Chapter 1 General Information

1.1 Introduction

VCU (Vehicle Control Unit) is the master controller for electric and hybrid vehicles. VCU is responsible for the vehicle's power system energy management, power mode management, and electrical auxiliary control. Its core functions include power on/off management, power system management, drive mode management, drive and brake control, auxiliary management, and fault diagnosis.

1.1.1 **Functionality**

EV2297A02 has the following functions:

Table 1 EV2297A02 Features

Feature
1 Key switch (KEYON)
1 Hardwire wakeup (WAKEUP)
4 Power supply (BATT)
9 5V Outputs
6 CAN Bus ports: CANE supports specific frame wake-up, CANF supports any frame wake-up, CANA, CANB, CANC, CAND support ISO CANFD
1 LIN Bus port
2 FlexRay Bus port
13 Digital signal inputs: 2 channels active high, 11 channels active low
22 Analog signal inputs: 8 channels of 0-5V voltage type input, 6 channels of 0-5V resistor type input, and 8 channels of 0-32V voltage type input
4 Frequency signal inputs
10 High-side driver outputs
26 Low-side driver outputs: 7 configurable as PWM outputs
Hardware watchdog

1.1.2 Material

The shell of VCU is formed by aluminum die-casting and assembled with silicone rubber. There is no special treatment or plating on the outside of the shell, no sharp burrs and sharp edges. The nominal dimensions of the VCU shell are as follows (excluding the female end of the VCU connector, in mm):

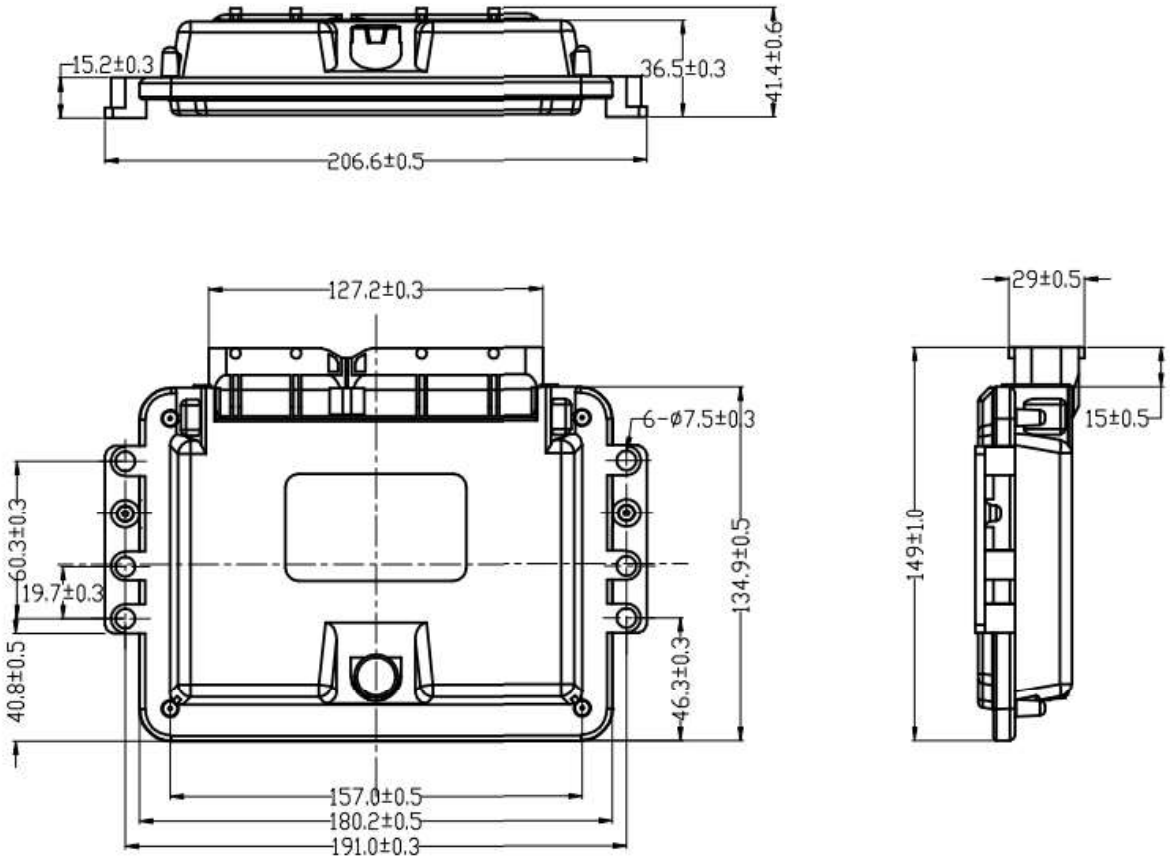

Figure 1 VCU Shell Size

The socket model used for disassembling the shell: Torx T15.
The product identification label is affixed to the VCU shell, which contains the product identification code, customer information, date, batch number, serial number, etc.