Title (en)

TRANSIENT BOOST CIRCUIT FOR LDO, CHIP SYSTEM AND DEVICE

Title (de)

TRANSIENTE VERSTÄRKUNGSSCHALTUNG FÜR LDO, CHIPSYSTEM UND VORRICHTUNG

Title (fr)

CIRCUIT D'AMPLIFICATION TRANSITOIRE POUR LDO, SYSTÈME DE PUCE ET DISPOSITIF

Publication

EP 4194991 A4 20230927 (EN)

Application

EP 20950683 A 20200826

Priority

CN 2020111524 W 20200826

Abstract (en)

[origin: EP4194991A1] A transient performance improvement circuit used for an LDO, a chip system, and a device are configured to reduce a chip area occupied by a capacitor while improving a transient performance of the LDO. The circuit includes an LDO and at least one detection circuit (2) coupled to the LDO, where the LDO is configured to output a first voltage. Each of the at least one detection circuit (2) includes a first capacitor, an amplifier (21), and a second capacitor. The first capacitor is configured to generate a coupling voltage based on a change in the first voltage and couple the coupling voltage to the amplifier (21). The amplifier (21) is configured to amplify the coupling voltage to obtain a second voltage. The second capacitor is configured to couple the second voltage to the LDO. The second voltage is used to regulate the first voltage to maintain constancy of the first voltage.

IPC 8 full level

G05F 1/575 (2006.01)

CPC (source: EP)

G05F 1/575 (2013.01)

Citation (search report)

- [XI] KR 101048205 B1 20110708
- [A] US 2017242449 A1 20170824 - CHEN YING-CHI [TW]
- [A] US 10545523 B1 20200128 - WU ZHENGZHENG [US], et al
- [A] DE 102018129910 A1 20200528 - INTEL CORP [US]
- See references of WO 2022041011A1

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CN117707269A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4194991 A1 20230614; **EP 4194991 A4 20230927**; CN 115668092 A 20230131; WO 2022041011 A1 20220303

DOCDB simple family (application)

EP 20950683 A 20200826; CN 2020111524 W 20200826; CN 202080101677 A 20200826