

Title (en)
VOLTAGE-TO-CURRENT CONVERTER WITH ERROR CORRECTION

Title (de)
SPANNUNGS-STROMKONVERTER MIT FEHLERKORREKTUR

Title (fr)
CONVERTISSEUR TENSION/COURANT DOTE D'UN CIRCUIT DE CORRECTION D'ERREUR

Publication
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Application
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Priority

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Abstract (en)
[origin: WO9840967A2] Voltage-current converter including a signal voltage source (2), a series resistor (4) and an electronic circuit with a first transconductance amplifier (12) and a second transconductance amplifier (22). The corresponding inputs (16, 20; 24, 26) of the transconductance amplifiers (12, 22) are connected to receive a voltage difference (VA) between a node (18) and a reference terminal (8). The output (14) of the first transconductance amplifier (12) is connected to an input terminal (6) to which the series resistor (4) is connected as well. The output (25) of the second transconductance amplifier (22) is connected to an output terminal (10). Due to feedback around the first transconductance amplifier (12) an input current (i1) can flow into the input terminal (6). The input current (i1) is amplified or copied by the second transconductance amplifier (22) and is available at an output terminal (10). The input current (i1) is not only dependent on the series resistor (4), but also on the voltage difference (VA) between the node (18) and the reference terminal (8). The distortion caused by the voltage difference is cancelled by measuring (28) this voltage difference and adding (30) this voltage difference to the input voltage signal (VS) in the proper sense.

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