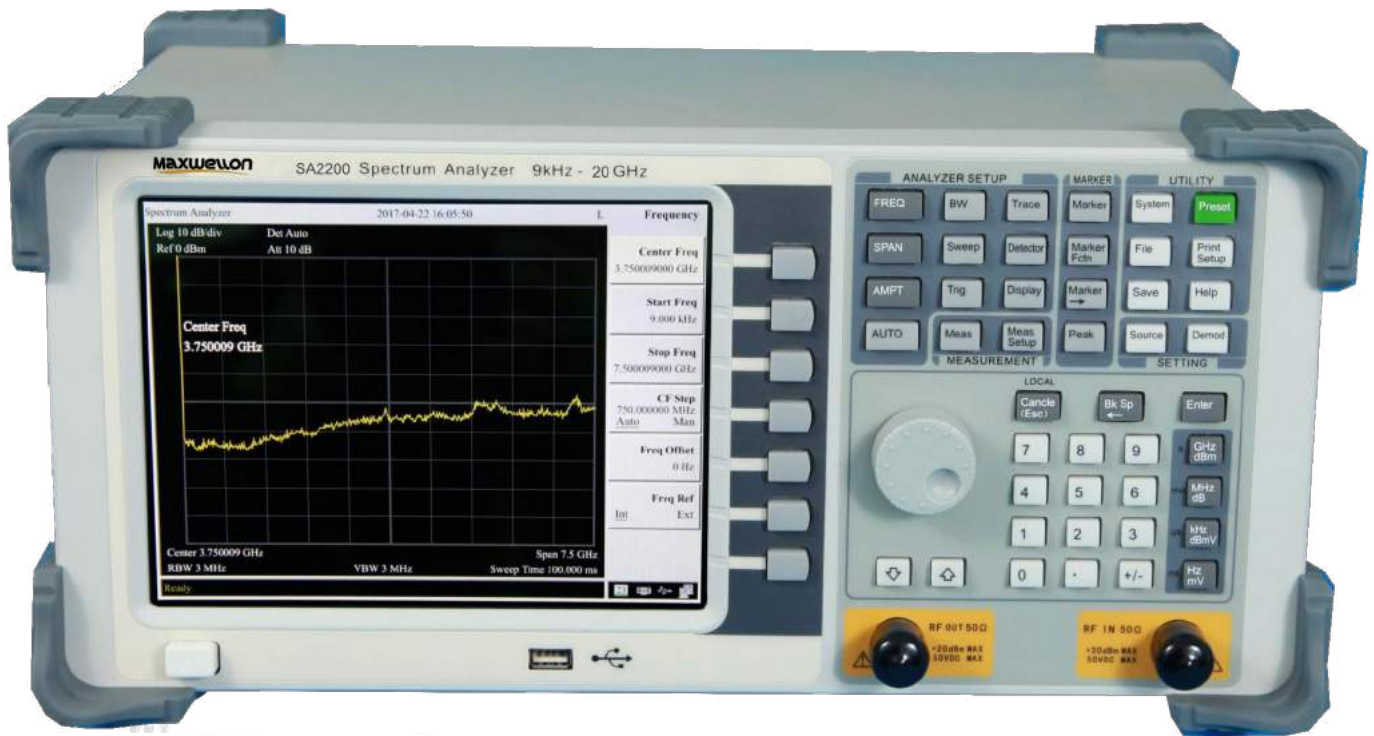




MAXWELLON SA2080/2200

5kHz~8GHz/9kHz~20GHz
Spectrum Analyzer
2023

Maxwellon SA2080/2200 series spectrum analyzer is a wide-band, high-performance analyzer with a frequency measurement range of 5kHz-8GHz/18GHz. Highly integrated RF front-end and full digital IF technology ensure its excellent performance and stable performance. The maximum real-time bandwidth of 40MHz meets the test of common radio signals such as mobile communication, TV and WiFi, and the 145MHz analog IF output provides users with a variety of test options. It has a variety of intelligent measurement functions such as spectrum analysis, network measurement, field strength measurement, channel scanning, third-order intermodulation, harmonic distortion, carrier-to-noise ratio and Pass-Fail.

Key Feature

- Frequency range: 5kHz - 8GHz / 9kHz - 20GHz
- DANL <-160dBm
- Resolution bandwidth: 1Hz -5MHz
- Maximum real-time bandwidth: 40MHz
- 145MHz analog IF output
- 8.4 inch LED high-brightness standard display screen

