

# Narda SignalShark vs. Tektronix RSA6120B Profile Comparison

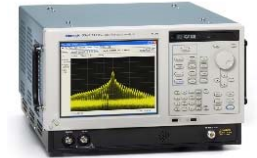
## Narda SignalShark 3310 – The Lab in Your Hand

- ✓ **Reliable:** No risk to miss-out any signal due to 40 MHz RTBW with high POI and HDR. No additional tablet or USB cable needed, that may cause problems. Rugged design.
- ✓ **Lab:** Powerful signal analysis, 4 x RF inputs, SCPI programmable and connectors for additional monitor, mouse and keyboard.
- ✓ **Field:** 10.4" touch handheld to measure at the site, where the real problems occur. Size (w x h x d) 335 mm x 230 mm x 85 mm, Weight ~ 4.1 kg (with one battery), Power consumption ~ 35 W (hot-swappable batteries for long-term measurements)
- ✓ **Save time and money:** No additional lab analyzer needed. No installation time. Up and running in a few seconds. Shorter measurement campaigns due to faster measurements.
- ✓ **Full automatic direction finding:** Reliable and fast DF.



## Tektronix RSA6120B

- ✗ High real-time bandwidth and high POI but weak sensitivity due to default signal analysis (no HDR)
- ✓ Many optional measurement functions. SCPI programmable. Connector for external monitor, mouse and keyboard.
- ✗ Powerful, but only usable for lab due to its size, weight and power consumption: Size (w x h x d), 473 mm, 282 mm, 531 mm, Weight ~ 26.4 kg, Power consumption 450 W max
- ✗ No full automatic direction finding



## High Dynamic Range (HDR) Receiver

In real life, you often have to measure signals with a low power level in an environment with strong signals. One example is the measurement of an interferer in a LTE down link band.

It's the same problem as taking a picture of an object in the shadow while being in bright sunlight. Like the traditional camera cannot take a picture of dark and bright objects at once, a conventional analyzer can only perform either high sensitivity or large-signal immunity measurements using a "Normal Mode" or and "Low Distortion Mode".

The special hardware design of SignalShark allows measuring signals under lab conditions as well as real life measurements like the scenario stated above. This is accomplished by supporting three important receiver parameters at the same time for a HDR measurement:

- The Noise Figure / DANL allows measuring signals with a very low power level
- And at the same time the IP2 value and IP3 value protects your system for overload or rather intermodulation in an environment with strong signals.

## Key Specification Comparison

		Narda SignalShark 3310		Tektronix RSA6120B	
<b>Real-time Bandwidth (RTBW)</b>		✓	40 MHz	✓	40 MHz (110 MHz opt.)
<b>POI (100% for signals...)</b>		✓	> 3.125 µs in 40 MHz	✗	3.9 µs
<b>Frequency Range</b>		✓	9 kHz to 8 GHz	✓	9 kHz to 20 GHz
<b>Scan Speed</b>		✓	up to 50 GHz/s	✗	?
<b>HDR</b>	<b>DANL (NF)</b>	2 MHz to 30 MHz ✓	< -160 dBm/Hz (< 14 dB)	✗	< - 97 dBm/Hz (< 77 dB)
		30 MHz to 3 GHz ✓	< -159 dBm/Hz (< 15 dB)	✗	< - 147 dBm/Hz (< 27 dB)
	<b>IP2</b>	2 MHz to 30 MHz ✓	> 56 dBm	✗	typ. 34 dBm
	30 MHz to 630 MHz ✗	typ. 30 dBm	✗	typ. 34 dBm	
	630 MHz to 3 GHz ✓	typ. 40 dBm	✗	typ. 34 dBm	
	<b>IP3</b>	2 MHz to 30 MHz ✓	> 20 dBm	✗	typ. 13.5 dBm
	30 MHz to 3 GHz ✓	typ. 12 dBm	✓	typ. 15 dBm	

All information is taken from public sources (i.e. datasheets) and is supplied without guarantee

