

YSG-200/400B

RF Signal Generators

At a Glance

The YSG-200/400B is a compact and cost-effective microwave signal generator designed specifically for professional test and measurement applications. This instrument is engineered to balance performance, reliability, and cost efficiency, making it an ideal solution for semiconductor testing, quantum technology research, radar system development, and advanced communication applications.

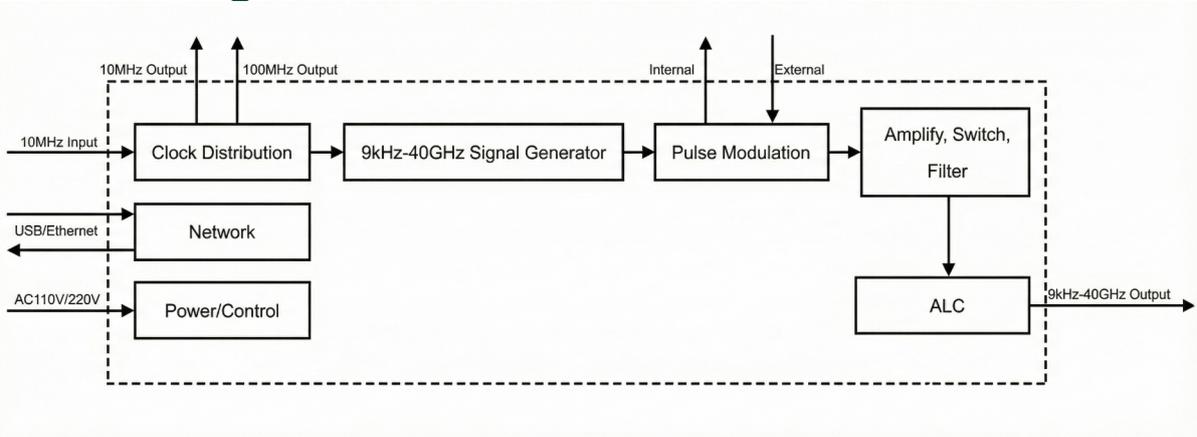
In terms of performance, the YSG-200/400B covers a wide frequency range and provides an extended output power range, which enables accurate signal generation across a spectrum from ultra-low levels to high dynamic outputs. Its design prioritizes high signal purity, characterized by low phase noise and low spurious content, ensuring that users achieve stable, repeatable, and reliable measurement results.



Performance

- Frequency Range(YSG-200B):9kHz to 20GHz
- Frequency Range(YSG-400B):9kHz to 40GHz
- Output Power:-120dBm to +17dBm
- Amplitude Resolution:0.1dB
- Frequency Resolution:0.001Hz
- Phase Noise:-110dBc/Hz@10kHz(10GHz)
- Harmonics:-50dBc@10GHz
- Spurious:-80dBc@10GHz
- Dimensions:360mmx360mmx89mm

