

Competitive Comparison

Keysight BSA (Basic Spectrum Analyzer) versus Danaher Tektronix MDO4000

If the majority of your daily job revolves around RF and microwave, a dedicated spectrum analyzer is the best choice for you to handle RF verifications and troubleshooting. You need a spectrum analyzer that is equipped with the essential functionality and required performance at an affordable price. Keysight Technologies, Inc. BSA spectrum analyzers N9320B and N9322C are designed to be the right answer for you.



Tektronix MDO	Keysight oscilloscope	Keysight BSA spectrum analyzer
MDO4014-3	MSOX4014A	N9320B
MDO4034-3	MSOX4034A	N9320B
MDO4054-3	MSOX4054A	N9320B
MDO4054-6	MSOX4054A	N9322C
MDO4104-3	MSOX4104A	N9320B
MDO4104-6	MSOX4104A	N9322C

	Keysight BSA spectrum analyzer		Tektronix MDO4000	
Frequency range	9 kHz to 3 GHz/7 GHz	✓	50 kHz to 3 GHz/6 GHz	✗
RBW	10 Hz to 1 MHz N9320B	✓	20 Hz to 10 MHz	✓
	10 Hz to 3 MHz N9322C	✓		
Attenuation	0 to 70 dB in 1 dB steps N9320B	✓	Not user adjustable	✗
	0 to 50 dB in 1 dB steps N9322C	✓		
DANL (at 1 GHz)	-148 dBm/Hz at 3 GHz N9320B	✓	-148 dBm/Hz at 3 GHz	✓
	-155 dBm/Hz at 6 GHz N9322C	✓	-140 dBm/Hz at 6 GHz	✗
Φ noise (100 kHz offset)	-100 dBc/Hz N9320B	✓	-95 dBc/Hz	✗
	-97 dBc/Hz N9322C	✓		
Level accuracy	± 1.5 dB (± 0.5 dB typical)	✓	± 1.5 dB (± 0.5 dB typical)	✓
Residual response	-83 dBm N9320B	✓	-78 dBm	✗
	-90 dBm N9322C	✓		
ADC resolution	12-Bit	✓	8-Bit	✗

About Keysight BSA spectrum analyzer

The N9320B and N9322C Basic Spectrum Analyzers (BSAs) have all the essentials of a Keysight spectrum analyzer with a price/performance that is easy to afford.

Excellent performance

- 10 ms minimum, non-zero span sweep time
- -161 dBm/Hz displayed average noise level
- Typical ± 0.5 dB amplitude accuracy
- 10 Hz minimum resolution bandwidth

Optimized for spectrum analysis

- Four traces and up to 12 markers allow optimum flexibility for troubleshooting
- Marker table lists the frequency and amplitude matrix from all active markers
- Frequency counter offers more accurate frequency readout
- Marker demodulation for AM/FM tune and listen
- Dedicated 12-bit ADC for RF spectrum analysis provides uncompromised performance in both accuracy and spurious response

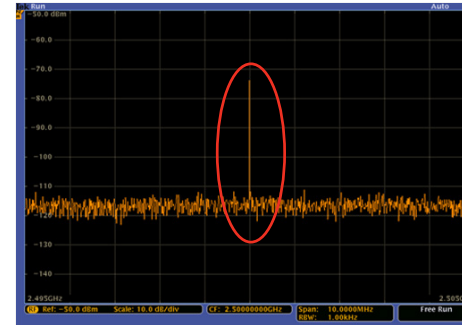
KEYSIGHT SERVICES

Accelerate Technology Adoption. *Lower costs.*

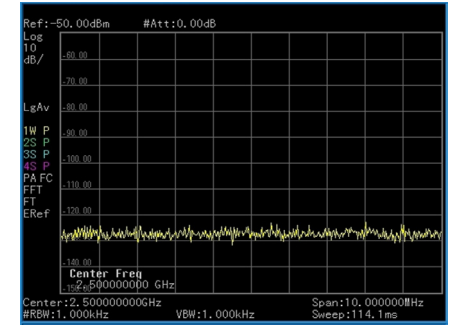
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A typical spurious response of MDO4000 that may impact measurement accuracy.



BSA has a clean spectrum with the same settings and 10 dB better DANL.

Spectrum analysis features	BSA	MDO4000
Tracking generator	Yes	No
One-port reflection measurement ¹	Yes	No
Task planner ¹	Yes	No
Channel scanner ¹	Yes	No
AM/FM demodulation metrics	Yes	No
ASK/FSK demodulation metrics	Yes	No
Spectrum emission mask	Yes	No
Limit lines, corrections	Yes	No
Manual markers	12	2
Marker tune and listen	Yes	No
USB power meter ¹	Yes	No
Remote control PC software	Yes	No

1. Only available on N9322C BSA.