CLAIMS:

1. A drive assembly with annularly arranged power transistors, comprising a housing, a motor controller, a rotor, and a stator, wherein

the housing is cylindrical, and is provided therein with a chamber along an axial direction of the housing; an inner wall of the housing is provided with a partition wall along a radial direction of the housing, the partition wall divides the chamber into a motor mounting chamber and a controller mounting chamber; the rotor is provided in the motor mounting chamber; the stator is provided in the motor mounting chamber, and is located outside the rotor; and the motor controller is provided in the controller mounting chamber;

an outer wall of the housing is provided with a liquid cooling channel; the liquid cooling channel comprises a motor cooling groove and a controller cooling groove that communicate with each other; and the motor cooling groove is located on an outer wall of the motor mounting chamber, and the controller cooling groove is located on an outer wall of the controller mounting chamber;

the motor controller comprises a circuit board assembly and multiple power transistors; the multiple power transistors are provided at an outer circumference of the circuit board assembly, and are electrically connected with the circuit board assembly; the multiple power transistors are evenly distributed along a circumferential direction of the controller mounting chamber; packages of the multiple power transistors are connected with an inner wall of the controller mounting chamber; and the controller cooling groove surrounds the power transistors;

the housing is provided with a ring wall in the controller mounting chamber; an annular power transistor mounting groove is formed between the ring wall and the inner wall of the controller mounting chamber; and the multiple power transistors are located in the power transistor mounting groove; and

the drive assembly further comprises a holding member; the holding member comprises an annular base portion and multiple holding portions; the multiple holding portions are distributed on the annular base portion in a circumferential direction of the annular base portion; the holding member is located in the power transistor mounting groove; and the holding portions abut between the ring wall and the power transistor mounting groove.

2. The drive assembly according to claim 1, wherein

the inner wall of the controller mounting chamber is provided with multiple heat-conducting surfaces, which are connected along a circumferential direction of the inner wall of the controller mounting chamber in sequence, and are respectively connected with the packages of the power transistors.

3. The drive assembly according to claim 2, wherein

a collision avoidance groove is provided between every two adjacent heat-conducting surfaces.

4. The drive assembly according to claim 2, wherein

heat-conducting sheets are located between the packages of the power transistors and the heat-conducting surfaces.

5. The drive assembly according to any one of claims 1 to 4, wherein

the drive assembly further comprises a positioning frame; the positioning frame comprises an annular base plate and multiple spacers; the multiple spacers are provided on the annular base plate, and extend along an axial direction of the positioning frame; the multiple spacers are distributed along a circumferential direction of the annular base plate; the positioning frame is located in the power transistor mounting groove; and every one spacer is located between two adjacent power transistors.

6. The drive assembly according to claim 5, wherein

the spacer is provided with a T-shaped radial section.

7. A vehicle, comprising the drive assembly according to any one of claims 1 to 6.