

pocketVNA - portable vector network analyzer

Hardware version 3.0 - to be released March 2023

- 2-port Vector Network Analyzer
- Fully bidirectional (S11, S21, S12, S22) - magnitude and phase

Applications:

Antenna analyzer, impedance scanning, cable length measurement, filter tuning, outdoor use



Specification:

Frequency range	200 kHz to 6 GHz
Temperature range	-20 °C to +85°C
Temperature stability	0.05 dB/°C
Typical dynamic range (System dynamic range):	up to 2 GHz 80 dB 2 GHz up to 6 GHz 70 dB
Impedance range	1 to 1000 Ohms
Measurement speed (Fast mode):	10 ms per step plus communication (for example a 301 points scan S11 only takes less than 3 seconds)
Number of steps:	1 to 10001 (Limited by measurement time)
Frequency setting resolution	1 Hz
Calibration	TOSM, OSL, Through, factory calibration

General information:

- Connection to PC: mini-USB
- RF connectors: SMA female

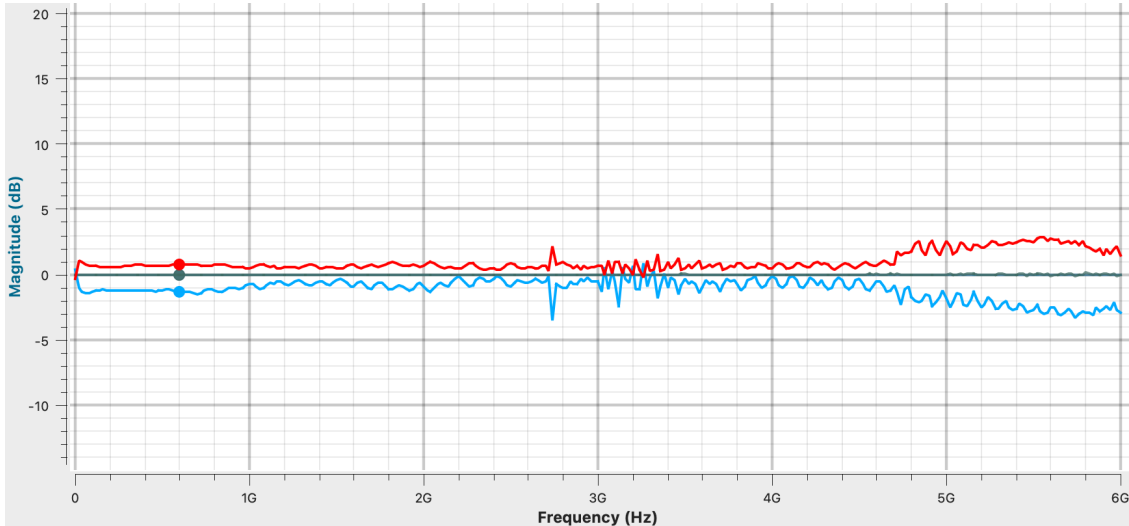
Software features:

- Available for Windows, MacOS and Linux, Android, Raspberry Pi
- OSL calibration functionality
- Time domain measurements
- Plot S-Parameter, Impedance, Phase, Resistance, Reactance, VSWR
- Plot in Smith chart
- Export to Excel, Touchstone, png, Import from touchstone
- Save complete sets of measurement together in one proprietary project file

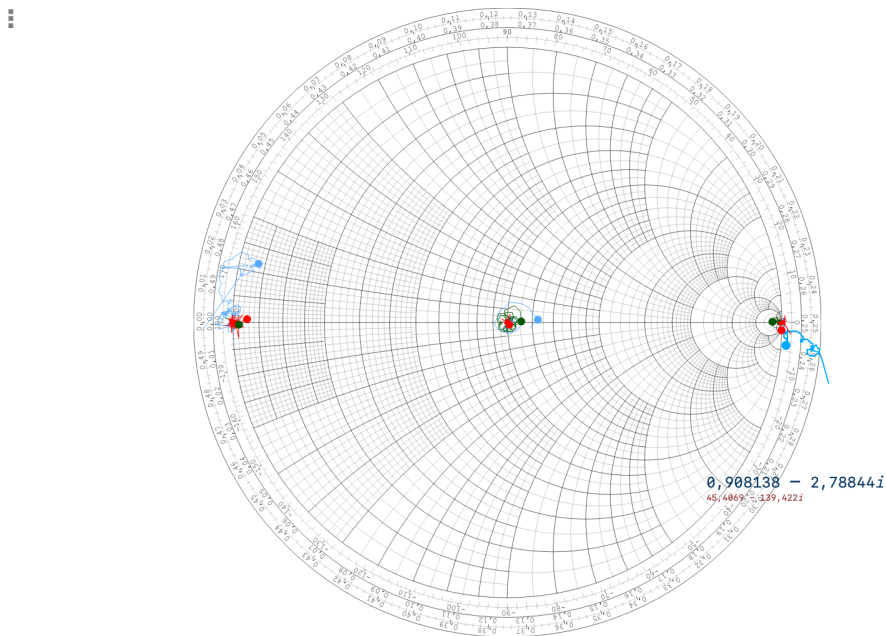
Example measurements:

