



R&S®MXO 5 SERIES OSCILLOSCOPE versus Tektronix 5 Series B MSO

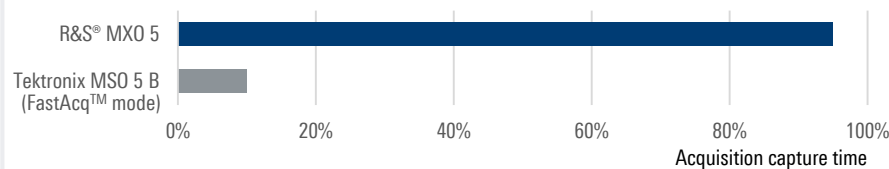


The R&S®MXO 5 Series delivers breakthrough oscilloscope technology to speed up your understanding in both the time and frequency domains. The MXO 5 Series 4 and 8-channel models combine the deepest standard memory of 500 Mpoints and the world's fastest acquisition rate of 18 million waveforms/second across multiple channels, letting the instrument stand out among competitors.

Your benefit	Features
See signals in real time	Never miss another signal anomaly. The fastest acquisition rate in the industry allows the R&S®MXO 5 to acquire over 99% of real-time signals. This outstanding performance is can be easily accessed by any digital trigger and in free run mode.
Optimize perspectives, easily	Customizable layout and toolbar, smart menu and fast search function: the R&S®MXO 5 comes with the most intuitive and flexible user interface of any oscilloscope.
Uncompromising waveform analysis	R&S®MXO 5 has up to 18-bit HD precision in time and frequency measurements. The fast spectrum of > 45K FFT/s reveals spurious spectrum events that would be otherwise missed. The hardware for measurement and math functions allows for responsive control even with deep memory.

Real-time acquisition rate comparison

R&S®MXO 5 Series has the highest acquisition rate on the market to capture events that other scopes miss. By comparison, even in FastAcq™ mode - which limits memory, increases jitter and hampers any additional measurement – the Tektronix MSO 5B is still 9 times slower for only <10 % of the capture time.

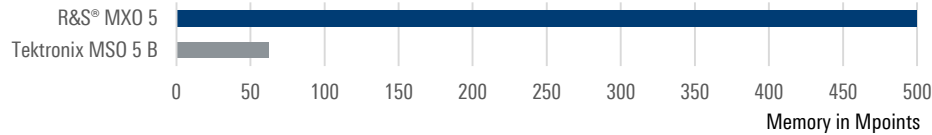


For more information, visit
www.rohde-schwarz.com/product/MXO5

Parameter	R&S®MXO 5 Series	Tektronix 5 Series B MSO
Acquisition system		
Bandwidth (GHz)	0.1, 0.2, 0.35, 0.5, 1, 2 (upgradable)	0.35, 0.5, 1, 2 (upgradable)
Channels	4, 8	4, 6, 8
Max. vertical resolution	18-bit HD mode	16-bit with high resolution
ADC	12 bit at all sample rates	8 bit at 6.25 GSamples/s; 12 bit at 3.125 GSamples/s
Max. sampling rate	5 GSamples/s on 4 channels 2.5 GSamples/s on 8 channels	6.25 GSamples/s on all channels
Memory depth	Standard 500 Mpoints/channel Max 1 Gpoints/channel on 4 ch. (option)	Standard 62.5 Mpoints/channel Max 500 Mpoints/channel (option)
Waveform update rate	> 4.5 M waveforms/s, on ≥ 4 ch.	60 waveforms/s >0.5 M waveforms/s (FastAcq™), 1 ch. >0.1 M waveforms/s, (FastAcq™), all ch.
Spectrum Analysis	HW-accelerated up to 4 channels >45 000 FFT/s (1 ch); >17 000 FFT/s (4 ch) Span 1 Hz to 1.8 GHz Spectra can independently be set	Spectrum View up to 8 channels 60 FFTs/s Span 18.6 Hz to 312.5 MHz (500 MHz opt.) same Span, RBW and Window type for all
Bandwidth limitations	BW unlimited, for any vertical scale	Progressive bandwidth limitations for vertical scale ≤ 5 mV/div in 50 Ω
Signal integrity		
Noise (1 mV/div, 350MHz, 50 Ω)	54 μV	141 μV
Channel-to-channel isolation	≥ 60 dB (1:1000)	≥ 46 dB (1:200)
Trigger sensitivity	0.0001 div (all bandwidths and all scales)	≥ 0.7 div (varies by bandwidth)
Time base accuracy	± 0.2 ppm	± 2.5 ppm
Hardware options		
Arbitrary function generator	2 channels, 100 MHz, Arb length 40 Mpoints, Freq. resolution 1 mHz, SR 625 MSamples/s	1 channel, 100 MHz, Arb memory 128 kpoints, Freq. resolution 100 mHz, SR 250 MSamples/s
Mixed signal capabilities (MSO)	5 GSamples/s, standard 500 Mpoints/ch	6.25 GSamples/s, standard 62.5 Mpoints/ch
MSO logic channels	Standard 16 channels Does not take up analog channel	Optional – up to 64 channels, each 8-channel pair takes up an analog channel
Form factor		
Display	15.6" full HD (1920 x 1080) pixel	15.6" full HD (1920 x 1080) pixel
Dimensions (W x H x D)	445 mm x 314 mm x 153 mm	454 mm x 309 mm x 204 mm
Weight	9.0 kg	11.4 kg

