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(54) **COMPARATOR WITH CONFIGURABLE OPERATING MODES**

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(57) **ABSTRACT**

A multiple operating-mode comparator system can be useful for high bandwidth and low power automated testing. The system can include a gain stage configured to drive a high impedance input of a comparator output stage, wherein the gain stage includes a differential switching stage coupled to an adjustable impedance circuit, and an impedance magnitude characteristic of the adjustable impedance circuit corresponds to a bandwidth characteristic of the gain stage. The comparator output stage can include a buffer circuit coupled to a low impedance comparator output node. The buffer circuit can provide a reference voltage for a switched output signal at the output node in a higher speed mode, and the buffer circuit can provide the switched output signal at the output node in a lower power mode.