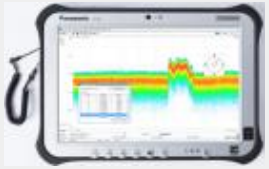
RSA500A Series vs. Keysight FieldFox Series

COMPETITIVE FACT SHEET

www.tektronix.com/usbrsa

Real Time for interference hunting

Tektronix RSA500A Series



- ✓ **Real Time Analysis** - Detects signals others miss
- ✓ **40 MHz Bandwidth** - support for wideband IoT wireless standards, record/playback, IQ acquisition,
- ✓ **Many Standard Features** - DPX, Preamp, Spectrogram, GPS,

- ✓ **VSA and Standards Support** - General purpose support with 27 different modulation formats and dedicated measurement personalities for Bluetooth, WLAN, P25, and LTE power measurements,
- ✓ **More Options** - Full IQ seamless Record/Playback within a 40 MHz BW, Mapping, signal classification,
- ✓ **Take the weight off your hands** - 1 kg tablet in your hands

Keysight FieldFox Series

- ✗ **Swept Spectrum Analysis** - misses signals
- ✗ **5 MHz Bandwidth too small** – misses support for wider bandwidth signal acquisition and analysis,
- ✗ **Individual options add cost** - preamp, Spectrogram, GPS,

- ✗ **Vector Signal Analysis** - No VSA options and wireless standards measurements,
- ✗ **Limited Spectrum Analyzer Options** – Full VNA options, but not many for the spectrum analyzer mode
- ✗ **3 kg spectrum analyzer in your hands**

Fast Sweeps for low noise floor

Tektronix RSA500A

- ✓ Conventional Spectrum Analyzer features
- ✓ Unique HW architecture to complete low noise floor sweeps very quickly
- ✓ Much faster sweep times for RBW settings less than 30 KHz
- ✓ Example: sweep times for a -134 dBm noise floor with a 1 kHz RBW is 8.3 second (7.5 GHz)

Keysight FieldFox Series

- ✓ Conventional Spectrum Analyzer features
- ✗ Conventional Spectrum Analyzer architecture sweeps quickly in default settings, but slowly when looking at low noise floors
- ✗ Much slower sweep times for RBW settings less than 30 KHz
- ✗ Example: sweep times for a -124 dBm noise floor with a 1 kHz RBW is 3 min in fast mode, and 40 min in performance or No FFT mode (7.5 GHz)

Key Specifications Comparison

	Tektronix RSA500A Series		**Keysight** FieldFox Series	
Bandwidth	✓	40 MHz	✗	5 MHz
Frequency Range	✗	9 kHz up to 18 GHz	✓	5 kHz up to 50 GHz
Real Time Analysis	✓	100% POI 15us	✗	Not available
DANL (1 GHz)	✓	-163 dBm/Hz	✓	-155 (N991x, N993x) -159 (N995x, N996x)
Phase Noise (1 GHz, 10 kHz offset)	✗	-97 dBc/Hz	✓	-111 dBc/Hz
Tracking Generator	✓	Yes	✓	Yes, opt with 2-port testing
Weight	✓	1 kg tablet on hands, 3 kg instrument on shoulder	✓	3 kg

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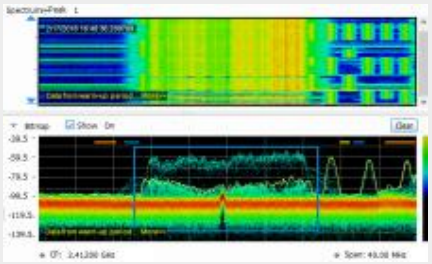
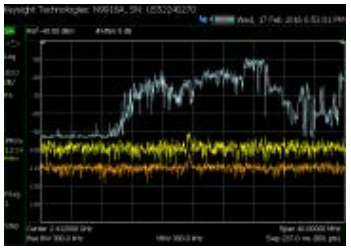
Real Time for live signal viewing

Tektronix RSA500A Series



- ✓ 10,000 FFT's per second for Live Signal Viewing
- ✓ Color shows the number of times a spectral event has occurred
- ✓ Probability of Intercept displayed on screen to let you know performance with current settings
- ✓ Real time Spectrogram display also available to give more insights
- ✓ Example – ISM band WLAN and Bluetooth signals shown with real time displays

Keysight FieldFox Series

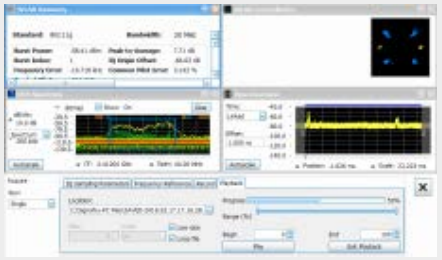


- ✗ Regular spectrum sweeps gives blind spots to miss short duration signals – 1 sweep every 50 msec is orders of magnitude slower than RSA500A
- ✗ Co-channel interference or signal under signal is no way to be shown
- ✗ Example – Some signals are missed even with the help of maximum and minimum hold spectrum traces.

Record/Playback

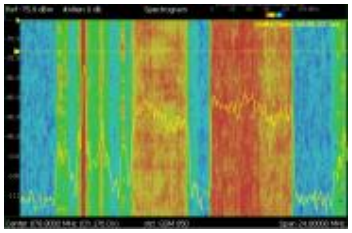
Tektronix RSA500A

- ✓ No limits on recording length – store 0.3 TB per hour of recording on a PC's SSD
- ✓ Playback file works just like a live measurement- make changes to settings, add measurements on the replay data
- ✓ Example – Recorded the 40 MHz ISM band IQ data seamless data, and adjust settings for the WLAN demodulation analysis with multiple displays



Keysight FieldFox Series

- ✗ Spectrogram is not standard, need to buy the Interference Analyzer and Spectrogram option - $1,797 US List
- ✗ Spectrogram records and playbacks the spectrum trace only, not underlying signal IQ data
- ✗ Example – Record/Playback the normal spectrum traces and Spectrogram only



Mapping and signal classification Test

Tektronix RSA500A

- ✓ The RSA mapping tool lets you record measurements on a geo-referenced map or a bitmap map for documentation purposes.
- ✓ The optional signal classification toolset helps you classify signals.

Keysight FieldFox Series

- ✗ No Mapping measurements
- ✗ No signal classification measurements

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