

Title (en)

DRIVER CIRCUIT FOR SWITCHING EDGE MODULATION OF A POWER SWITCH

Title (de)

TREIBERSCHALTUNG ZUR SCHALTFLANKENMODULATION EINES LEISTUNGSSCHALTERS

Title (fr)

CIRCUIT D'ATTAQUE SERVANT À LA MODULATION DES FRONTS DE COMMUTATION D'UN COMMUTATEUR DE PUISSANCE

Publication

**EP 3824552 A1 20210526 (DE)**

Application

**EP 19746446 A 20190715**

Priority

- DE 102018211841 A 20180717
- EP 2019069003 W 20190715

Abstract (en)

[origin: WO2020016178A1] The invention relates to a driver circuit (1) for switching edge modulation of a power switch (2). The driver circuit according to the invention comprises a first driver circuit input (3) with a downstream input node (4) and a power switch (2) with an upstream first gate node (6). A charging path (7) comprising a charging resistor (11) is arranged between the input node (4) and the first gate node (6). Furthermore, a discharge path (8) comprising a discharge resistor (16) is arranged between the input node (4) and the first gate node (6). Moreover, a gate path (9) is arranged between the input node (4) and the first gate node (6). A power switch transistor, the gate of which is connected to the first gate node (6), is furthermore provided. A gate path (9) comprises a gate resistor (18). The driver circuit (1, 20) is configured such that during a switching process of the power switch (2), the gate path (9) is short-circuited at times either via the charging path (7) or via the discharge path (8) in order to increase the gradient of the switching behavior of the power switch (2).

IPC 8 full level

**H03K 17/16** (2006.01); **H03K 17/687** (2006.01); **H03K 17/74** (2006.01)

CPC (source: EP US)

**H03K 17/163** (2013.01 - EP); **H03K 17/164** (2013.01 - US); **H03K 17/6877** (2013.01 - EP US); **H03K 17/74** (2013.01 - EP US); **H03K 17/164** (2013.01 - EP)

Citation (search report)

See references of WO 2020016178A1

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

DOCDB simple family (publication)

**WO 2020016178 A1 20200123**; DE 102018211841 A1 20200123; DE 102018211841 B4 20200206; EP 3824552 A1 20210526; JP 2021530921 A 20211111; JP 7308259 B2 20230713; US 11646730 B2 20230509; US 2021281257 A1 20210909

DOCDB simple family (application)

**EP 2019069003 W 20190715**; DE 102018211841 A 20180717; EP 19746446 A 20190715; JP 2021502586 A 20190715; US 201917252461 A 20190715