

Title (en)

METHOD AND DEVICE FOR CONVERTING A VOLTAGE WITH SOFT SWITCHING OF THE SWITCHES

Title (de)

VERFAHREN UND VORRICHTUNG ZUR UMWANDLUNG EINER SPANNUNG MIT WEICHEM SCHALTEN DER SCHALTER

Title (fr)

PROCÉDÉ ET DISPOSITIF DE CONVERSION D'UNE TENSION AVEC COMMUTATION DOUCE DES INTERRUPTEURS

Publication

EP 4115512 A1 20230111 (FR)

Application

EP 21704848 A 20210107

Priority

- FR 2000401 A 20200116
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Abstract (en)

[origin: WO2021144521A1] Method (100) for converting an input voltage (Vin) of a converter (1) into an output voltage (Vout), the circuit comprising a first bridge arm consisting of two switches (A) and (B), a second bridge arm consisting of two switches (C) and (D) connected in parallel, a primary coil coupled to a secondary coil and connected by a pole to the central point (PAB) of the first bridge arm, and by another pole to the central point (PCD) of the second bridge arm; the circuit further comprising a capacitor in parallel between the respective terminals of each of the switches (A, B, C, D); a third bridge arm consisting of two switches (E) and (F) connected in series; each of the switches (A, B, C, D, E, F) being associated with a diode at the terminals of the switch; an injection inductor (L inj) connected to the central point (PAB) of the first bridge arm, and to the central point (PEF) of the third bridge arm; and a control unit configured to control the ON or OFF switches according to a control cycle which is configured to ensure soft ON and OFF switching.

IPC 8 full level

H02M 3/335 (2006.01); **H02M 1/00** (2006.01); **H02M 1/34** (2007.01); **H02M 1/44** (2007.01)

CPC (source: EP US)

H02M 1/0058 (2021.05 - US); **H02M 1/083** (2013.01 - US); **H02M 1/342** (2021.05 - EP); **H02M 3/01** (2021.05 - US); **H02M 3/33573** (2021.05 - EP US); **H02M 3/33576** (2013.01 - EP US); **H02M 1/0087** (2021.05 - EP); **H02M 1/44** (2013.01 - EP); **H02M 3/01** (2021.05 - EP); **Y02B 70/10** (2013.01 - EP)

Citation (search report)

See references of WO 2021144521A1

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BA ME

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DOCDB simple family (application)

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