

ABSTRACT:

A variable voltage to current conversion circuit comprising a voltage to current converter (31), a gain controllable current converter (32) coupled to the voltage to current converter (31) and an adder (33) coupled to the voltage to current converter (31) and the gain controllable current converter (32), wherein the voltage to current converter (31) has a first and a second transistors (Q21, Q22) supplied with differentially related voltages, a diode-fashion third transistor (Q23) connected to the first transistor (Q21) through a first resistor (R21), a diode-fashion fourth transistor (Q24) connected to the second transistor (Q22) through a second resistor (R22), and a first current source (I21) coupled to the third and the fourth transistors (Q23, Q24), the gain controllable current converter (32) has the diode-fashion third transistor (Q23), the diode-fashion fourth transistor (Q24) and the first current source (I21) which are shared with the voltage to current converter (31), and a fifth and a sixth transistors (Q25, Q26) connected to the third and the fourth transistors (Q23, Q24) and to a second current source (I22), and the adder (33) has a third current source (I23) coupled to the second and the sixth transistors (Q22, Q26).

