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(54) **TWO-WIRE INTERFACE FOR DIGITAL MICROPHONES**

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(57) **ABSTRACT**

A two-wire interface for a digital microphone circuit
includes a power line and a ground line. The interface
utilizes the ground line as a "voltage active line" to transmit
both clock and data signals between the digital microphone
circuit and a receiving circuit. The digital microphone circuit
detects the clock signal on the voltage active line and uses
the detected clock signal to operate an ADC to provide
digital data. The digital data is used to selectively drive
current back to the receiving circuit over the voltage active
line. The receiving circuit detects the transmitted data by
monitoring the voltage associated with a line termination.
The impedance associated with the line termination is
switched by the receiver circuit to modulate the clock signal
on the voltage active line.

20 Claims, 9 Drawing Sheets

