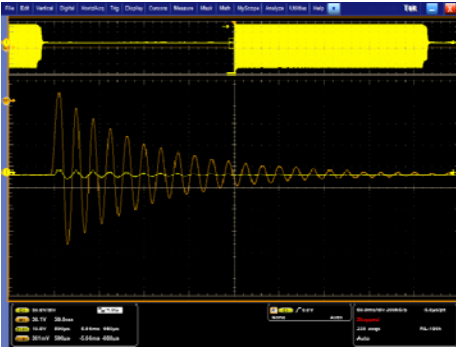# MSO/DPO5000B Series vs. Agilent DSO 9000H Series
Competitive Fact Sheet

High Vertical Resolution

Tektronix MSO/DPO5000B

✓ Vertical range is 100 V/div with standard probes, and 10 vertical divisions.

✗ Default vertical resolution is 8 bits.

✓ HiRes acquisition mode can be used to increase vertical resolution.

✓ Standard math filter functions can be used to improve signal-to-noise.

✓ Vertical zoom can be used to vertically scale the math waveform.

Agilent DSO 9000H Series

✗ Vertical range limited to 50V/div with standard probes, and only 8 divisions.

✓ Default vertical resolution is 10 bits.

✓ "Bits of Resolution" acquisition selections enable higher vertical resolution.

✓ Acquisition averaging and math filtering can be used to improve signal-to-noise.

✓ No vertical zoom, but math can be used to scale the waveform.

Screen shots above show similar high resolution acquisition of >600V signal with detail of 2-3V ringing pulse, using vertical zoom and filtering on both scopes.

Standard Passive Probing

Tektronix MSO/DPO5000B

✓ Standard TPP0500B probes provide full bandwidth performance on 350 and 500 MHz models of the 5000B series.

✓ Standard TPP1000 probes provide 1 GHz bandwidth performance on 1 and 2 GHz models of the 5000B series.

✓ TPP0500B and TPP1000 probes have 3.9 pF input capacitance, providing significantly lower probe loading on critical circuits.

Agilent 9000H Series

✓ Standard N2873A probes provide full bandwidth performance on 250 and 500 MHz models of the 9000H series.

✗ Standard N2873A probes provide 500 MHz bandwidth performance on 1 and 2 GHz models of the 9000H series.

✗ N2873A probes have 9.5 pF input capacitance, providing significantly higher probe loading on critical circuits.

Key Specifications Comparison

		Tektronix MSO/DPO5000B Series		Agilent DSO 9000H Series
Channels	✓	4 (+16 digital on MSO)	✓	4 (+16 digital with MSO opt.)
Bandwidth	✓	350 MHz, 500 MHz, 1 GHz, 2 GHz	✓	250 MHz, 500 MHz, 1 GHz, 2 GHz
Waveform Capture Rate (max)	✓	>250k wfms/s, with color- / intensity-graded displays	✗	3k wfms/s, with limited color- and intensity-graded displays
Max. Sample Rate (All channels on)	✓	5 GS/s	✗	1.25 - 5 GS/s, depending upon acquisition mode and input terminations
Max. Record Length (All channels on)	✓	25 Mpts (standard) 125 Mpts (optional)	✓	50 Mpts (standard) 128 Mpts (opt., repetitive)
DC Gain Accuracy	✓	±1.5%	✗	±2%
Vertical Resolution	✗	8 bits	✓	10 bits (default)

Tektronix®

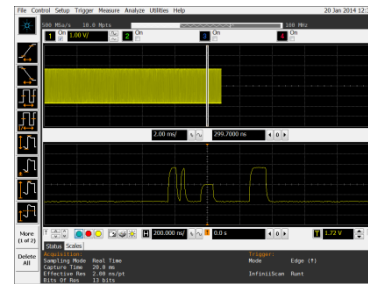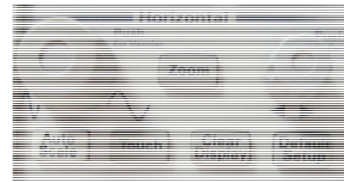# MSO/DPO5000B Series vs. Agilent DSO 9000H Series
Competitive Fact Sheet

Automated Search

Tektronix MSO/DPO5000B

- ✓ Wave Inspector® controls for easy scrolling through long records.
- ✓ Play/Pause button scrolls the waveform across the screen automatically.
- ✓ Wave Inspector automatic search is standard.
- ✓ Simultaneously and automatically search for up to 8 different types of events.
- ✓ Search on variety of digital features including setup/hold, logic, serial or parallel buses.
- ✓ Integrated analog, digital, and serial search mechanism.
- ✓ Automatically or manually mark events of interest, and then navigate through the record mark by mark.
- ✓ Search based on signal data values, reliably finding specified events (screen shot shows finding 3 runts and 3 glitches).
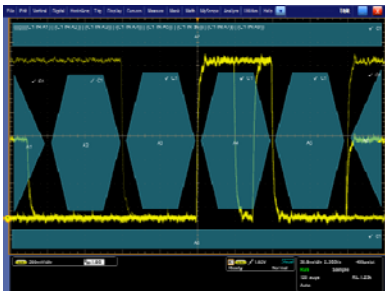
Agilent DSO 9000H Series

- ✗ Multiplexed horizontal acquisition and zoom controls.
- ✗ Manual scrolling through data with horizontal position control.
- ✗ All automatic searching is optional.
- ✗ Search for a single occurrence of a single event.
- ✗ No automated search for digital features such as setup/hold or logic/pattern.
- ✗ Separate serial search mechanism for each standard, with different user interface.
- ✗ No automatic or manual marks.
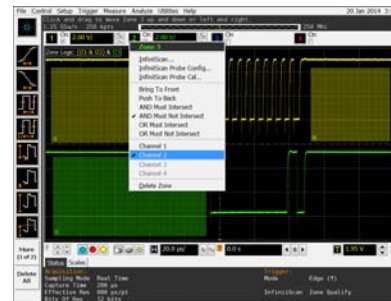- ✗ Search based on signal data values, finding one specified event

Visual Trigger and Search

Tektronix MSO/DPO5000B

- ✓ Visual Trigger and Search is standard and is integrated into Wave Inspector search.
- ✓ Up to 8 user-definable regions and can be associated with any of the analog channels.
- ✓ Visual Trigger areas can be moved, re-sized, and shapes can be modified.
- ✓ Visual Trigger can be used with search and Mark All Triggers.

Agilent DSO 9000H Series

- ✗ Infiniiscan Zone Qualify is optional and is mutually exclusive with the other Infiniiscan search modes.
- ✓ Up to 8 user-definable rectangles and can be associated with any of the analog channels.
- ✗ Zones can be moved, but not re-sized, and shape can't be modified.
- ✗ Zone Qualify triggering doesn't work with search.

Tektronix®