

# Tektronix TDS3000B Series vs. Agilent DSO5000A Series

## Side-by-Side Product Comparison

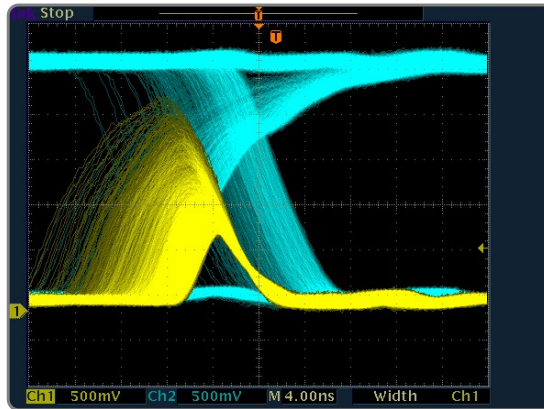
### Capturing an Intermittent Pulse

Persistence modes are critical for taking measurements on intermittent events, like this meta-stable pulse.

#### Tektronix TDS3000B

Infinite persistence display, stopped.

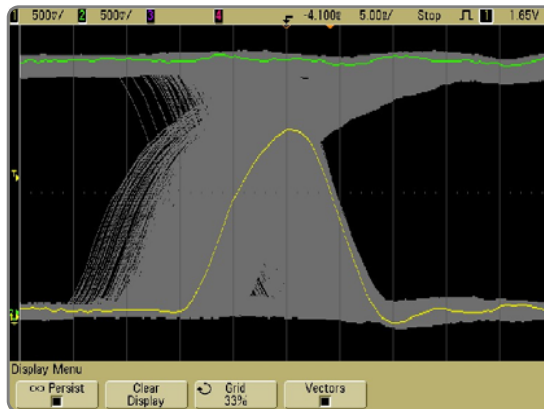
- ✓ Each channel represented by different colors.
- ✓ Intensity scaling is preserved when stopped.
- ✓ Offers variable persistence capability.



#### Agilent DSO5000A

Infinite persistence display, stopped.

- ✗ No intensity grading in persistence mode – running or stopped.
- ✗ Cannot differentiate channel history when stopped.
- ✗ No variable persistence capability.



### When does the DSO5000 really show 1M samples?

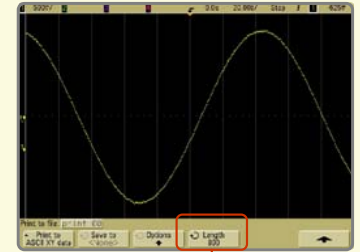
#### Tektronix TDS3000B

Selectable record length – up to 10K points on all channels, all the time.

#### Agilent DSO5000A

To get 1M samples:

- ▶ Must be in single shot mode.
- ▶ Slower than 50µ s/DIV horizontal setting.
- ▶ Turn off 2 channels on 4-channel instrument, or turn off 1 channel on 2-channel instrument.



*If long record length is critical, the Tektronix 4000 Series provides 10M on all channels, all the time.*

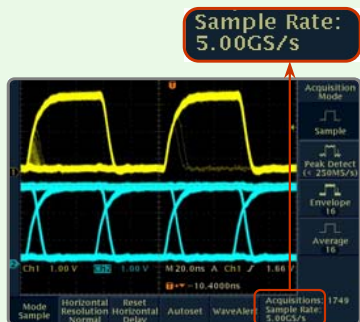
### Key Specification Comparison

	Tektronix TDS3000B	Agilent DSO5000A
<b>Channels</b>	✓ 4 or 2	✓ 4 or 2
<b>Available Bandwidths</b>	✓ 100 MHz, 200 MHz, 300 MHz, 400 MHz, 500 MHz	✗ 100 MHz, 300 MHz, 500 MHz
<b>Max. Sampling Rate (All Channels On)</b>	✓ 5 GS/s	✗ 2 GS/s
<b>Max. Record Length (All Channels On)</b>	✗ 10k	✓ 500k
<b>Battery</b>	✓ Optional	✗ Not Available
<b>Communications</b>	✗ 10/100-baseT, parallel, (RS-232, GPIB optional)	✓ 10/100-baseT, USB, GPIB

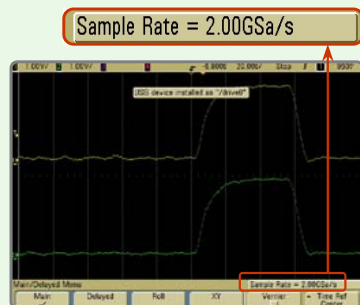
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## Sample Rate

- ✓ Tektronix TDS3000B Series
  - ✓ 5 GS/s max
  - ✓ Sample rate does not drop when channels are turned on



- ✗ Agilent DSO5000A
  - ✗ 4 GS/s max
  - ✗ Sample rate drops to half when all channels are turned on



## Portability

- ✓ Tektronix TDS3000B Series
  - ✓ TDS3BATB option provides up to 3 hours of battery power

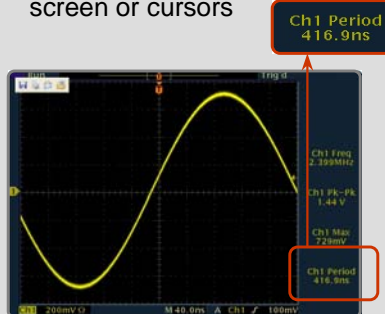


- ✗ Agilent DSO5000A
  - ✗ No battery capability

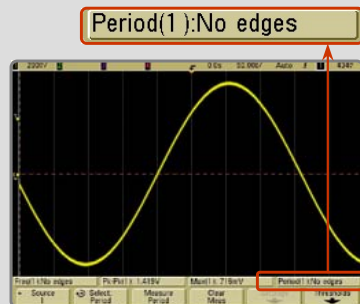


## Measurement and Channel Math

- ✓ Tektronix TDS3000B Series
  - ✓ Uses all 10k samples for measurements, averaging, FFT and math
  - ✓ Can gate measurements using screen or cursors



- ✗ Agilent DSO5000A
  - ✗ Uses only 1000 on-screen samples for measurements, averaging, FFT and math
  - ✗ No gating control



## Limit Testing, Video, Telecom, Advanced Analysis

- ✓ Tektronix TDS3000B Series
  - ✓ Video module offers vector and picture modes
  - ✓ Limit testing module
  - ✓ Telecom testing module
  - ✓ Advanced analysis module allows math expressions



- ✗ Agilent DSO5000A
  - ✗ Does not offer vector or picture video modes
  - ✗ No limit testing
  - ✗ No telecom mask testing
  - ✗ No math expressions

