

Title (en)

MINIMIZING POWER CONSUMPTION BY TUNING SELF-RESONANCE IN A FREQUENCY DIVIDER

Title (de)

MINIMIERUNG DES ENERGIEVERBRAUCHES MITTELS SELBSTRESONANZABSTIMMUNG BEI EINEM FREQUENZTEILER

Title (fr)

REDUCTION DE LA CONSOMMATION D'ENERGIE DANS DES CIRCUITS NUMERIQUES HAUTE FREQUENCE

Publication

EP 1782534 A1 20070509 (EN)

Application

EP 05774786 A 20050817

Priority

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Abstract (en)

[origin: WO2006018818A1] A circuit comprises a frequency divider connected to receive respective Igate and hatch DC-biasing currents. Such frequency divider will self-resonate at some frequency that depends, in part, on these DC-biasing currents. Corresponding current sources provide programmable magnitudes for each of these DC-biasing currents, and can therefore affect the self-resonant frequency and overall power consumption. During calibration, the frequency divider is allowed to self-oscillate, and the DC-biasing currents are manipulated to cause the self-resonant frequency to approximate some target frequency. The DC-biasing currents can be opportunistically lowered and still maintain reliable operation when the selfresonant frequency of the frequency divider is tuned to the target operational frequency. Such calibration is repeated as needed during the service life of the device.

IPC 8 full level

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CPC (source: EP KR)

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Citation (search report)

See references of WO 2006018818A1

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