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ABSTRACT

For power transfer from a first DC part to a second DC part in a dual active bridge (DAB) converter by stepping up a voltage, the second bridge circuit 12 includes a period in which a secondary winding n2 of an insulated transformer TR1 and the second DC part conduct and a period in which ends of the secondary winding n2 of the insulated transformer TR1 are short-circuited in the second bridge circuit 12. A control circuit 13 fixes a phase difference between a first leg a the second leg, variably controls a simultaneous off period of a fifth switching element S5 and a sixth switching element S6, and variably controls a simultaneous off period of a seventh switching element S7 and an eighth switching element S8.

