Supporting document

TWEPP 2022

## A four-channel front-end readout ASIC for high hit rate gas detector

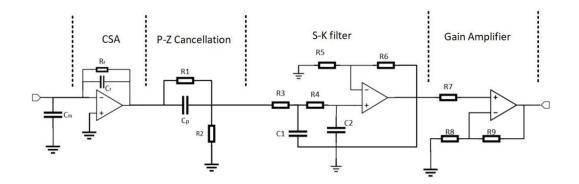


figure. 1. Block diagram of the proposed readout ASIC.

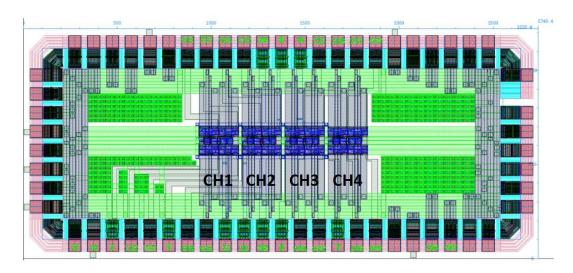


figure. 2. Layout of the proposed readout ASIC.

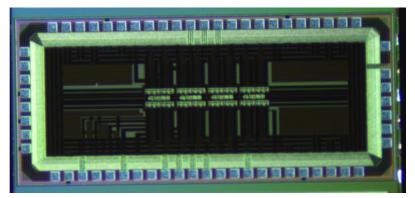


figure. 3. Micro-photograph of the proposed readout ASIC.

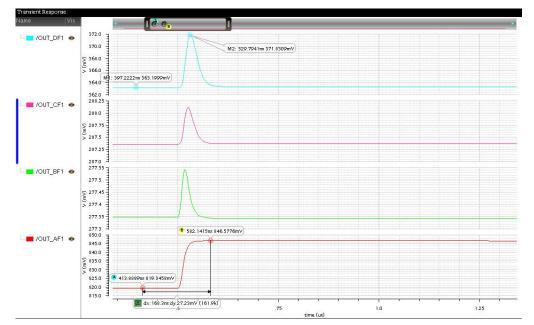


figure. 4. Waves of final output, S-K filter output, P-Z cancellation output, CSA output.

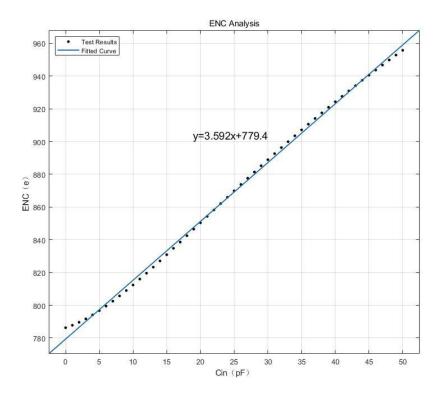


figure. 5. Noise performance versus input capacitance.

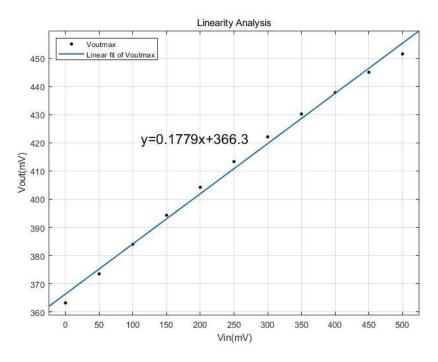


figure. 6. The linear relationship between input voltage and output voltage

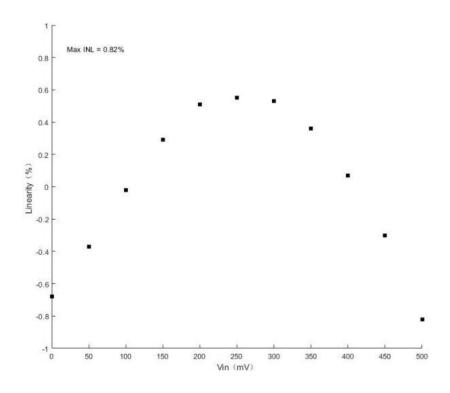


figure. 7. Integral nonlinear test results