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(54) **OFFSET FREE DIFFERENTIAL AMPLIFIER
AND OFFSET FREE METHOD OF
DIFFERENTIAL AMPLIFIER**

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(57) **ABSTRACT**

The present invention provides an offset free differential amplifier and an offset free method of a differential amplifier capable of removing an offset of a differential amplifier by selectively using at least one of an auto zero method and a chopping method. The offset free differential amplifier includes a differential amplifier; a chopping switch unit that is connected to two input terminals and one output terminal of the differential amplifier in response to a chopping control signal and removes an average offset of the differential amplifier; and an auto-zero switch unit that is connected to the differential amplifier and the chopping switch unit in response to an auto-zero switch control signal and removes an absolute offset of the differential amplifier.

