

MDO4000B Series vs. Agilent N9010A EXA Spectrum Analyzer

Competitive Fact Sheet



Mixed Domain Oscilloscope

- 4 analog channels
- 16 digital channels
- Integrated spectrum analyzer
- ← ▪ Dedicated front panel controls
- ← ▪ Dedicated N connector

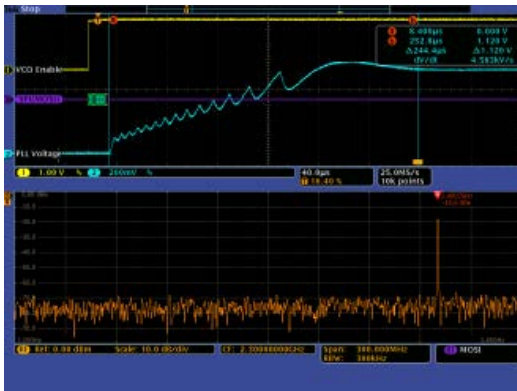
Specifications		Tektronix MDO4000B-3		Agilent N9010A-503
Frequency Range	✗	9 kHz - 3 GHz	✓	10 Hz – 3.6 GHz
Capture / Analysis Bandwidth	✓	3 GHz	✗	10 MHz std (25 / 40 MHz opt)
Phase Noise at 1 GHz CF 10 kHz offset 100 kHz offset		-108 dBc/Hz, -111 dBc/Hz (typical) -110 dBc/Hz, -113 dBc/Hz (typical)		-103 dBc/Hz, -105 dBc/Hz (typical) -115 dBc/Hz, -117 dBc/Hz (typical)
Displayed Average Noise Level (DANL) at 1 GHz		-147 dBm/Hz , -149 dBm/Hz (typical)		-148 dBm/Hz, -150 dBm/Hz (typical)
2nd Harmonic Distortion at 1 GHz	✗	-60 dBc, -65 dBc (typical)	✓	-65 dBc
3rd Order Intermodulation Distortion at 1 GHz		-62dBc, -65 dBc (typical)		-60 dBc, -68 dBc (typical)
Other Input Related Spurious Response	✗	-60 dBc, -65 dBc (typical) w/ exceptions to -55 dBc, -60 dBc (typical)	✓	-80 dBc w/ exceptions to -68 dBc
Residual Response	✗	-85 dBm w/ exceptions at -78 dBm	✓	-100 dBm
Display Size and Resolution	✓	10.4" XGA	✗	8.4" XGA
Dimensions (HxWxD in inches)	✓	9.0 x 17.3 x 5.8	✗	7.0 x 16.8 x 14.5
Weight	✓	11 lbs.	✗	35.0 lbs.
Warranty		3 years		3 years

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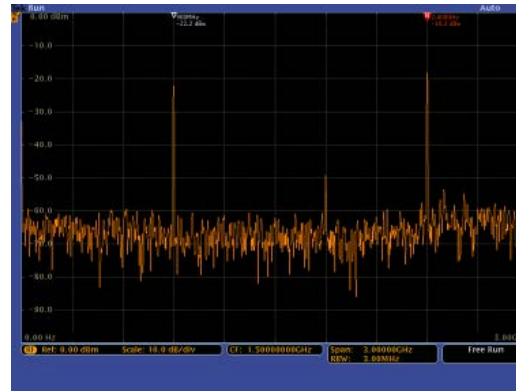
MDO4000B Capabilities not Available on Agilent N9010A

- 4 analog channels
- 16 digital channels
- Serial / Parallel bus decode
- Capture bandwidth wide enough for modern RF signals
- Time correlated views of analog, digital, serial / parallel buses and RF signals for complete system visibility. RF signals include:
 - Spectrum shown in Frequency Domain
 - Amplitude, Frequency, and Phase vs. Time traces shown in Time Domain



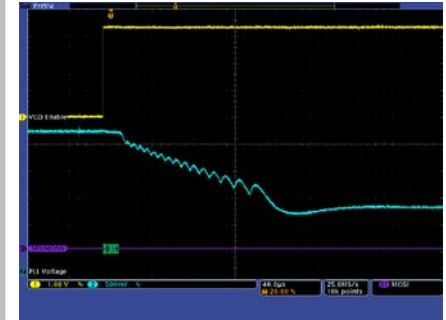
Correlating RF to other system signals

The most common application is making timing measurements from control logic (often serial or parallel bus commands) to when the RF output changes take effect.

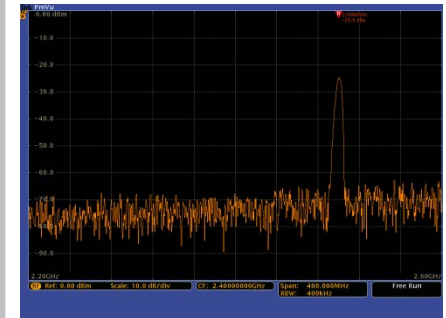


Exceptionally Wide Capture Bandwidth

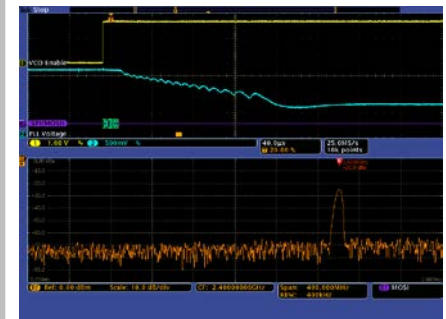
With 3 GHz of capture bandwidth and long RF acquisition times, the MDO is the ultimate product for debugging modern wideband, time varying RF signals.



Time Domain Only



Frequency Domain Only



Both Domains at Once