

Never settle for close enough.

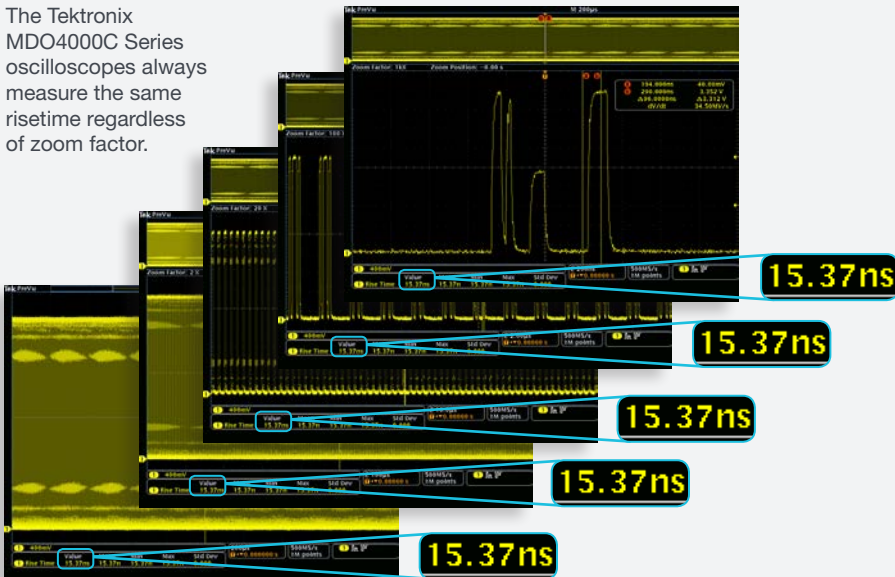
Be right, be sure with the MDO4000



Enabling accurate measurements with our instruments are a priority for Tektronix. Engineers need to effectively create and optimize products, with reliable measurements at the core of this process. We designed the MDO4000C Series Oscilloscopes with this simple, but important goal – to make the best measurements in the industry. The Keysight 4000 X-Series includes some compromises that impact measurements.



The Tektronix MDO4000C Series oscilloscopes always measure the same risetime regardless of zoom factor.



Consistent, Meaningful Measurements

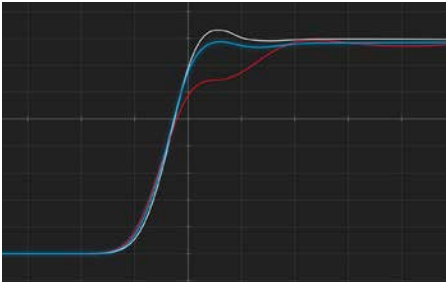
MDO4000C Series measurements are taken on actual acquisition data - providing as much data to the measurement algorithms as possible. The Keysight 4000 X-Series uses the lower resolution display data; which can produce measurements that are inaccurate and change with zoom settings. Misinterpreting the Keysight measurements could lead you to draw the wrong conclusion, putting your overall design quality and integrity at risk.

Example rise time measurement:

Zoom	Tektronix	Keysight
1x	15.37ns	No Signal
2x	15.37ns	<190ns
20x	15.37ns	<19ns
100x	15.37ns	14.7ns
1000x	15.37ns	15.4ns

SEE BACK FOR MORE DETAILS

Tektronix



An edge loaded by Keysight N2894A probe (red) versus Tektronix TPP1000 probe (blue).

Probe Loading Degrades Your Measurements

Our engineers have worked hard to minimize the impact. Tektronix TPP-Series probes have less than 4 pF of capacitive loading and they're included with every MDO4000C. The probes included with the Keysight 4000 X-Series have 11 to 12 pF of loading. Excessive loading can result in inaccurate measurements and even change circuit behavior.

And why buy a 1 GHz scope if you are going to filter the signal with a 700 MHz probe? Probes that match the bandwidth of the scope enable full utilization of the scope. All Tektronix MDO4000C Series oscilloscopes include probes that are at least the bandwidth of the oscilloscope. The Keysight 1GHz 4000 X-Series oscilloscope includes 700MHz probes.

15 Guaranteed Specs! 3X more than Keysight

Tektronix Mixed Domain Oscilloscopes deliver unrivaled accuracy right out of the box, with 15 guaranteed specifications. Other oscilloscopes like the Keysight X3000 can only promise five specifications. Every Mixed Domain Oscilloscope undergoes a series of verification procedures before it even leaves the factory, and we stand behind them until your instrument is due for calibration.

Specification	Tektronix MDO4000 Series	Keysight DSOX4104A
Oscilloscope & Acquisition System		
Bandwidth	Guaranteed ✓	Guaranteed ✓
Sample Rate	Guaranteed ✓	Typical
Waveform Acquisition Rate	Guaranteed ✓	Typical
System Digital Channels		
Maximum Sample Rate	Guaranteed ✓	Typical
Threshold Accuracy	Guaranteed ✓	Guaranteed ✓
System Analog Channels		
Channel-to-Channel Deskew Range	Guaranteed ✓	Typical
DC Balance	Guaranteed ✓	Not Specified
DC Gain Accuracy	Guaranteed ✓	Guaranteed ✓
DC Measurement Accuracy	Guaranteed ✓	Typical*
Input Impedance	Guaranteed ✓	Typical
Input Sensitivity Range	Guaranteed ✓	Typical
Maximum Input Voltage	Guaranteed ✓	Typical
Offset Accuracy	Guaranteed ✓	Typical
Time Base Accuracy	Guaranteed ✓	Guaranteed ✓
Vertical Resolution	Guaranteed ✓	Typical

* Measurement is typical for single-cursor measurements, and only guaranteed for dual cursors.