Specification

Model		SA2080	SA2200
Frequency Range		5kHz~8GHz	9kHz~20GHz
Frequency Reading Accuracy		± (Frequency standard reading × Frequency reference accuracy+1% × Sweep width+10% × RBW+0.5 × [Sweep width/(Sweep point -1)]+1Hz)	
Internal Reference (10MHz)		Standard: Aging rate:<1ppm/year, Temperature drift:<0.5ppm (15 C to 35 C)	
		High stability time base option: Aging rate:<0.2ppm/year, Temperature drift:<0.1ppm (15 C to 35 C)	
Resolution Bandwidth(RBW)			
Range		1Hz to 5MHz in steps of 1, 3, and 5	
Selectivity (60db/3db)	RBW ≤500kHz	<5:1 typical value (digital implementation, close to Gaussian shape)	
Accuracy		<10% (<5% typical value)	
Video Bandwidth (VBW)		1Hz ~ 5MHz	
DANL (1Hz resolution bandwidth, RF attenuator 0dB)			
Pre Amplifier Off		5kHz~1MHz <-120dBm (Typ. -130dBm)	9kHz~1MHz <-100dBm
		1MHz~10MHz <-130dBm (Typ. -140dBm)	1MHz~20MHz <-105dBm-3×(f/2MHz)dB
		10MHz~2GHz <-138dBm (Typ. -142dBm)	20MHz~4GHz <-138dBm
		2GHz~3.1GHz <-136dBm (Typ. -140dBm)	4GHz~7GHz <-135dBm
		3.1GHz~5GHz <-136dBm (Typ. -140dBm)	7GHz~8GHz <-133dBm
		5GHz~8GHz <-135dBm (Typ. -138dBm)	8GHz~15GHz <-135dBm
		18GHz~20GHz <-128dBm	
Pre Amplifier On		1kHz~10MHz <-140dBm (Typ. -145dBm)	1MHz~10MHz <-135dBm
		10MHz~2GHz <-158dBm (Typ. -162dBm)	10MHz~2GHz <-156dBm
		2GHz~3.1GHz <-156dBm (Typ. -160dBm)	2GHz~5GHz <-154dBm
		3.1GHz~5GHz <-155dBm (Typ. -159dBm)	5GHz~7GHz <-152dBm
		5GHz~8GHz <-153dBm (Typ. -155dBm)	7GHz~8GHz <-150dBm
		15GHz~18GHz <-152dBm	8GHz~15GHz <-154dBm
		18GHz~20GHz <-147dBm	
Phase Noise			
fc=1GHz (sampling detection, average number of traces ≥ 10)		-98dBc/Hz at 10kHz frequency offset	-90dBc/Hz at 10kHz frequency offset
		-112dBc/Hz at 1MHz frequency offset	-105dBc/Hz at 1MHz frequency offset
Sweep Time			
Non Zero Sweep Width		5ms to 3000s	
Zero Sweep Width		20us to 3000s	
Sweep Mode		Continuous, Single	

Model		SA2080	SA2200
Trigger			
Trigger Source		Freedom, Video, External	
External trigger level		5V TTL level, Nominal Value	
Frequency Counter			
Counting Resolution		1Hz, 10Hz, 100Hz, 1kHz	
Counter Uncertainty		Frequency Reading × Frequency Reference Accuracy+Counting Resolution	
Amplitude Accuracy (20℃ to 30℃)			
Comprehensive Amplitude Accuracy		±1.5dB	1MHz~13.5GHz:±1.5dB
			13.5 GHz~20GHz:±2.0dB
Amplitude			
Measurement Range (fc≥10MHz)		DANL to +20dBm	
Max. Safe Input Level(Average continuous power)		+27dBm	
Max. DC Input Voltage		50Vdc	
Input Attenuator Range		0 - 30dB, Steps of 1 dB	
Stray and Residual Response			
TOI (third order distortion)	>30MHz	+7dBm	
SHI (second-order distortion)	>10MHz	+40dBm	
Input related spurious signal		< -60dBc	
Remaining Response		< -95dBm, Tpy -100dBm	< -85dBm
Input/Output			
RF Input		N-type female (50 Ω)	
USB		USB 2.0	
LAN		10/100 Base-T, RJ-45 connector	
RS232		9-pin D-SUB (male)	
FM/AM Audio Demodulation		Speaker and Headphone Jack	
Reference Input/Output		10MHz, BNC female; Input power: 0dBm to+10dBm; Output power: 0dBm ± 2dB	
IF Output		145MHz, BNC female	
VGA		800 × 600, 60Hz, 15 pin D-SUB (female)	
External Trigger Input		5V TTL level (± 10V, 100mA maximum)	
General			
Display		TFT-LCD, 8.4 inches, 800×600	
Max. Weight		7kg	
Dimensions (width × high × deep)		390mm×182mm×230mm	
Working Temperature		0 ℃ to 40 ℃	
Storage Temperature		-30℃ to+70℃	
Power		Input Voltage:100V to 240V	
		AC Frequency: 40Hz to 60Hz	
		Max. Power Consumption: 30W	Max. Power Consumption: 35W

■ Ordering Information

Model

Model	Name	Description
SA2080	Spectrum Analyzer	5kHz - 8GHz
SA2200	Spectrum Analyzer	9kHz - 20GHz

Standard

No.	Name
1	CD-ROM (User Manual, Programming Manual)
2	AC/DC adapter

Options

Option Model	Name
SA2000-OCXO	High stability time base option
SA2000-Meas	Advanced measurement options
ANT01	Near field probe kit
OA750/DA800	Omnidirectional antenna/directional antenna
UP60	USB power sensor
TR1000	RF demonstration kit



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