

SignalShark 5G Analyzer (Sk5G)

5G

Advanced 5G EMF Measurements

SignalShark 5G Analyzer is an optional EMF measurement tool for 5G signals that can be installed on SignalShark. The current version provides two main measurement functions:

5G EMF Extrapolation:

The 5G EMF extrapolation function allows the maximum channel field strength to be extrapolated directly from a 5G traffic signal.

A downstream with maximum power is requested using a suitable user equipment (e.g. a smartphone). The SignalShark 5G Analyzer records an isotropic spectrogram and calculates the average field strength of a 5G resource element as well as the extrapolated maximum channel field strength.

5G Smart Power Lock Test:

The 5G Smart Power Lock test feature measures the isotropic channel power of a given 5G channel over an adjustable time and displays this value as a line graph. It also calculates a moving average value that can indicate whether the Smart Power Lock function of the given base station is working correctly.

A downstream with maximum power is requested using a suitable user equipment (e.g. a smartphone).

- › Extrapolation to maximum load even without information from mobile operator.
- › Channel center frequency is used and easily readable from spectrum view (versus usage of SSB center frequency)
- › No conversions from antenna pattern needed, hence no effortful nor erroneous angle measurements required
- › Improved overall measurement accuracy due to consideration of reflections by measuring true traffic with an isotropic antenna.
- › Also possible in cases of Non-Line-of-Sight (NLOS)
- › In opposite to the integration over frequency method SignalShark 5G Analyzer can also measure correct values even if several user equipment are registered to same base station (i.e. regular operation and no test mode).
- › Due to the very short preparation time, the measurement takes only a few minutes.
- › Extrapolated value is directly displayed, no manual calculations needed
- › Measurements can be saved and re-evaluated with different extrapolation settings!

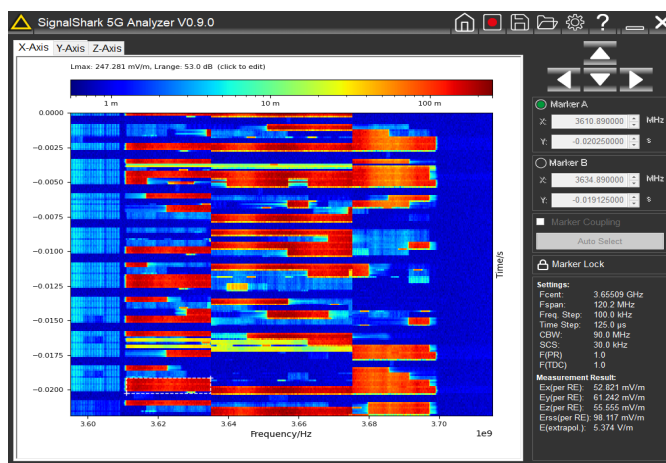


Fig. 1. 5G EMF Extrapolation

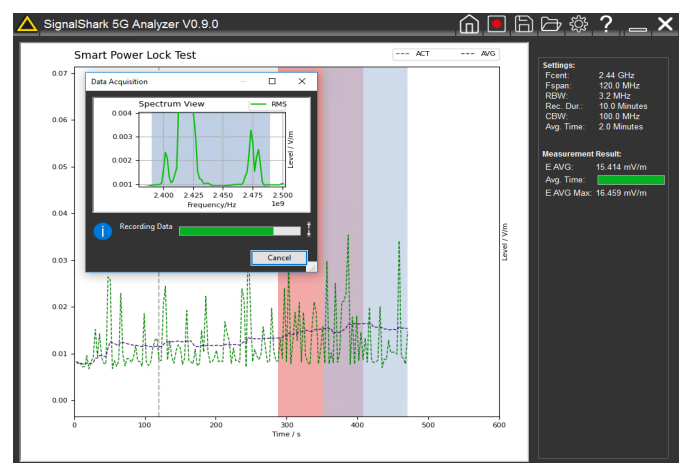


Fig. 2. 5G Smart Power Lock Test

Ordering information

Your local Narda sales representative can provide information about all the possible options as well as the current ordering information and will be pleased to offer advice.

Required Hardware

Description	Part number
SignalShark Handheld Basic Set (Option SignalShark 5G Analyzer can also be used with other SignalShark devices)	3310/101
Antenna, Three-Axis, E-Field, 200 MHz – 6 GHz	3502/02
5G-capable UE (e.g. a smartphone) with provider SIM card supporting sufficient data volume. Android OS recommended to make use of USB Tethering.	Not provided by Narda

Required Software Options

Description	Part number
Option, Spectrogram	3310/95.002
Option, SCPI Remote Control	3310/95.012
Option, SignalShark 5G Analyzer	3310/95.020

Recommended Accessories

Accessory description	Part number
Antenna Holder for Triaxial Antenna	3501/90.02
RF-Cable, 9kHz-6GHz, 5m, N 50 Ohm	3602/02
Tripod, Non-Conductive, 1.65 m with carrying bag	2244/90.31
Tripod Extension, 0.50m, Non-Conductive	2244/90.45
N-Connector Saver for SRM	3001/90.14