

The diagram shows a differential amplifier circuit. The input stage consists of two NMOS transistors, U1 and U2, whose sources are connected to a common source node. This node is connected to a Wilson current source, which is implemented using three NMOS transistors: U3, U4, and U5. U3 and U4 are connected in series, with U3's source connected to the common source node and U4's source connected to U3's drain. U5 is connected with its source to ground and its gate to the common source node. The output of the differential amplifier is taken from the drains of U1 and U2, which are connected to a load resistor (represented by a triangle) and a supply voltage (represented by a triangle). The output current is labeled I_{out} . The output voltage is labeled V_{out} . The input voltage is labeled V_1 . The bias voltage is labeled V_b . The current source current is labeled I_b . The drain currents of U1 and U2 are labeled I_1 and I_2 . The drain currents of U3 and U4 are labeled I_3 and I_4 . The gate voltages of U1, U2, U3, and U4 are labeled U_1 , U_2 , U_3 , and U_4 respectively. The gate voltage of U5 is labeled U_5 .