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# Typical Output Noise of an LDX-3412 Precision Current Source

TECH NOTE

This technical note presents the results of noise measurements made on a typical production run of LDX-3412 Precision Current Sources.

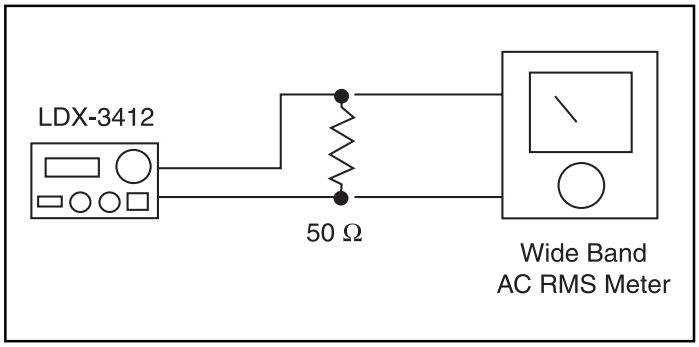



*Figure 1. Measurement Setup.*

## MEASUREMENT SETUP

The LDX-3412s were set for an output of 100 mA through a 50 Ω metal film resistor. A Millivac® MV-812A precision multimeter was used to measure the rms noise voltage across the resistor (at room temperature), as shown in Figure 1. Then the rms noise current was calculated using Ohm's law: I = E / R. The output bandwidth of the LDX-3412 is 100 Hz, and the input bandwidth of the MV-812A is 5 MHz.

## RESULTS

The noise data was recorded for each LDX-3412, and this data was entered in the histogram shown in Figure 2. The typical output noise for a LDX-3412 is less than 1 µA rms.

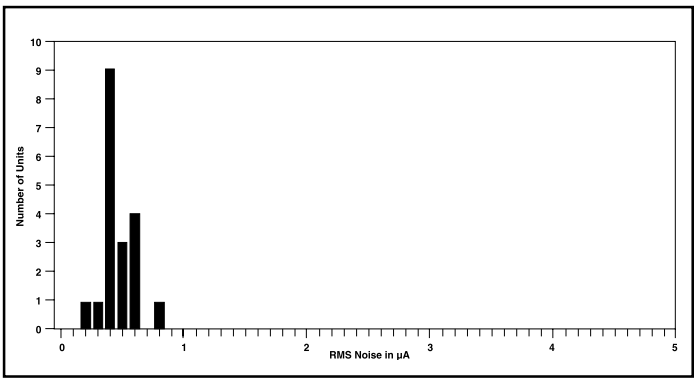



*Figure 2. LDX-3412 Output Noise Measurement Histogram.*

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