

# N9021B MXA X-Series Signal Analyzer

The optimum choice in wireless for new generation devices



## See the real performance of your device

R&D, design validation (DVT) and manufacturing engineers need to keep up with the rapidly expanding wireless industry into wider bandwidth, enabling higher data throughput demand, and millimeter wave (mmWave) frequencies including 5G New Radio (NR) and high-throughput satellite (HTS) communications, and Wi-Fi 7. Keysight signal analyzers provide reliable results, whether you need deep-dive measurements for solving tough problems in R&D or quick and simple measurements for manufacturing.

The new N9021B MXA Signal Analyzer provides analysis bandwidth and the superior phase noise performance to meet the needs of engineers designing and delivering today's 5G and wideband wireless applications.

## Reliable Signal Analysis Results

### Meets evolving test needs of advanced wireless and satellite communications DVT and manufacturing

- Frequency range of 10 Hz – 50 GHz, meeting specification requirements for both 5G NR FR1 and FR2
- Detect signals you couldn't see before with extended analysis bandwidth up to 510 MHz and > 75 dB SFDR
- Best-in-class RF performance with an SSB phase noise -130 dBc/Hz typical (1 GHz, 10 kHz offset)

### Explore every facet of a complex signal and optimize your designs

- Capture elusive or transient signals with a full-band real-time spectrum analyzer (RTSA)
- Use Keysight's powerful industry-leading 89600 PathWave VSA software to validate your design and pinpoint signal issues with signal recording, playback, vector signal analysis, and demodulation support for over 75 industry standard signals.

## Repeatable results from software enabled measurement science

- Utilize PathWave X-Series Applications to measure system or component compliance across multiple parametric or standards-compliant wireless signals.
- Maximize the flexibility of test assets with a wide variety of PathWave X-Series Applications offer licensing terms that enable application sharing between X-Series signal analyzers and PXIe instruments.

## Key performance data

### Specifications

	Description
Frequency range	10 Hz to 8.4, 13.6, 26.5, 32, 44, and 50 GHz
Analysis bandwidth	255 MHz, or 510 MHz
Display average noise level (@3 GHz)	-154 dBm (preamp off), -164 dBm (preamp on)
Phase noise (10 kHz offset)	-130 dBc/Hz at 1 GHz typical
Third-order Intermodulation Distortion	+23 dBm at 3 GHz typical
Real-time bandwidth	Up to 510 MHz
Amplitude Accuracy	±0.44 dB at 3 GHz, 95% percentile
Probability of Intercept (POI)	Minimal signal duration of 3.51 $\mu$ s for 100% POI and full amplitude accuracy

NFE: Noise floor Extension

### Options

Frequency		Preamplifier		Analysis bandwidth	
Option	Description	Option	Description	Option	Description
508	10 Hz – 8.4 GHz	P08	100 kHz – 8.4 GHz	B2X	255 MHz analysis bandwidth
513	10 Hz – 13.6 GHz	P13	100 kHz – 13.6 GHz	B5X	510 MHz analysis bandwidth
526	10 Hz – 26.5 GHz	P26	100 kHz – 26.5 GHz		
532	10 Hz – 32 GHz	P32	100 kHz – 32 GHz		
544	10 Hz – 44 GHz	P44	100 kHz – 44 GHz		
550	10 Hz – 50 GHz	P50	100 kHz – 50 GHz		

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