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(54) **TWO-STAGE COMMON-MODE FEEDBACK CIRCUIT AND FULLY DIFFERENTIAL OPERATIONAL AMPLIFIER INCLUDING THE SAME**

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(57) **ABSTRACT**

A two-stage common-mode feedback (CMFB) circuit and a fully differential operational amplifier are provided. The two-stage CMFB circuit includes a first CMFB circuit and a second CMFB circuit. The first CMFB circuit includes a first CMFB component that receives a first differential pair of output signals of the first amplifier and a first reference signal. The first CMFB component generates a first control signal to regulate a first common-mode voltage of the first amplifier to a first reference voltage of the first reference signal. The second CMFB circuit includes a second CMFB component that receives a second differential pair of output signals of the second amplifier and a second reference signal. The second CMFB component generates a second control signal according to a second reference signal, so as to regulate a second common-mode voltage of the second amplifier to a second reference voltage of the second reference signal.

