



Signal Hound designs and builds powerful, affordable spectrum analyzers and signal generators for engineers, operators and RF professionals around the globe.

### EXCEPTIONALLY CLEAN 1 GHZ SINEWAVE, SERVING AS A REFERENCE STANDARD FOR PHASE NOISE IN THE EVALUATION OF SPECTRUM ANALYZER PERFORMANCE.

The PNCS-1 Phase Noise Clock Standard provides an ultra-low phase noise 1 GHz sinewave that can be used as a phase noise reference standard for testing spectrum analyzer phase noise performance. The PNCS-1 is also well suited for use as a system clock for ADCs and DACs, providing a clean reference for optimal performance. For low phase noise RF applications, the PNCS-1 can be used as a reference for high speed PFDs, or multiplied to higher frequencies for use in translation loop architectures.

#### APPLICATIONS

- Clock source for converters & analyzers
- Satellite communications
- Signal processing
- Telecommunications
- Commercial broadcast
- Aerospace
- General purpose RF test & measurement

#### FEATURES

- Output Frequency 1 GHz Nominal with 1.5 ppm rear panel frequency adjustment RF Input Impedance (SMA connector): 50Ω nominal
- Output Amplitude +10 dBm ( $\pm 2$  dB)
- Harmonics Typically -35 dBc



# PNCS-1 Phase Noise Clock Standard

October 2024

## Production Specifications

Output Frequency	10 Hz to 4.4 GHz
Output Amplitude	• +10 dBm ( $\pm 2$ dB)
SSB Phase Noise 1 GHz Center Frequency	Offset Frequency      dBc/Hz • 10 Hz                    -82 • 100 Hz                  -116 • 1 kHz                    -138 • 10 kHz                  -147 • 100 kHz                -148 • 1 MHz                   -149
Harmonics	• Typically -35 dBc
Operating Temperature	Standard 50°F to 95°F (10°C to +35°C)
Size and Weight	• 6.5" x 3.2" x 1.1" (259mm x 183mm x 55mm), • 0.9 lb. (266 gm)
Power Consumption	• 4.5 Watts sourced from the supplied AC/DC 13.5V wall adapter
System Requirements	Windows

PNCS-1 tuned to match Holzworth (typical)  
HA7402B-245

