

## Keysight 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  $\mu\text{Vrms}$  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.

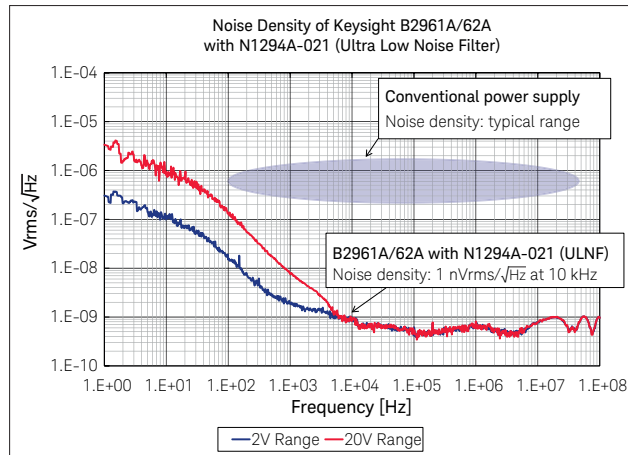


Supplemental Characteristics		Values	
Max. output	Voltage	DC	42 V
	Current	DC	105 mA
Noise	Voltage source	0.1 to 10 Hz	5 $\mu\text{Vpp}$
		10 to 20 MHz	10 $\mu\text{Vrms}$ (1 $\text{nVrms}/\sqrt{\text{Hz}}$ @10 kHz)
	Current source	0.1 to 10 Hz	60 pApp
		10 to 1 MHz	300 nArms
Maximum capacitive load (4-wire)			50 $\mu\text{F}$
Output/residual resistance	2-wire	50 $\Omega$ nominal	
	4-wire	0.3 $\Omega$ 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 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-020 High Current Ultra-Low Noise Filter

A High Current Ultra-Low Noise Filter (HC-ULNF) is also available for the B2961A/62A. The HC-ULNF lowers the B2961A/62A's noise floor and when used together the noise density of this solution is 1 nVrms/√Hz at 10 kHz for voltages and currents of up to 21 V and 500 mA. Please refer to 5992-1432EN for more detail.



## 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.



To Learn More.... please visit our website below:  
[www.keysight.com/find/precisionSOURCE](http://www.keysight.com/find/precisionSOURCE)