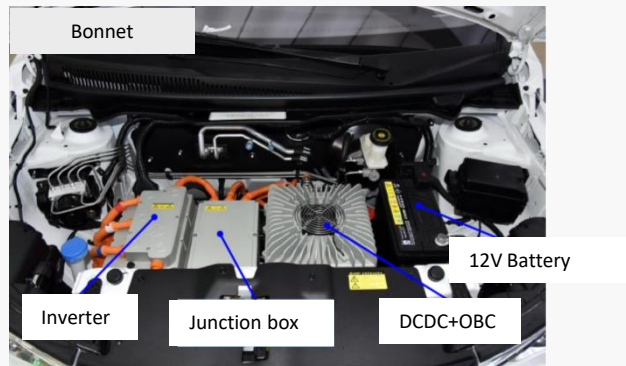


## ZHUHAI ENPOWER'S EV INVERTER MODULE TEARDOWN REPORT

**February 2020.** This is a teardown report of the Zhuhai Enpower inverter found in Beijing Automobile Works' EC180 electric vehicle.



**EC180 EV manufactured by Beijing Automobile Works Co., Ltd. (BAW)**



**Inverter unit produced by Zhuhai Enpower Electric Co. Ltd.**

### Vehicle overview

BAW's EC180 was the best selling EV among the Chinese manufacturers in China in 2018. This model is used in the lower grade version. BAW is part of the BAIC group of manufacturers. The driving range of this vehicle is 215km. This vehicle is using a 108V Li-ion battery pack.

### Inverter specifications

System operating voltage: 108V, Max Output power: 37.5kVA, forced air cooling.

### Inverter unit features

This product consists of four boards: Gate driver board, Gate driver control board, Power module board, and inverter top-cover presence/absence detection sensor board. The lower housing with radiator fins is made of metal and it is in full contact with the power module substrate. Forced air cooling system is used.

### Report content

The 50-page report includes images of the teardown process and the BOM list of each PCB.

**Report price: \$3,000**

# Table of Contents

Page

## **Summary**

Table 1, Product outline 3

## **Analysis result summary**

Inverter unit appearance 4

Teardown process documentation 6

Gate driver PCB images 11

MG-ECU board images 12

Power module images 13

Sensor PCB images 14

Gate driver PCB X-Ray images 15

MG-ECU board X-Ray images 16

Power module X-Ray images 17

Sensor PCB X-Ray images 18

## **Component positions on:**

Gate driver PCB 19

MG-ECU board 20

Power module 21

Sensor PCB 22

## **BOM list of:**

Gate driver PCB 23

MG-ECU board 32

Power module 39

Sensor PCB 49