

ABSTRACT OF THE DISCLOSURE**LINEAR TRANSCONDUCTOR**

A transconductor (10) has first and second current flowpaths. Each of the current flowpaths has a current sourcing transistor (16,18), an input transistor (12,14), and a load transistor (20,22). The input transistors (12,14) are connected to receive a differential input signal. A pair of transistors (24,26) are provided, each connected to feed forward a signal between the input (12,14) and the current sourcing transistors (16,18) in a respective flowpath to a respective control element of the load transistors (20,22). A resistor (36) is connected between output nodes of the first and second flowpaths, and a current source (34), which may be adjustable, is connected between a common node of the load transistors (20,22) and a reference potential. A voltage comparing amplifier (38) is connected between the common node of the load transistors (20,22) and control elements of the current sourcing transistors (16,18). The amplifier (38) is referenced to a reference voltage (V_B), whereby current sourced by the current sourcing transistors (16,18) is controlled by a voltage on the common node. A plurality of differential load circuits (53,61,63) are provided, each connected in parallel with the load transistors (20,22), and each including a controllable current source (58,64,72) connected between a common node of the circuit and a reference potential. Additionally, a respective plurality of capacitive circuits (40,42,44,46) each connected between the input transistor (12,14) and the load transistor (20,22) of each current flowpath may be provided.

Figure 2