MDO4000B Series vs. Rohde & Schwarz FSV 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		Rohde & Schwarz FSV4
Frequency Range	✘	9 kHz - 3 GHz	✔	10 Hz - 4 GHz
Capture / Analysis Bandwidth	✔	3 GHz	✘	28 MHz (options to 160 MHz)
Phase Noise at 500 MHz CF 10 kHz offset 100 kHz offset	✔	-114 dBc/Hz, -117 dBc/Hz (typical) -116 dBc/Hz, -119 dBc/Hz (typical)	✘	-106 dBc/Hz, -110 dBc/Hz (typical) -115 dBc/Hz, -115 dBc/Hz (typical)
Displayed Average Noise Level (DANL) at 1 GHz	✘	-147 dBm/Hz , -149 dBm/Hz (typical)	✔	-150 dBm/Hz, -153 dBm/Hz (typical)
2nd Harmonic Distortion at 1 GHz (0 dB atten.)	✔	-60 dBc, -65 dBc (typical)	✘	-55 dBc
3rd Order Intermodulation Distortion at 1 GHz	✔	-62dBc, -65 dBc (typical)	✘	-56 dBc, -62 dBc (typical)
Other Input Related Spurious Response	✘	-60 dBc, -65 dBc (typical) w/ exceptions to -55 dBc, -60 dBc (typical)	✔	-80 dBc with exceptions to -70 dBc
Residual Response	✘	-85 dBm w/ exceptions at -78 dBm	✔	-103 dBm
Display Size and Resolution	✔	10.4" XGA	✘	8.4" SVGA
Dimensions (HxWxD in inches)	✔	9.0 x 17.3 x **5.8**	✘	7.8 x 16.2 x **16.4**
Weight	✔	11 lbs.	✘	20.9 lbs.
Warranty	✔	3 years	✘	1 year

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MDO4000B Capabilities not Available on Rohde & Schwarz FSV

- 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
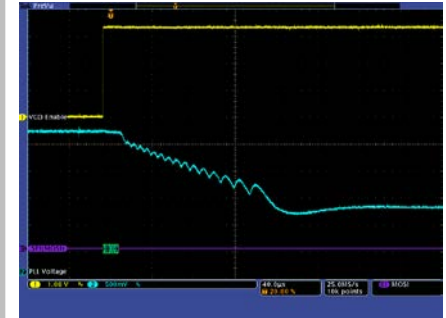   - Amplitude, Frequency, and Phase vs. Time traces shown in Time Domain

Time Domain Only

Frequency Domain Only

Both Domains at Once
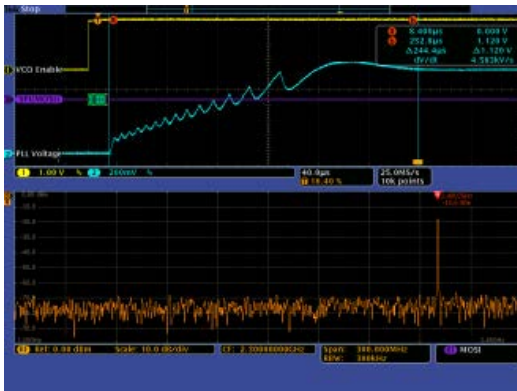
Correlating RF to other system signals
The most common application is making timing measurements from control logic (often serial or parallel bus commands) to when the RF output changes take effect.
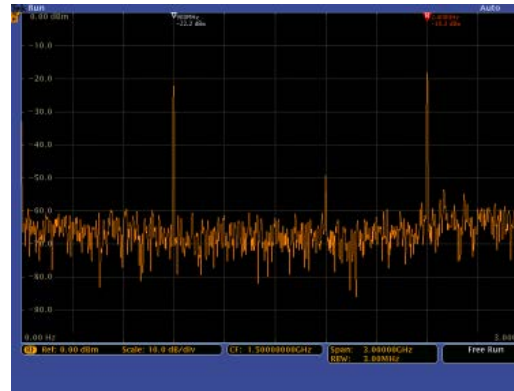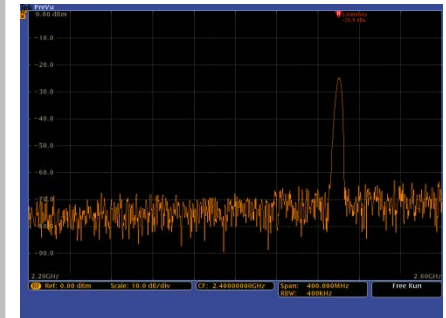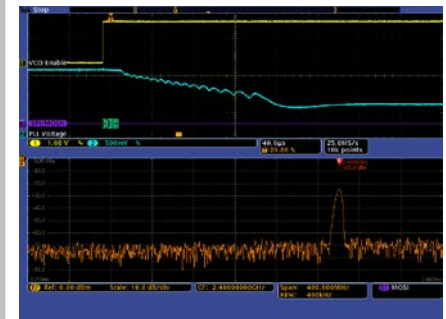

Exceptionally Wide Capture Bandwidth
With 3 GHz of capture bandwidth and long RF acquisition times, the MDO is the ultimate product for debugging modern wideband, time varying RF signals.

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