Standard memory depth comparison

More standard memory to capture longer periods of time with high sample rates and no additional cost. The R&S®MXO 5 series offers the 2 Gpoints segmented acquisitions that no other oscilloscope can.



Minimum investment comparison

Tektronix 5 Series B MSO + 2 digital probes



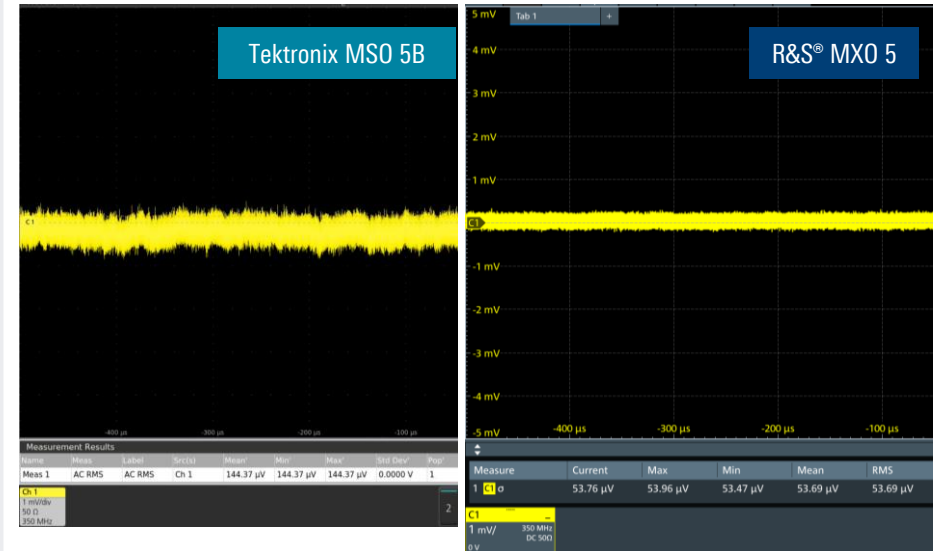
Digital channel takes up expensive analog channels to make the setup more costly and less efficient: 8 ch. + digital ch. is never possible simultaneously.

R&S®MXO 5 Series + 2 digital probes



Entry-level 100 MHz and 200 MHz configurations make the setup more affordable. Dedicated logic channels come standard and are activated by connecting a probe.

Noise performance



Even without input, the Tek 5 Series picks up more noise than the R&S®MXO 5 Series. Both instruments have 350 MHz bandwidth and 1 mV/div with 50 Ω input coupling.

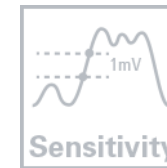
Advantage factors of R&S®MXO 5 Series versus Tektronix 5 Series B MSO



>30 %
more cost efficient MSO setup



8 x
more memory



7000 x
better input sensitivity



90000 x
faster waveform update rate



50 %
more vertical resolution at max sampling rate



2 x
less noise