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(54) **Title:** ELECTRONIC DRIVING CIRCUIT FOR DRIVING ELECTRODES OF A MICROFLUIDIC DEVICE FOR MANIPULATION OF PARTICLES, AND CORRESPONDING ANALYSIS APPARATUS

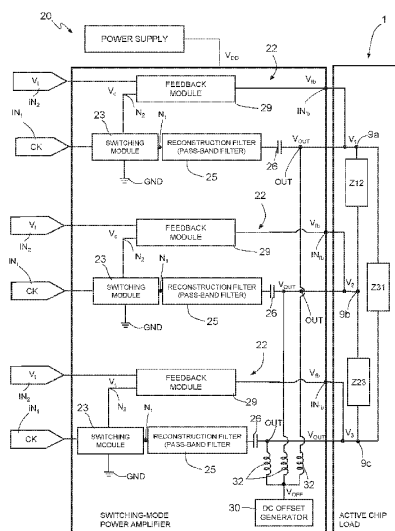


Fig. 3

(57) **Abstract:** An electronic driving circuit (20) for a microfluidic device (1), having a number of synchronized driving stages (22) to generate a respective driving signal (V_1, V_2, V_3) for each electrode or group of electrodes (4,6) of the microfluidic device, the driving signals having a desired amplitude, frequency and phase-shift. Each driving stage has a switching-mode amplifier stage (22) to receive a clock signal (CK) and a target signal (V_i) and to generate, at an output (Out) thereof, an output signal (V_{out}) defining a respective driving signal. The amplifier stage has: a switching module (23), coupled to a first internal node (N_1) and controlled by the clock signal for selectively bringing the first internal node (N_1) to a control signal (V_c); a filter module (25,26), coupled between the first internal node and the output, to provide the output signal; and a feedback module (29).