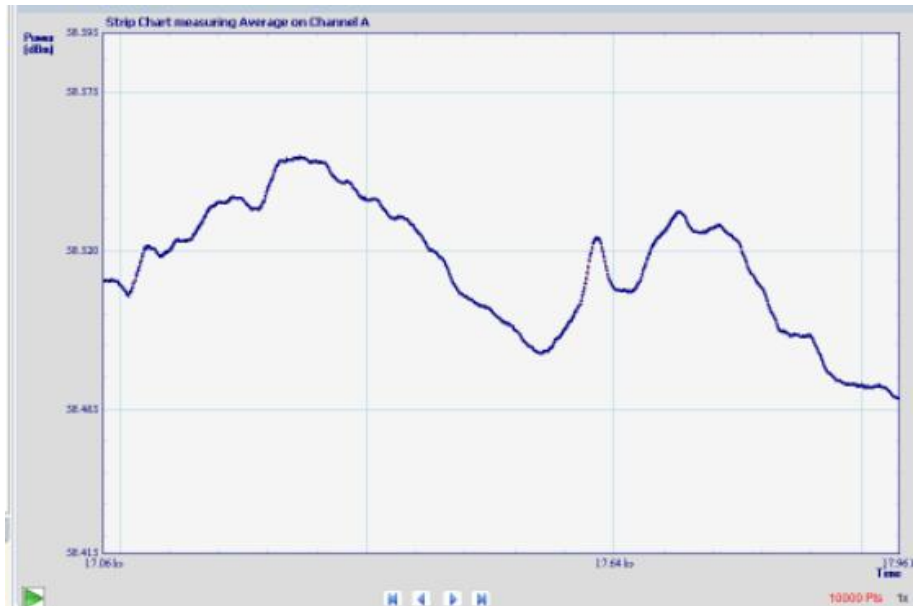
Harmonics vs Frequency



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典型曲线 Typical Performance Data:

Pout Stability@24h

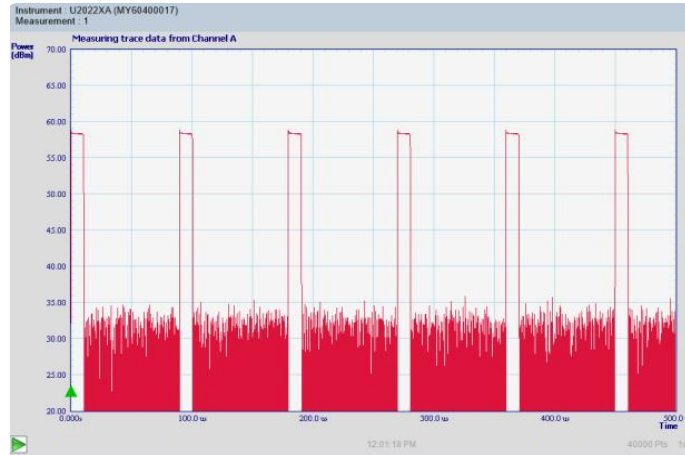


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典型曲线 Typical Performance Data:

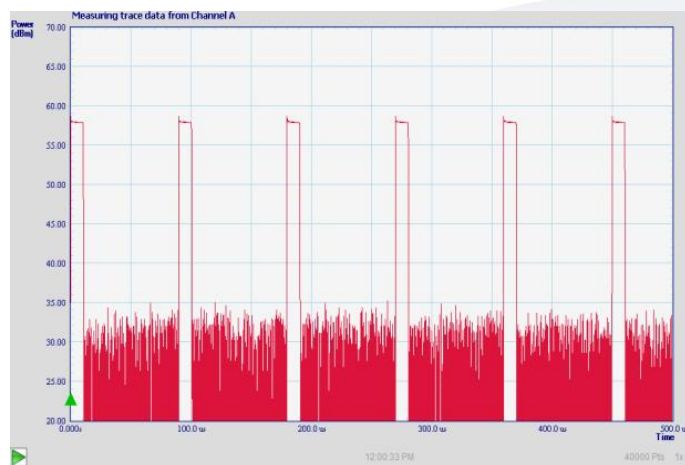
13.75GHz:

Pout@PRF=1KHz, Duty cycle=10%



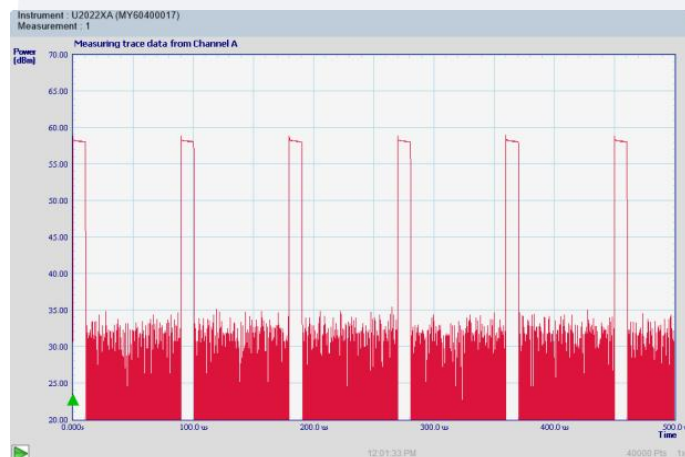
14GHz:

Pout@PRF=1KHz, Duty cycle=10%



14.5GHz:

Pout@PRF=1KHz, Duty cycle=10%



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