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(54) **MULTI-CHANNEL MULTIPLEXER**

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(57) **ABSTRACT**

A circuit includes a first switch assembly having a first input node and a first output node, and a second switch assembly having a second input node and a second output node. The circuit further includes a third switch assembly an operational amplifier, and a buffer. The third switch assembly has a third input node and a third output node. The third input node is coupled to the second output node, and the third output node is coupled to the first output node. The buffer has a buffer input and a buffer output. The buffer input is coupled to an input stage of the operational amplifier. The buffer output is coupled to the third switch assembly.