

ABSTRACT:**Sawtooth oscillator**

Sawtooth oscillator comprising: a first capacitor (14), a current source (12) having an output (10) coupled to the first capacitor (14) for supplying a charge current (I) to the first capacitor (14), discharging means (20, 22) for discharging the first capacitor (14) during a discharge period (TDS) in response to a voltage (UC) on the first capacitor (14), a second capacitor (30) coupled to the output (10) of the current source (12), interrupting means (26) for interrupting the supply of the charge current (I) to the first capacitor (14) during an interrupt period (TIS) part of which charge current occurring during the discharge period (TDS), supply means (24, 26, 40, 46, 34) for supplying subsequent to the interrupt period (TIS) the first capacitor (14) with a charge surplus built up by the charge current (I) in the second capacitor (30). The current supply to the first capacitor (14) is temporarily interrupted by the interrupting means (48) at least during part of the discharge period. The second capacitor (30) operates as an auxiliary capacitor in which the charge is stored which would otherwise have been supplied to the first capacitor (14). After the interrupt period the charge stored in the second capacitor (30) is supplied back to the first capacitor (14) by the supply means (50). In this manner there is achieved that substantially no charge current is lost during a total period of time of a charge and discharge cycle. In the total period of time the whole charge current of the current source ends up in the first capacitor, so that tolerances in the discharge period no longer affect the oscillation frequency of the sawtooth oscillator.

(Fig. 5)