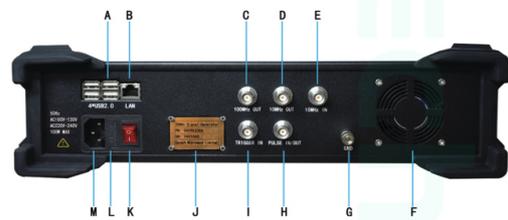
Block Diagram



Product Interface



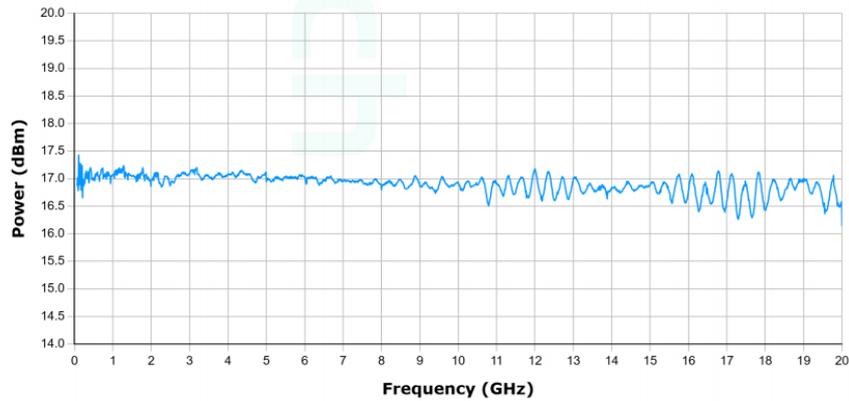
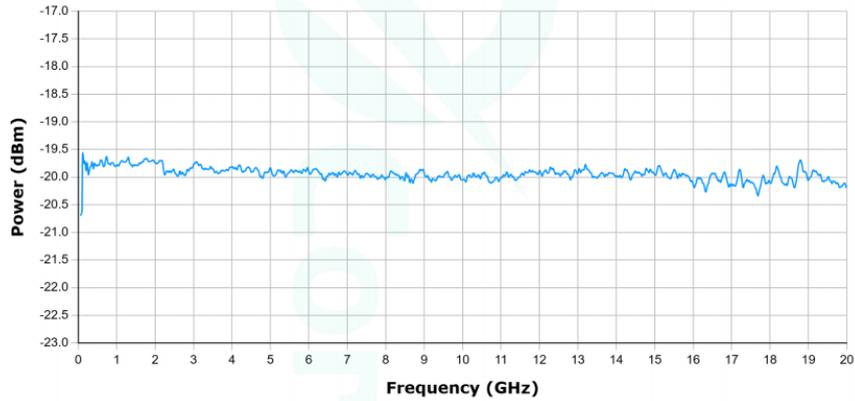
Ref.	Function	Description
A	DC ON/OFF	—
B	RF ON/OFF	—
C	Menu	—
D	Reset	—
E	Keyboard	—
F	Knob	—
G	RF Output	2.9mm-Male
H	Direction Key	—
I	Screen	5 Inch



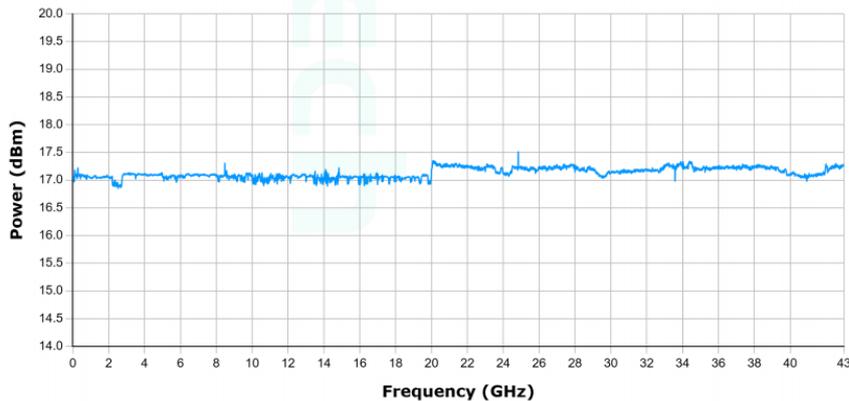
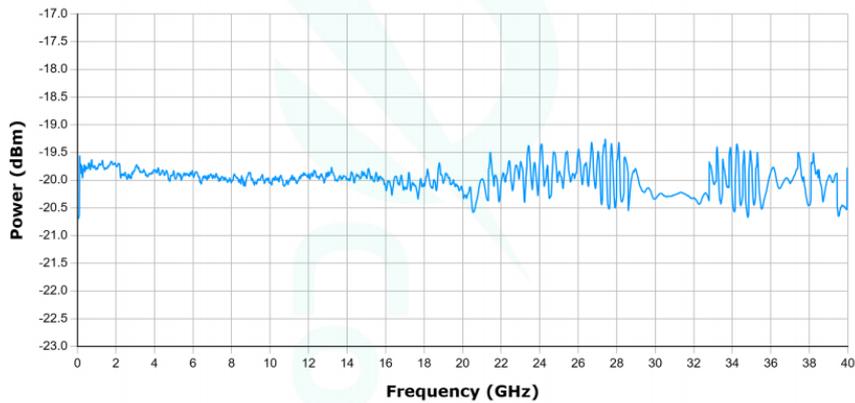
Ref.	Function	Description
A	USB Ports	4 x USB 2.0
B	Ethernet Port	RJ45
C	100MHz Output	BNC Female
D	10MHz Output	BNC Female
E	10MHz Input	BNC Female
F	Fan	Exhaust
G	GND Terminal	
H	Pulse Signal I/O	BNC Female
I	Trigger Signal In	BNC Female
J	Name Plate	
K	AC ON/OFF	
L	Fuse Holder	
M	AC Power Port	AC 110~240V.

