

Low Noise Filter Improves B2961A/62A Power Source Noise Performance

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

Application Brief

The Agilent Technologies N1294A-022 Low Noise Filter (LNF) 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). In addition, the LNF enables the B2961A/62A to drive capacitive loads of up to 1 mF.



Supplemental Characteristics			Values
Max. output	Voltage	DC	210 V
	Current	DC	3 A
Noise	Voltage source	0.1 to 10 Hz	5 μ Vpp
		10 to 20 MHz	350 μ Vrms
	Current source	0.1 to 10 Hz	1 pApp
		10 to 1 MHz	450 μ Arms
Maximum capacitive load			1 mF
Output/residual resistance			0.3 Ω nominal (2-wire)
Small signal bandwidth			2 kHz nominal (1A/3A ranges)
			800 Hz nominal (100 mA range)

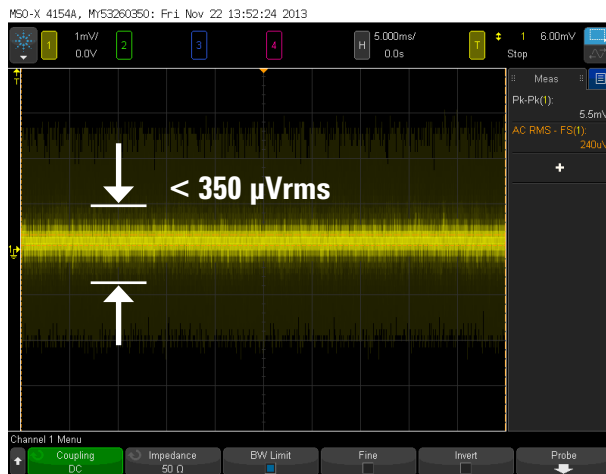
Note: Please see the datasheet ([5991-0663EN](#)) of the B2961A/62A for more detail



Noise levels comparable to those of linear power supplies B2961A/62A 6.5 Digit Low Noise Power Source

Used together, the Low Noise Filter (LNF) and the Agilent B2961A/62A provide clean voltage sourcing equivalent to that of much costlier precision linear voltage and current sources. Best of all, this solution supports all of the output ranges (210 V @105 mA, 21 V@1.5 A and 6 V@3 A) while providing exceptional low noise performance.

The LNF also supports 4-wire connections to allow accurate sourcing and measurement far from the output terminals of the filter.



B2961A/62A power source with NLF

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www.agilent.com/find/precisionSOURCE

The Agilent 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-021 Ultra Low Noise Filter

An Ultra-Low Noise Filter (ULNF) is also available for the B2961A/62A. The ULNF lowers the B2961A/62A's noise floor and when used together the noise density of this solution is $1 \text{ nVrms}/\sqrt{\text{Hz}}$ at 10 kHz for voltages and currents of up to 42 V and 100 mA. Please refer to 5991-3884EN for more detail.



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Product specifications and descriptions in this document subject to change without notice.

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