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(54) **CHARGE AMPLIFICATION CIRCUITS AND METHODS**

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(57) **ABSTRACT**

A circuit includes an amplifier, a bias voltage node, and a first set of switches configured, based on a first reset signal having a first value, to couple first and second input nodes to the bias voltage node and to couple first and second output nodes of the amplifier. First and second feedback branches each include a respective RC network including a plurality of capacitances. The first and second feedback branches further include a second set of switches intermediate input nodes and the capacitances, and a third set of switches intermediate input nodes and the plurality of capacitances. These switches selectively couple the capacitances to the input nodes and output nodes, based on a second reset signal having a first value. The second reset signal keeps the first value for a determined time interval exceeding a time interval in which the first reset signal has the first value.