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KAWAMURA et al.(10) **Pub. No.: US 2022/0360180 A1**(43) **Pub. Date: Nov. 10, 2022**(54) **ISOLATED DC-DC CONVERTER****Publication Classification**(71) Applicants: **AutoNetworks Technologies, Ltd.**,
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Industries, Ltd., Osaka-shi, Osaka (JP)(51) **Int. Cl.**
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(2013.01); **H02M 1/0009** (2021.05)(72) Inventors: **Ibuki KAWAMURA**, Yokkaichi-shi,
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Yokkaichi-shi, Mie (JP)(57) **ABSTRACT**

An isolated DC-DC converter includes a transformer, a full-bridge switching circuit, a protective circuit, a control unit, an inductor, and an output circuit. The isolated DC-DC converter includes a first voltage detection unit that detects a voltage value between a first conductive path and a second conductive path, and a first current detection unit that detects a current value of the inductor. The control unit determines at least one of a first dead time and a second dead time on the basis of the voltage value detected by the first voltage detection unit and the current value detected by the first current detection unit, using a method that increases the dead time as the voltage value increases and reduces the dead time as the current value increases.

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