Low Temperature Transimpedance Amplifier Test Report

Testing was done to characterize the Texas Instruments Operational Amplifiers OPA855 single event effects (SEE) response. The primary SEE concerns for this device are single event ...

In this work, I present a design of transimpedance amplifier (TIA) for the CryoSTM with high gain, large bandwidth, and low inherent noise. In the CryoSTM, the TIA with the tip-sample ...

We conducted a survey to identify a commercially available op-amp candidate that was high vacuum compatible, low-temperature compatible, had sufficiently high bandwidth, and had low ...

We present the characterization of an ultra-low noise, temperature compensated amplifier, designed for superconducting quantum interference devices (SQUID) read

We will present some ideas on this and develop analysis and optimization techniques, as well as list the devices with the most desirable specifications for such applications.

Here, we report prototypical demonstrations of hybrid circuits combining silicon quantum dot devices and a classical transimpedance amplifier, which is characterized and then used to measure the current ...

While CMOS transistors are generally functional at cryogenic temperature, a full opamp circuit may or may not work (due to shifts in Vth, biasing issues, stability, ...)

Finite bandwidth amplifier modifies the transimpedance transfer function to a second-order low-pass function

The conductance of a quantum point contact (QPC) at 100 mK was measured in a dry dilution refrigerator in order to compare the cryogenic and room temperature performance of ...

Here, we report prototypical demonstrations of hybrid circuits combining silicon quantum dot devices and a classical transimpedance amplifier, ...

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