

2007

Development of power-card techniques for driving the motors of HEVs

~ Packaging ~

In 1997, Toyota Motor started selling a hybrid car (HEV) Prius as a fuel-efficient automobile, and thereafter continued to accelerate the development of HEV vehicles. A key device that drives HEV is a package named power card which was jointly developed by Toyota and Denso. It is a structure in which the IGBT element is sandwiched with copper lead frames and the heat generated from the element is efficiently cooled with engine cooling water.

They released the technical contents at the ISTF (International Semiconductor Technology Forum) 2008 jointly hosted by Japan Semiconductor Equipment Association (SEAJ) and SEMI. The figure below shows the materials at that time.

Lexus hybrid car LS 600h realizes high current drive with 24 power cards.

One side cooling (Other company) Both sides cooling (DN) FISTF 2008J

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Version 2019/1/31