

VARIABLE-GAIN AMPLIFIER CIRCUIT AND ATTENUATOR CIRCUIT**ABSTRACT OF THE DISCLOSURE**

There is disclosed a variable-gain circuit forming resistors on a semiconductor substrate. The ratio of the total resistance to the minimum resistance is made smaller than heretofore. The circuit is miniaturized. The variable-gain circuit comprises an operational amplifier, a first set of resistors R_1 - R_{n+1} , a second set of resistors R_{x1} - R_{xm} , switches SW_1 - SW_n and a control circuit. This control circuit closes only one of the switches SW_1 - SW_n at all times.

Figure 1