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(54) **FOURTH-ORDER
 FEEDFORWARD-COMPENSATION
 OPERATIONAL AMPLIFIER AND METHOD
 FOR DESIGNING THE SAME**

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(57) **ABSTRACT**

A fourth-order feedforward compensation operational amplifier is provided. The amplifier includes a first transconductance amplification unit, a second transconductance amplification unit, a third transconductance amplification unit, a fourth transconductance amplification unit, a fifth transconductance amplification unit, a sixth transconductance amplification unit, and a seventh transconductance amplification unit. The first unit, the second unit, the third unit, and the fourth unit are cascaded in sequence to form a fourth-order operational amplifier path. The first unit, the fifth unit, and the fourth unit form a third-order operational amplifier path. The first unit and the sixth unit form a second-order operational amplifier path. The seventh unit forms a first-order operational amplifier path. The first-order path performs feedforward compensation on the second-order path, the second-order path performs feedforward compensation on the third-order path, and the third-order path performs feedforward compensation on the fourth-order path.

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