Tektronix 5 Series MSO vs. Keysight S-Series

COMPETITIVE FACT SHEET

Oscilloscope Design

Tektronix 5 Series MSO	**Keysight** S-Series
✓ **Industry First** FlexChannels (up to 8) (each input is 1 analog or 8 digital)	✗ Fixed configuration: 4 Analog; 16 digital
✓ **Industry First** 4, 6, 8 channel models	✗ 4 channel models only
✓ **Industry First** HD 1920 x 1080 15.6" Multi-touch capacitive display	✗ 15" XGA 1024 x 768 Multi-touch display
✓ **Industry First** Std. embedded OS or Opt. Windows 10 OS	✗ Windows 7 only
✓ 12 bit Analog to Digital Converter	✗ 10 bit Analog to Digital Converter
✓ >500,000 wfm/s update rate	✗ Not Specified (*tested to 600 wfms/s)

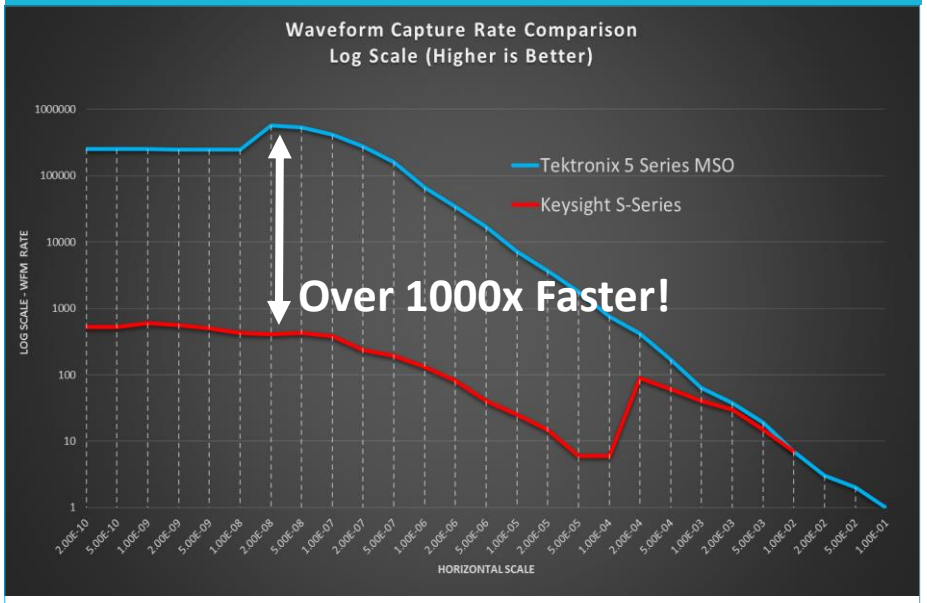
Analog to Digital Converter (ADC)

Tektronix 5 Series MSO	**Keysight** S-Series
✓ 12 bit ADC	✗ 10 bit ADC
✓ Up to 16 bits in new High Res mode	✗ Up to 12 bits in HiRes mode
✓ 7.6 bits ENOB @ 1GHz 500mV Full Scale	✓ 7.6 bits ENOB @ 1GHz 500mV Full Scale

Included Probing

Tektronix 5 Series MSO	**Keysight** S-Series
✓ 1 GHz passive probes (≥1GHz models)	✗ 500 MHz passive probes (≥1GHz models)
✓ 3.9pF Capacitive loading	✗ 9.5pF Capacitive loading
✓ Automated compensation	✗ Manual compensation
✓ Stores compensation data in memory	✗ Can't store compensation data
✓ Hardware Dynamic Range 5mV to 100V	✗ Hardware Dynamic Range 16mV to 40V

Waveform Capture Rate*



*Tektronix 5 Series and Keysight S-Series tested max Waveform Capture Rates by Tek Feb 2017

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Key Specifications Comparison

	Tektronix 5 Series MSO		**Keysight** S-Series	
Max Bandwidth (all channels)	✗	Up to 2.0 GHz	✓	Up to 4.0 GHz
Upgradable Bandwidth	✓	Yes	✓	Yes
Number of Analog Channels	✓	4, 6, or 8 with FlexChannels	✗	4
Number of Digital Channels	✓	Up to 32, 48, or 64 with FlexChannels	✗	16
Number of Math / Bus channels / Measurements	✓	As many as you want!	✗	16 math / 4 buses / 20 measurements
Max Analog Sample Rate (all channels)	✗	6.25 GS/s	✓	10 GS/s
Max Digital Channel Sample Rate (all channels)	✓	6.25 GS/s	✗	2 GS/s
Optional Arbitrary Function Generator (AFG)	✓	Yes – 50 MHz	✗	Not Available
Optional DVM/ Trigger Freq. Counter	✓	Yes – Free with Registration	✗	Not Available
Standard Analog Probes (≥1GHz models)	✓	1 GHz at 3.9pF	✗	500 MHz at 9.5pF
Standard Record Length (all channels)	✓	62.5 Mpts	✗	50 Mpts
Max Waveform Capture Rate	✓	>500,000 wfms/s	✗	Not Specified*
ADC Resolution	✓	12 bits	✗	10 bits
Max Vertical Resolution (with filtering)	✓	Up to 16 bits with New High Res mode	✗	Up to 12 bits with HiRes
ENOB (at 1 GHz)**	✓	7.6 bits	✓	~7.6 bits
Lowest Hardware Vertical Setting	✓	500uV/div = 5 mV Full Scale	✗	2 mV/div = 16 mV Full Scale
DC Gain Accuracy - Warranted	✓	1.0 %	✗	2.0 %
Screen Size & Resolution	✓	15.6” High Definition 1920 x 1080	✗	15” XGA 1024 x 768
Automated Search and Mark	✓	Search and Mark on Standard Triggers and Decoded Bus Events	✗	Only Search on Serial Decode Events
Operating System	✓	Std. Embedded OS or optional SSD with Windows 10	✗	Windows 7 Only

* Not specified by Keysight, but maximum rate measured by Tektronix was 600 wfms/sec ** ENOB tested by Tektronix, at 500mV Full Scale at 1 GHz and max sample rate

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