Typical Test Curve

Output Power at -20dBm/+17dBm(YSG-200B)



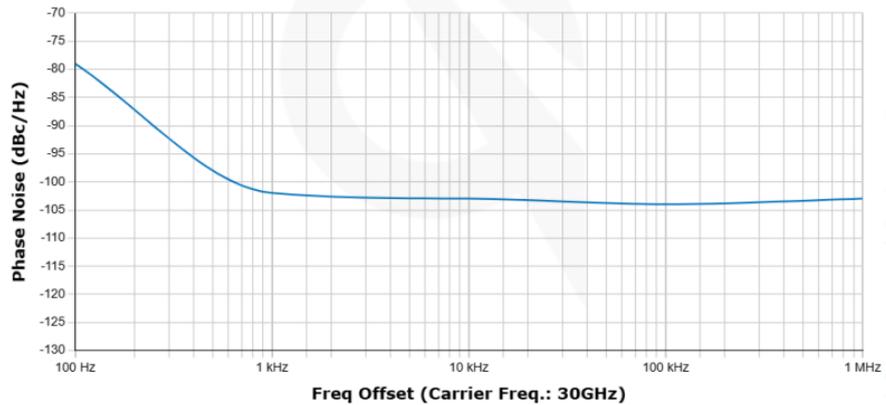
Output Power at -20dBm/+17dBm(YSG-400B)



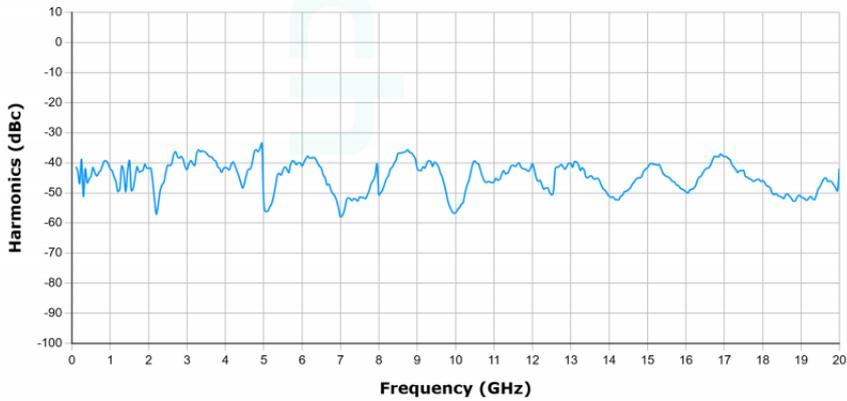
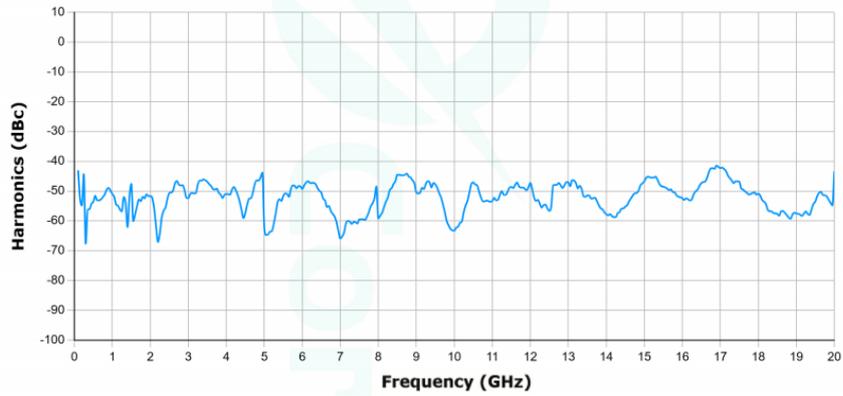
SSB Phase Noise(YSG-200B)



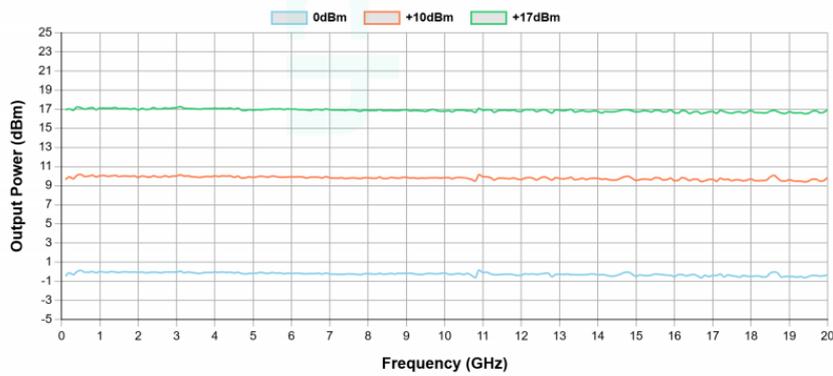
SSB Phase Noise(YSG-400B)



