

Ultra-Low Noise Filter Minimizes B2961A/62A Power Source Noise Density

Accessory for the Keysight B2961A/62A 6.5 Digit Low Noise Power Sources

The Keysight Technologies, Inc. N1294A-021 Ultra Low Noise Filter (ULNF) reduces the voltage noise of the Keysight B2961A/B2962A to 10 μVrms in the frequency range of 10 Hz – 20 MHz, while still allowing it to source up to 42 V and 105 mA.

When attached to the output channels of B2961A/62A, the ULNF reduces the noise density to 1 $\text{nVrms}/\sqrt{\text{Hz}}$ at 10 kHz.

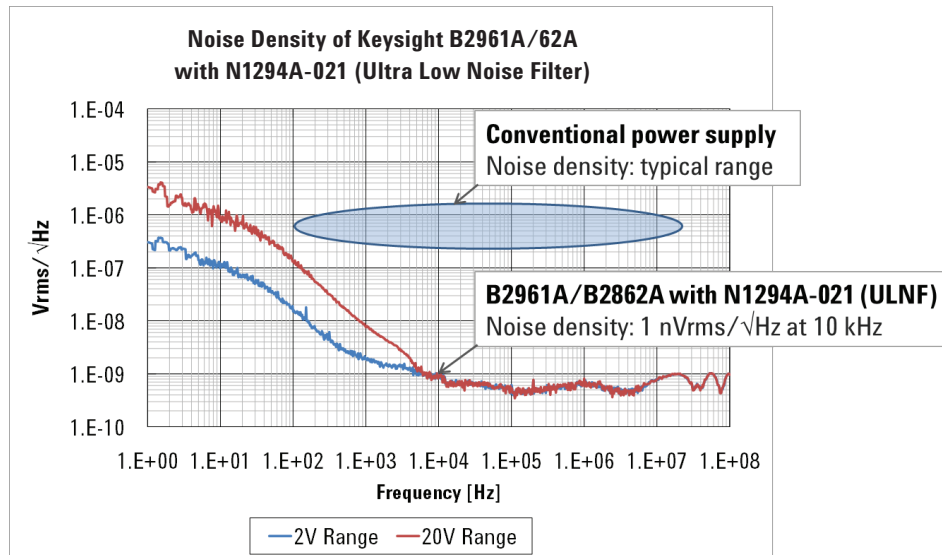


| Supplemental Characteristics | | Values | |
|----------------------------------|----------------|--------------|--|
| Max. output | Voltage | DC | 42 V |
| | Current | DC | 105 mA |
| Noise | Voltage source | 0.1 to 10 Hz | 5 μVpp |
| | | 10 to 20 MHz | 10 μVrms (1 $\text{nVrms}/\sqrt{\text{Hz}}$ @10 kHz) |
| | Current source | 0.1 to 10 Hz | 1 pApp |
| | | 10 to 1 MHz | 300 nArms |
| Maximum capacitive load (4-wire) | | | 50 μF |
| Output/residual resistance | | 2-wire | 50 Ω nominal |
| | | 4-wire | 0.3 Ω nominal |
| Small signal bandwidth | | 2-wire | 23 Hz nominal |
| | | 4-wire | 8 Hz nominal |

Note: Please see the datasheet (**5991-0663EN**) of the B2961A/62A for more detail

Uncover More of the True Characteristics of Noise Sensitive Devices

Used together, the Ultra-Low Noise Filter (ULNF) and the Keysight B2961A/62A provide outstanding low noise performance that can evaluate noise-sensitive devices and circuits such as A/D Converters as well as many other types of analog and RF ICs. In addition, this solution meets the noise density requirements for phase noise evaluation of oscillator circuits such as VCOs and crystal oscillators.



B2961A/62A power source with UNLF

B2961A/62A 6.5 Digit Low Noise Power Source

The Keysight B2961A/62A is an advanced power supply/source. It can source either voltage or current with 6.5 digits of resolution while also monitoring both voltage and current. This makes it essential for a variety of measurement applications.



N1294A-022 Low Noise Filter

A Low Noise Filter (LNF) is also available for the B2961A/62A. It provides noise levels comparable to those of linear power supplies and also supports the B2961A/62A's wide bipolar voltage and current ranges (up to 210 V/3 A). Please refer to 5991-3886EN for more detail.



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