

# SSA3000X Series Spectrum Analyzer



SSA3032X

SSA3021X

## General Description

Siglent's SSA3000X series of spectrum analyzers have a frequency range of 9 KHz to 2.1 GHz / 3.2 GHz. With their light weight, small size, and friendly user interface, the SSA3000s offer a bright easy to read display, powerful and reliable automatic measurements, and plenty of powerful features. Applications are many, but include research and development, education, production, maintenance, and many more.

## Features and Benefits

- All-Digital IF Technology
- Frequency Range from 9 kHz up to 3.2 GHz
- 161 dBm/Hz Displayed Average Noise Level (Typ.)
- 98 dBc/Hz @10 kHz Offset Phase Noise (1 GHz, Typ.)
- Total Amplitude Accuracy < 0.7 dB
- 10 Hz Minimum Resolution Bandwidth (RBW)
- Standard Preamplifier
- Up to 3.2 GHz Tracking Generator Kit (Opt.)
- Reflection Measurement Kit (Opt.)
- Advanced Measurement Kit (Opt.)
- EMI Pre-compliance Test Kit (Opt.)
- 10.1 Inch WVGA ( 1024x600 ) Display



## Model and Main index

Model	SSA3032X	SSA3021X
Frequency Range	9 kHz~3.2 GHz	9 kHz~2.1 GHz
Resolution Bandwidth	10 Hz~1 MHz, in 1-3-10 sequence	10 Hz~1 MHz, in 1-3-10 sequence
Displayed Average Noise Level	-161 dBm/Hz, Normalize to 1 Hz (typ.)	-161 dBm/Hz, Normalize to 1 Hz (typ.)
Phase Noise	<-98 dBc/Hz@1 GHz, 10 kHz offset	<-98 dBc/Hz@1 GHz, 10 kHz offset
Amplitude Precision	< 0.7 dB	< 0.7 dB

## Specifications

Specification are valid under the following conditions: the instrument is within the calibration period, is stored for at least two hours at 0 °C to 50 °C temperature, and is warmed up 40 minutes. In addition tracking generator indicators, the specifications in this manual include the measurement uncertainty.

**Technical index** : All products guaranteed performance parameters, Apply to 5 °C to 45 °C temperature range.

**Typical** : 80 percent of the measurement result will meet at room temperate (approximately 25 °C ).It has 95th percentile reliability. This date is not warranted and does not include the measurement uncertainly.

**Nominal** : The expected mean or average performance or a designed attribute such as the 50 Ω connector. This date is not warranted and does not include the measurement uncertainly. This measurement meet at room temperate (approximately 25 °C ).

### Frequency Characteristic

	SSA3032X	SSA3021X
<b>Frequency</b>		
Frequency range	9 kHz-3.2 GHz	9 kHz-2.1 GHz
Frequency resolution	1 Hz	1 Hz
<b>Frequency Span</b>		
Range	0 Hz, 100 Hz to 3.2 GHz	0 Hz, 100 Hz to 2.1 GHz
Accuracy	± Span / (number of sweep points - 1)	
<b>Internal Reference Source</b>		
Reference frequency	10.000000 MHz	
frequency reference accuracy	± [(time since last adjustment × frequency aging rate) + temperature stability + calibration accuracy]	
Initial calibration accuracy	<1 ppm	
Temperature stability	<1 ppm/year, 0 °C ~50 °C	
Frequency aging rate	<0.5 ppm/first year, 3.0 ppm/20 years	
<b>Marker</b>		
Marker resolution	Span / (number of sweep points - 1)	
Marker uncertainty	± [frequency indication × frequency reference uncertainty + 1% × span + 10% × resolution bandwidth + marker resolution]	
Frequency counter resolution	1 Hz	
Frequency counter uncertainty	± [frequency indication × frequency reference accuracy + counter resolution]	
<b>Bandwidths</b>		
Resolution bandwidth (-3dB)	10 Hz~1 MHz, in 1-3-10 sequence	
Resolution filter shape factor	< 4.8:1 (60 dB:3 dB), Gaussian-like	
RBW uncertainty	<5%	
Video bandwidth (-3dB)	1 Hz ~3 MHz, in 1-3-10 sequence	
VBW uncertainty	<5%	

All Specifications are subject to change without prior notice.



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