Keysight Technologies

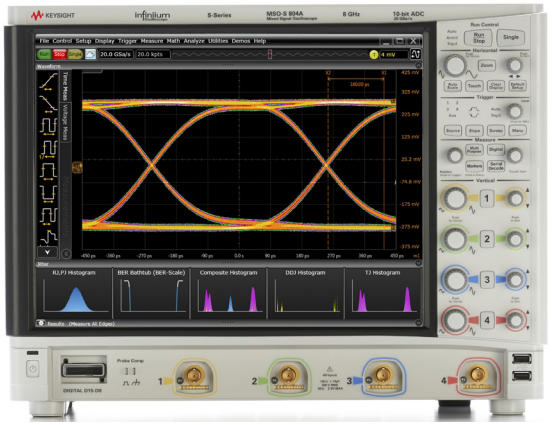
Keysight S-Series versus Danaher-Tektronix DPO5000B

Competitive Comparison

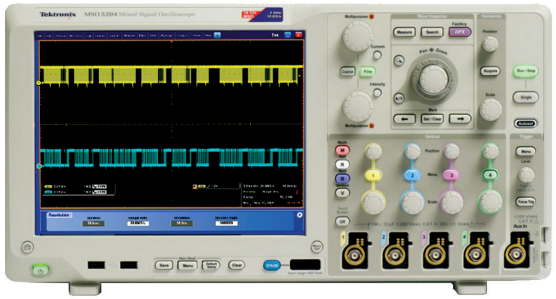
The Keysight Technologies, Inc. S-Series oscilloscopes provide bandwidths up to 8 GHz with class-leading signal integrity and analysis. Custom ASICs, including the industry's first 40 GSa/s, 10-bit ADC, allow you to see your real signal. Class-leading deep memory and a large suite of analysis tools complement a designed-for-touch user interface and the industry's first 15" multi-touch capacitive touch-screen display.

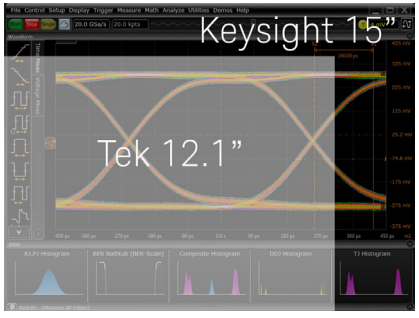
	Danaher-Tektronix DPO5000		Keysight S-Series	
Bandwidth	Up to 2 GHz	X	Up to 8 GHz	√
Upgradable bandwidth	No	X	Yes – license key	√
Max sampling rate	10 GSa/s on 1, 2 GHz	X	20 GSa/s on all models	√
	5 GSa/s on 350/500 MHz	X		√
Std memory depth (4 ch)	25 Mpts	X	50 Mpts	√
Max memory depth	250 Mpts	X	800 Mpts	√
ADC bits	8 bits	X	10 bits	√
Effective Number of Bits (ENOB) at 1 GHz	6.0	X	8.0	√
Noise at 10 mV/div 2 GHz to 50 Ω	750 uV RMS calculated	X	163 uV RMS	√
Bandwidth filters	Up to 5	X	Up to 16	√
Waveform update rate (normal mode)	Up to 40 wfms/s	X	Up to 2,000 wfms/s	√
Waveform update rate (special mode)	Up to 250,000 wfms/s	√	Not available	X
Display	10.4" resistive touch	X	15" capacitive multi-touch	√
Upgradable MSO	No	X	Yes	√
Math functions	4	X	16	√
Offline analysis software	No	X	Yes	√
Std passive probe	500 MHz or 1 GHz	√	500 MHz	X
BenchVue support	Not available	X	Yes	√

Keysight S-Series



Danaher-Tektronix DPO5000B Series



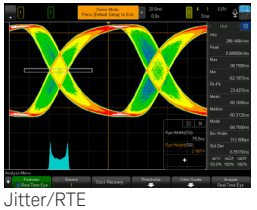


A 15" multi-touch capacitive touch-screen display offers 2x more viewing area and much greater sensitivity to user inputs.

