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

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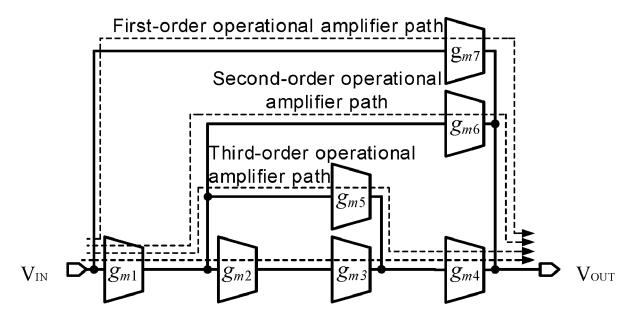
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#### (57)ABSTRACT

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 secondorder path, the second-order path performs feedforward compensation on the third-order path, and the third-order path performs feedforward compensation on the fourthorder path.



Fourth-order operational amplifier path