Windfreak Technologies SynthNV

Preliminary Data Sheet

34.4MHz – 4.4GHz RF Signal Generator plus RF Power Detector

Features

- Open source Labveiw GUI software control via USB
- Works with USB power or external DC power (6-9 Volts)
- Run all features with or without a PC
- 1KHz or smaller generator step size
- 150µS generator lock time
- 2.5ppm generator frequency accuracy
- Phase noise ~ 93dBc/Hz @ 1KHz offset and 117dBc/Hz @ 100KHz offset with a 1GHz carrier
- 10MHz – 100MHz external reference input
- 10MHz internal reference output
- +19dBm output power
- ½ dB amplitude output power step size
- Two 31.5dB ranges for over 60dB of power control
- Absolute power display and calibration for software version 2.5 and above
- -60dBm to +10dBm broadband RF power detector
- 0.1dB power detector resolution
- Up to 1dB RF power detector accuracy
- Up to 0.1dB Network Analyzer accuracy
- 1% reference for power detector on board
- 200µS power detector measurement time
- Pulse Modulation with 1µS minimum pulse width and resolution
- Amplitude Modulation
- AM with sinusoid, ramp, saw tooth or programmable arbitrary waveforms

Overview Description

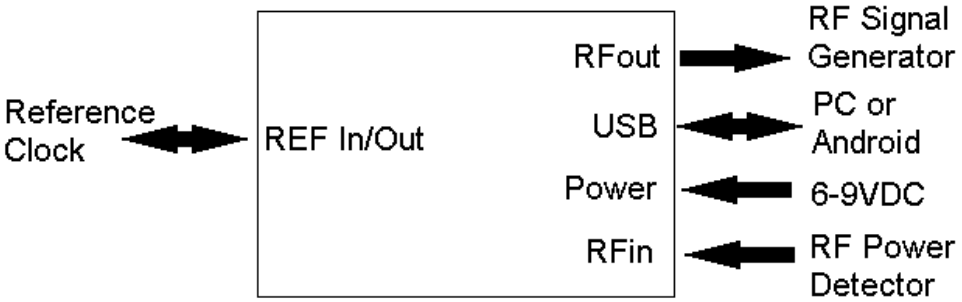
The Windfreak Technologies SynthNV is a 34.4MHz to 4.4GHz software tunable RF signal generator, sweeper and RF power detector controlled and powered by a device running Windows, Linux or Android via its USB port. It includes an on board 34MHz to 4GHz RF power detector which can be used as a generic RF power meter or with the sweep function as a basic RF network analyzer. Set the RF Signal Generator, then measure RF power in less than 400µS.

The SynthNV also has nonvolatile on board memory so it can be programmed to fire up by itself on any frequency, power, sweep and modulation setting. This makes for a highly mobile, low power and light weight solution for your RF signal generation needs.

Applications

- Wireless communications systems
- RF and Microwave radios
- Software Defined Radio (SDR)
- Radar
- Automated Test Equipment (ATE)
- EMC - radiated immunity pre-compliance testing
- Scalar Network Analysis (SNA)
- Electronic Warfare (EW) and Law Enforcement
- Local Oscillator replacement
- Quantum device research
- Plasma physics
- Education

SynthNV Functional Diagram



Windfreak Technologies, LLC.