KEYSIGHT TECHNOLOGIES

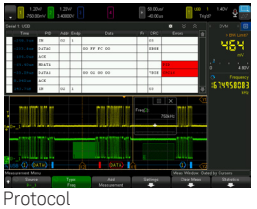
Keysight's 6000 X-Series oscilloscopes offer bandwidths up to 6 GHz with the key benefits of the InfiniiVision line: affordability, excellent visualization, 6-in-1 integration and investment protection. Speed your debugging with its uncompromised fast update rate, combined with the industry's only hardware zone trigger. Operation is simplified with a localized GUI that is designed for touch and the industry's first 12.1" multi-touch capacitive display. Voice control makes doing oscilloscope inputs easy while your hands are holding probes.

	Danaher-Tektronix DPO5000		Keysight 6000 X-Series	
Bandwidth	Up to 2 GHz	X	Up to 6 GHz	√
Upgradable bandwidth	No	X	Yes – license key	√
Max sampling rate	10 GSa/s on 1, 2 GHz	X	20 GSa/s on all models	√
	5 GSa/s on 350/500 MHz	X		
Max memory depth	Up to 50 M	√	Up to 4 M	X
Noise at 10 mV/div 2 GHz to 50 Ω	750 uV RMS calculated	X	369 uV RMS with 2.5 GHz	√
Waveform update rate (normal mode)	Up to 40 wfms/s	X	Up to 140,000 wfms/s	√
Waveform update rate (special mode)	Up to 250,000 wfms/s	X	Up to 450,000 wfms/s	√
Zone trigger	Yes – software based 40 triggers/s	X	Yes – hardware based > 100 K triggers/s	√
Hardware-based serial decode and mask	No - software based	X	Yes	√
Display	10.4" resistive touch	X	12.1" capacitive multi-touch	√
Upgradable MSO	No	X	Yes	√
Other integration	Not available	X	2 ch AWG, counter, DVM	√
Operating system	Windows 7, 64 bit	X	Embedded	√
Std passive probe	500 MHz or 1 GHz	√	700 MHz	X
Localized GUI	No	X	Yes	√
Voice control	No	X	Yes – localized	√
Standard calibration interval	1 year	X	2 years	√
BenchVue support	Not available	X	Yes	√

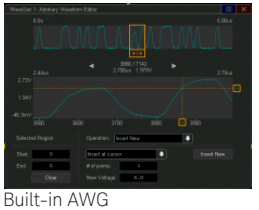


Jitter/RTE

FFT

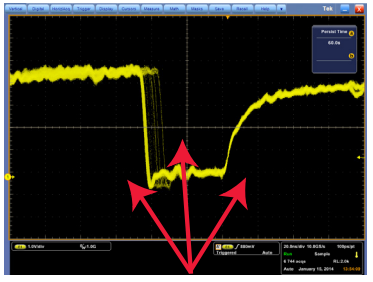


Protocol

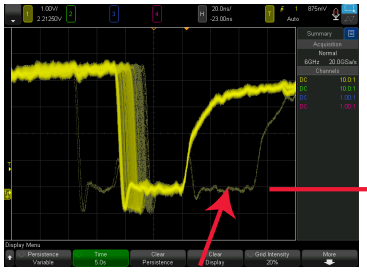


Built-in AWG

Infrequent glitches and signal jitter captured after one second on 6000 X-Series with standard update rate.



DPO7000 after 60 seconds. It never sees the glitches and shows limited signal jitter due to its slow update rate.



A fast update rate allows you to see an infrequent glitch, but then you want to isolate it. With the 6000 X-Series' hardware zone trigger, you can draw a box to isolate the signal of interest. If you can see it, you can trigger on it.

KEYSIGHT TECHNOLOGIES

Published in USA, August 3, 2014
5991-4019EN
www.keysight.com