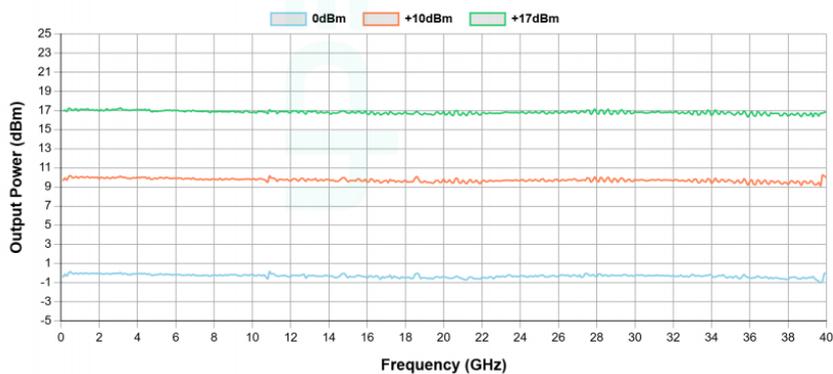
2nd Harmonics at +10dBm/+17dBm (YSG-200/400B)



Attenuation Accuracy at 0dBm, +10dBm, +17dBm(YSG-200B)



Attenuation Accuracy at 0dBm, +10dBm, +17dBm(YSG-400B)



Specifications

Parameter	Min.	Typ.	Max.	Note
Part Number		YSG-200/400B		
Frequency Range	9kHz		20/40 GHz	
Frequency Resolution		0.001Hz		
Operating Mode	CW / Sweep			
Internal Pulse Generator		✓		Standard
Pulse Modulation		✓		Standard
Frequency Reference (Internal)				
Internal Reference Aging Rate	±0.3ppm / year (typical)			
Initial Calibration Accuracy	±0.1 ppm @ +23 ±5 °C			
External Reference				
Input Frequency		10MHz		50 Ω
Accepted External Reference Signals (50 Ω)	Sine Wave: +3 to +10dBm			
	Square Wave, CMOS/TTL Compatible (0 to +3.3 V)			
Lock Range	±0.5 ppm relative to 10 MHz reference input			
Internal Reference Output				
Output Frequency		10MHz, 100MHz		
Output Power	+5dBm		+10dBm	10MHz
	+5dBm		+10dBm	100MHz
Output Frequency Stability	±0.1ppm			
SSB Phase Noise		-145dBc/Hz@1kHz		10MHz
		-155dBc/Hz@1kHz		100MHz
Spurious		-70dBc		

Parameter	Min.	Typ.	Max.	Note
Switching Speed				
Frequency Switching Time		10ms (Typical, RF Settled, ALC enabled)		
Output Power Range				
9kHz ~ 100kHz	-120dBm		+13dBm	
100kHz ~ 40GHz	-120dBm		+17dBm	
40GHz ~ 43GHz	-120dBm		+15dBm	Option
Note: Maximum output power may vary with frequency and temperature				
Output Power Resolution		0.1dB		
VSWR (Level ≤ 0dBm, ALC enabled)				
9kHz ~ 6GHz		1.6		
6GHz ~ 43GHz		2		

Output Level Range	Pout > 0 dBm	-20dBm < Pout ≤ 0dBm	-70dBm < Pout ≤ -20dBm	Pout ≤ -70 dBm
9kHz < F ≤ 1GHz	≤±0.5	≤±1.0	≤±2.0	≤±2.0
1GHz < F ≤ 10GHz	≤±0.5	≤±1.0	≤±2.0	≤±2.0
10GHz < F ≤ 20GHz	≤±1.0	≤±1.0	≤±2.0	≤±3.0
20GHz < F ≤ 30GHz	≤±1.0	≤±1.0	≤±2.0	≤±3.0
30GHz < F ≤ 40GHz	≤±1.0	≤±1.0	≤±2.0	≤±3.0
40GHz < F ≤ 43GHz	≤±2.0	≤±2.0	≤±3.0	≤±4.0