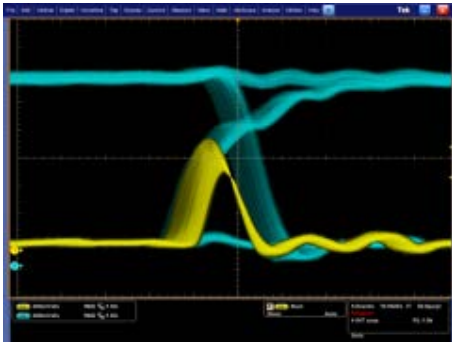


MSO/DPO5000B Series vs. Agilent MSO/DSO7000B Series

Competitive Fact Sheet

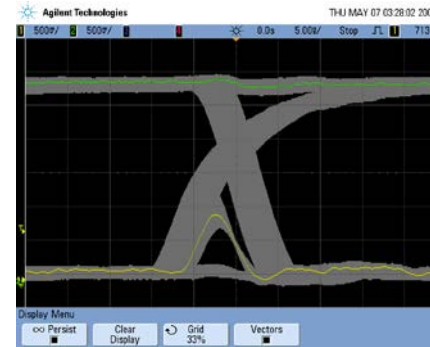
Discovering an Intermittent Pulse

Tektronix MSO/DPO5000B Series



- ✓ >250,000 wfms/s maximum waveform capture rate.
- ✓ Channels represented with different colors or color intensity grading.
- ✓ Color or grey-scale intensity grading shows frequency of occurrence.
- ✓ Intensity grading is preserved when stopped.
- ✓ Variable persistence control.
- ✓ User selectable horizontal models: constant sample rate, automatic, and manual.

Agilent MSO/DSO7000B Series



- ✓ 100,000 wfms/s maximum waveform capture rate (specified)
- ✗ No intensity grading in persistence mode – whether running or stopped.
- ✗ Cannot distinguish channel history when stopped – only last acquisition.
- ✗ No variable persistence.
- ✗ Record length determined by the acquisition mode (repetitive, single shot), number of channels on, and time-base setting.

Navigation and Search

Tektronix MSO/DPO5000B

Agilent MSO/DSO7000B



- ✓ Wave Inspector® controls.
- ✓ Pan/Zoom controls for easy scrolling through long records.
- ✓ Search/Mark controls enable you to search for events of interest, mark them, then navigate through the record mark by mark.
- ✓ Simultaneously search up to 8 types of events.

- ✗ Only uses horizontal scale control to zoom.
- ✗ Manual turning of horizontal position to scroll through data.
- ✗ Limited automated search capability and only on Serial Decode
- ✗ Search limited to single type of event.
- ✗ Navigation by horizontal position
- ✗ Automated Search only on Serial Decode

Key Specifications Comparison

	Tektronix MSO/DPO5000B Series	Agilent MSO/DSO7000B Series
Channels	✓ 4 (+16 digital MSO)	✓ 2, 4 (+16 digital MSO)
Analog Bandwidth	✓ 350 MHz – 2 GHz	✓ 100 MHz - 1 GHz
Max. Sample Rate (All channels on)	✓ 5 GS/s	✗ 2 GS/s
Max. Std. Record Length (All channels on)	✓ 25 M points (DPO and MSO models)	✗ 4 M points (DSO models) 1 M points (MSO models)
Max. Opt. Record Length (All channels on)	✓ 125 Mpts. (analog channels) 40 Mpts. (digital channels)	✗ 4 M points (DSO models) 1 M points (MSO models)
Optional Analysis Packages	✓ Advanced Jitter, Power, Limit Test, Mask Test, DDR Memory, Serial Compliance	✗ Power
Standard Passive Probe	✓ 1 GHz, 3.9 pF, 10 MΩ (1 -2 GHz models); 500 MHz, 3.9 pF, 10MΩ	✗ 500 MHz, 12 pF, 2.2 MΩ; 150 MHz, 15 pF, 10 MΩ (100 MHz models)

MSO/DPO5000B Series vs. Agilent MSO/DSO7000B Series

Competitive Fact Sheet

Serial Triggering and Decode

Tektronix MSO/DPO5000B Series

- ✓ **Serial Bus Support** – I²C, SPI, USB, RS-232/422/485/UART, CAN, LIN, FlexRay, PCIe, 8b/10b, MIL-STD-1553, Ethernet
- ✓ **Bus Display** – View up to 16 serial buses simultaneously.
- ✓ **Bus Decoding** – Decodes each packet on the bus and displays the value in hex, binary, decimal, or ASCII.
- ✓ **Serial Triggering** – Trigger on packet content.
- ✓ **Event Table** – View captured packets in time-stamped protocol event table format.



Agilent MSO/DSO7000B Series

- ✓ **Serial Bus Support** – I²C, SPI, CAN, LIN, FlexRay, RS-232/UART, I²S, and MIL-STD-1553 (**Serial Decode only on 4-channel models**).
- ✗ **Bus Display** – View only a single decoded serial bus display, anchored at the bottom of the screen.
- ✗ **Bus Decoding** – Hardware decode of each packet on the bus, but not always time-aligned.
- ✓ **Serial Triggering** – Trigger on packet content. Limited serial triggering standard.
- ✓ **Lister** – View captured packets in a tabular listing view.



Pan right and some of the decoded text shifts; now it's not time correlated with data.

Measurements and Channel Math

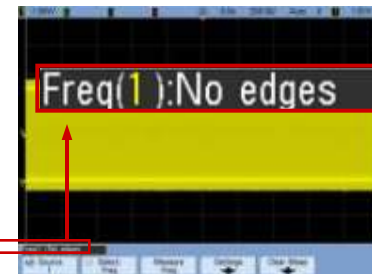
Tektronix MSO/DPO5000B

- ✓ Use all the record length points for measurements, averaging, math, and FFT.
- ✓ Up to 8 automatic measurements displayed at once. Gate measurements by screen or cursors.
- ✓ Up to 4 math waveforms - advanced math with arbitrary expressions and user-defined filters.
- ✓ Jitter and eye pattern measurements standard.



Agilent MSO/DSO7000B

- ✗ Uses only 1000 displayed points by default for measurements, averaging, FFT and math. Special mode for 128k point record length.
- ✗ Up to 4 automatic measurements displayed at once. No cursor gating control.
- ✗ One math waveform with limited math choices.
- ✗ No jitter or eye pattern measurements.



Digital Debug with MSO

Tektronix MSO5000B

- ✓ Sample rate not dependent on number of channels used.
- ✓ Record length not dependent on number of channels used.
- ✓ Per-channel digital thresholds
- ✓ Green trace for highs (1), blue trace for lows (0).
- ✓ Bus waveforms can be moved within the display.
- ✓ Up to 16 buses available.
- ✓ Clocked or unclocked parallel bus decode.

Agilent MSO7000B

- ✗ Sample rate cut in half when using both pods.
- ✗ Record length compromised as digital channels are used.
- ✗ Single digital threshold per pod.
- ✗ No color difference between a low and a high.
- ✗ Bus waveforms anchored to bottom of the display.
- ✗ Up to 2 buses available.
- ✗ No clocked parallel bus decode.

	MSO/DPO5000B Series		MSO/DSO7000B Series	
Maximum Toggle Frequency	✓	500 MHz	✗	250 MHz
Maximum Sample Rate	✓	16.5 GS/s (60.6 ps)	✗	2 GS/s (500 ps) – 1 pod 1 GS/s (1 ns) – each pod
Minimum Input Swing	✓	400 mV	✗	500 mV
Minimum Detectable Pulse Width	✓	1 ns	✗	2 ns