

# MDO4000B Series vs. Agilent N9000A CXA Spectrum Analyzer

## Competitive Fact Sheet



### Mixed Domain Oscilloscope

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

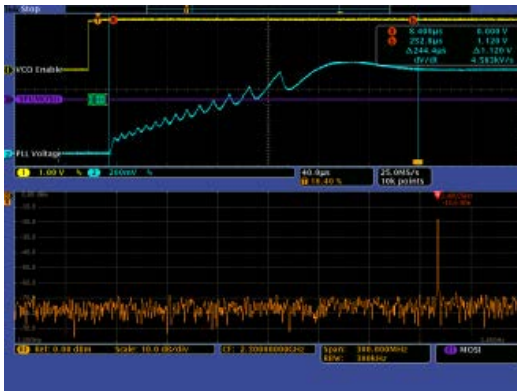
Specifications		Tektronix MDO4000B-3		Agilent N9000A-503
Frequency Range		9 kHz - 3 GHz		9 kHz - 3 GHz
Capture / Analysis Bandwidth	✓	3 GHz	✗	10 MHz std (25 MHz opt)
Phase Noise at 1 GHz CF		-108 dBc/Hz, -111 dBc/Hz (typical)		-99 dBc/Hz, -102 dBc/Hz (typical)
10 kHz offset	✓	-110 dBc/Hz, -113 dBc/Hz (typical)	✗	-102 dBc/Hz, -104 dBc/Hz (typical)
100 kHz offset				
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 (0 dB atten.)		-60 dBc, -65 dBc (typical)		-62 dBc
3rd Order Intermodulation Distortion at 1 GHz	✗	-62dBc, -65 dBc (typical)	✓	-66 dBc, -74 dBc (typical)
Other Input Related Spurious Response		-60 dBc, -65 dBc (typical) w/ exceptions to -55 dBc, -60 dBc (typical)		-60 dBc
Residual Response	✗	-85 dBm w/ exceptions at -78 dBm	✓	-90 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.	✗	34.0 lbs.
Warranty	✓	3 years	✗	1 year

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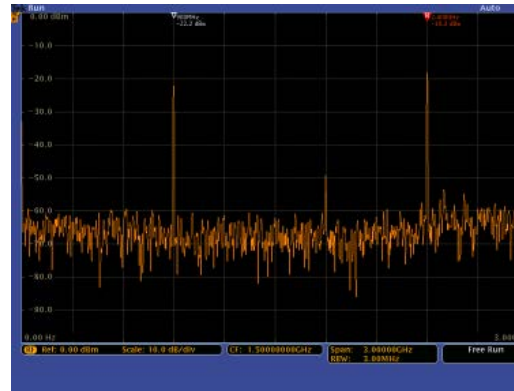
### MDO4000B Capabilities not Available on Agilent N9000A

- 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



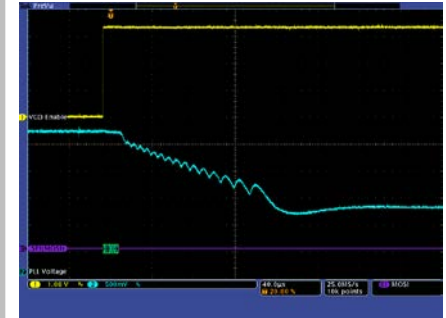
#### Correlating RF to other system signals

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.

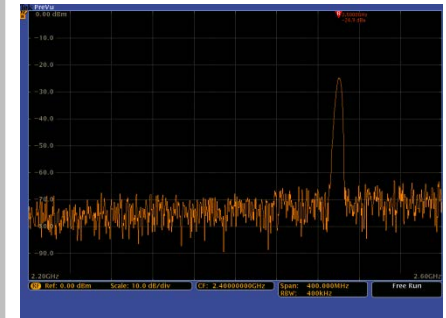


#### Exceptionally Wide Capture Bandwidth

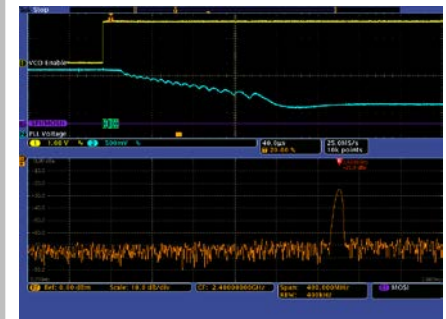
With 3 GHz of capture bandwidth and long RF acquisition times, the MDO is the ultimate product for debugging modern wideband, time varying RF signals.



Time Domain Only



Frequency Domain Only



Both Domains at Once