Temperature measurements demonstrate the extremely high temperature stability over more than 100 °C up to 6 GHz without the need for recalibration:

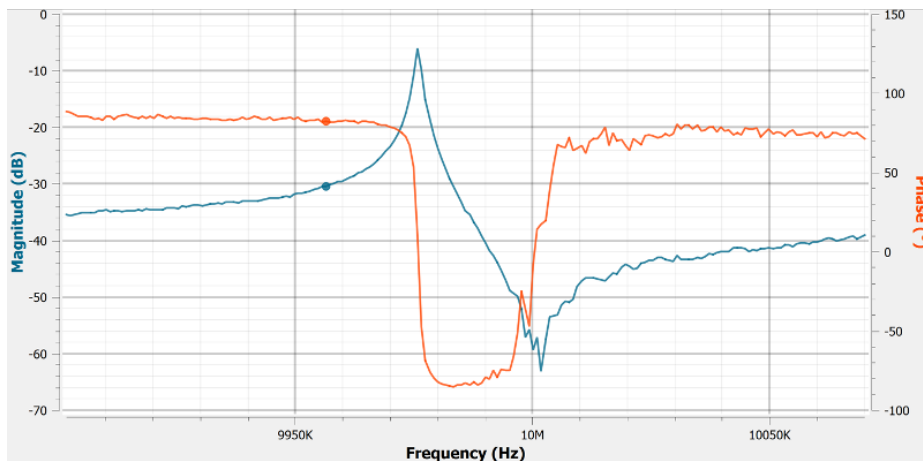
Measurement of a coaxial cable at environmental temperatures of -20°C (blue), RT(green) and +85°C (red) only with one initial calibration:



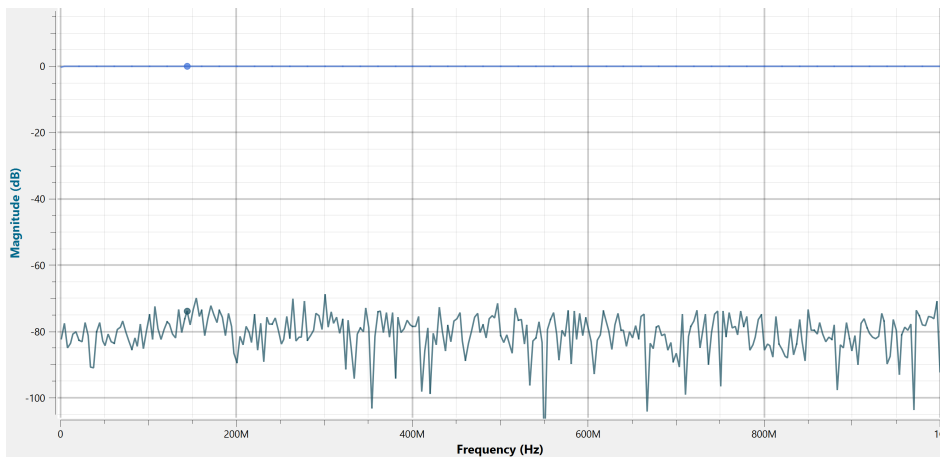
Measurement of calibration standards (OSL) at environmental temperatures of -20°C (blue), RT(green) and +85°C (red) without re-calibration:



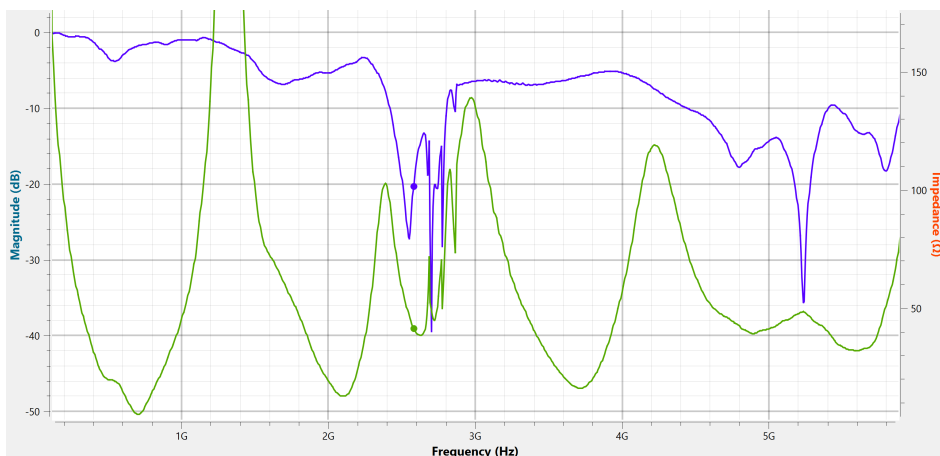
Measurement of a resonance (magnitude and phase)



Dynamic range (S21) from 200 kHz to 1 GHz



Measurement of a 5G antenna (S11 and impedance)



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11/02/2023

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