MSO/DPO5000B Series vs. Agilent MSO/DSO-X 4000A Series

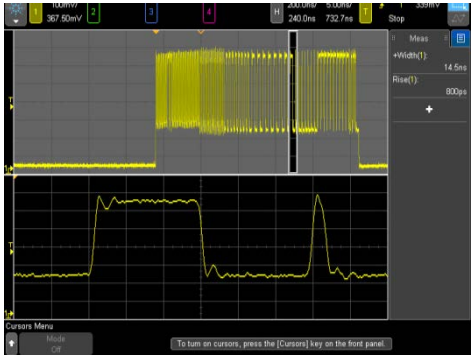
Competitive Fact Sheet

Signal Fidelity and Measurement Accuracy*

Tektronix MSO/DPO5000B

- ✓ 2 GHz bandwidth
- ✓ 10 GS/s max sampling rate
- ✓ 1 GHz, 3.9 pF standard probe on 1 GHz and 2 GHz models

Agilent MSO/DSO-X 4000A Series

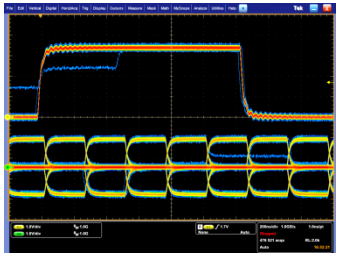


- ✗ 1.5 GHz bandwidth
- ✗ 5 GS/s max sampling rate
- ✗ 700 MHz, 9.5 pF standard probe

Waveform Capture Rate

Tektronix MSO/DPO5000B

- ✓ >250K waveforms per sec
- ✓ Color graded persistence display
- ✓ Single button activation



Agilent X 4000A Series

- ✓ >1,000 K waveforms per sec
- ✗ Single color persistence display only in “Run” mode
- ✓ Default always on

Key Specifications Comparison

	Tektronix MSO/DPO5000B Series		Agilent MSO/DSO-X 4000A Series	
Channels	✓	4 (+16 digital on MSO)	✓	2, 4 (+16 digital on MSO)
Bandwidth	✓	2 GHz, 1 GHz, 500 MHz, 350 MHz	✗	1.5 GHz, 1 GHz, 500 MHz, 350 MHz, 200 MHz
Waveform Capture Rate	✓	>250k wfms/s, with color-intensity-graded displays	✓	>1M wfms/s, with limited intensity-graded display
Max. Sample Rate 2 chan. (4 chan.) on	✓	10 GS/s (5 GS/s)	✗	5 GS/s (2.5 GS/s)
Max. Record Length (All channels on)	✓	25 M points (standard) 125 M points (optional)	✗	2 M points
Segmented Memory	✓	290,000 segments max.	✗	1,000 Segments max.
DC Gain Accuracy	✓	±1.5%	✗	±2%
Display	✓	10.4 inch, XGA resolution, 8 in. X 5.125 in. graticule	✓	12.1 inch, SVGA resolution, 7.75 in. X 5.75 in. graticule

* 480 Mb/s USB 2.0 signal

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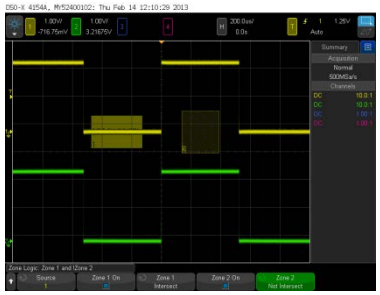
Measurements

Tektronix MSO/DPO5000B	**Agilent** X 4000A Series
✓ Two multipurpose controls for convenient cursor control	✗ Single, multiplexed cursor control
✓ Automated measurements can be gated by cursors or by any of the 4 zooms	✓ Automated measurements can be gated by zoom or cursors
✓ Automatic measurements based on signal data values	✗ Automatic measurements based on displayed data points

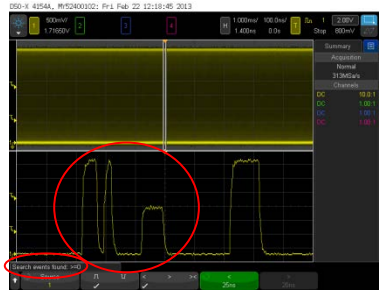
Graphical Triggering

Tektronix MSO/DPO5000B	**Agilent** X 4000A Series
✓ Visual Trigger is standard and is integrated into the trigger setup interface	✓ Zone triggering is standard and has a separate front panel button user interface
✓ Up to 8 user-definable regions	✗ Limited to 2 rectangular zones max.
✓ Visual Trigger areas can be associated with any of the analog channels	✗ Limited to a single analog channel
✓ Visual Trigger areas can be moved, re-sized, and shapes can be modified	✗ Zones can be moved, but not re-sized, and shape can't be modified
✓ Visual Trigger setup can be horizontally scaled and used with search	✗ Zone triggering can't be horizontally scaled significantly and doesn't work with search



Automated Search

Tektronix MSO/DPO5000B	**Agilent** X 4000A Series
✓ Simultaneously search for up to 8 different events	✗ Search for a single event at a time
✓ Search on variety of digital features including Setup/Hold, Logic, serial or parallel buses	✗ Limited search capabilities – no Setup/Hold, Logic, or parallel bus.
✓ Search based on signal data values, reliably finding specified events (see below, finding 3 runts and 3 glitches)	✗ Search based on displayed data points and does not reliably find events (see example, showing "**>=0 events found**")



Digital Channels

Tektronix MSO5000B	**Agilent** MSO-X 4000A Series
✓ Record lengths up to 40 Mpoints, even with analog channels on.	✗ Maximum record length 2 Mpoints with no analog channels on, reduced with analog channels on.
✓ Channel-to-channel skew 500 ps typical.	✗ Channel-to-channel skew 2 ns typical.
✓ MagniVu extends digital channel timing resolution down to 60.6 ps.	✗ Digital channel sample rate of 1.25 GS/s gives 800 ps timing resolution.
✓ Bus waveforms can be moved within the display. Up to 16 buses.	✗ Bus waveforms anchored to bottom of the display.
✓ Event table for parallel bus decode.	✗ No event table for parallel bus decode.

www.tektronix.com/mso5000

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