

A B S T R A C T

Four VVVF main circuit inverters for supplying electric power to drive a permanent-magnet synchronous motor 2 are packaged into one unit. The four VVVF main circuit inverters 21 are configured as a 4-in-1 inverter unit which shares a cooling mechanism for radiating heat generated due to power supply operation for the permanent-magnet synchronous motors 2 to outside. A 2-in-1 semiconductor device package in which two semiconductor elements to convert electric power are packaged into one unit to be able to drive a permanent-magnet synchronous motor 1 is contained in the 4-in-1 inverter unit. Thereby, individual control of inverters and reducing the size of the entire apparatus can be achieved for the electric-vehicle control apparatus.



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