New Release

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HONDA FIT (HV) BIDIRECTIONAL BUCK-BOOST DC-DC CONVERTER CIRCUIT ANALYSIS REPORT

June 2017. This is a detailed circuits analysis report of the bidirectional buck-boost 12V DC-DC converter system found in the Honda Fit hybrid vehicle. PCB structural details with various dimensions, component list, block diagram and detailed circuit schematics are included.

Control board

Transformer board

This DC-DC converter is produced by Shindengen Electric Manufacturing Co., Ltd. It consists of two boards (control board & power module).

The system has the following main elements:

1. Control board: Internal power supply, current monitor 1 and 2, voltage monitor, gate driver, and a CAN communication transceiver with a port connecting to an external module.
2. Pre-driver circuit that prevents simultaneous turn-on of the high-side and Low-side switches.
3. General purpose MCU (TI) to perform control functions.

Priced to sell at $7,000

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