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(57) ABSTRACT

The present invention relates to a main magnetic component applicable to a core module of an electric vehicle. A composite magnetic component according to one embodiment of the present invention comprises: a transformer that converts power on an input side to transmit same to an output side, and has a first core and a first coil disposed in the first core; a ZVS inductor that refluxes a residual current to the input side without FET operation loss, and has a second core and a second coil disposed within the second core; an output inductor that removes the ripple of a current on the output side, and has a third core and a third coil disposed in the third core; and an EMI inductor that reduces electric noise of the current on the output side, and has a fourth core and a fourth coil disposed in the fourth core. Here, the second core, the third core, and the fourth core are made of different materials, and the first core and the second core are made of the same material.

