To search page

1999

Mass production of µBGAs for high-speed memory starts

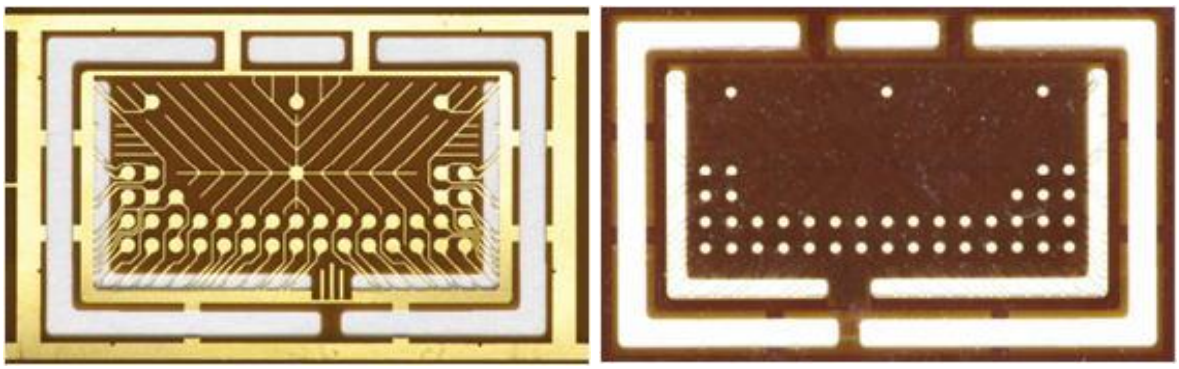
~ Packaging ~

In 1997, Intel announced the adoption of Direct Rambus architecture for the main memory of PC, which could transmit high density data in high speed, and was developed by Rambus.

Hitachi Cable, which manufactured LOC lead frames, proposed joint development to Intel and Rambus to adopt the µBGA package as the main package. Although µBGA was developed by Tessera in the U.S., Hitachi Cable received basic technology from Rambus, and developed its own structure, materials and manufacturing equipment, together with Hitachi's technical team. The new package developed showed the superior features such as higher productivity, superior electric performance and reliability.

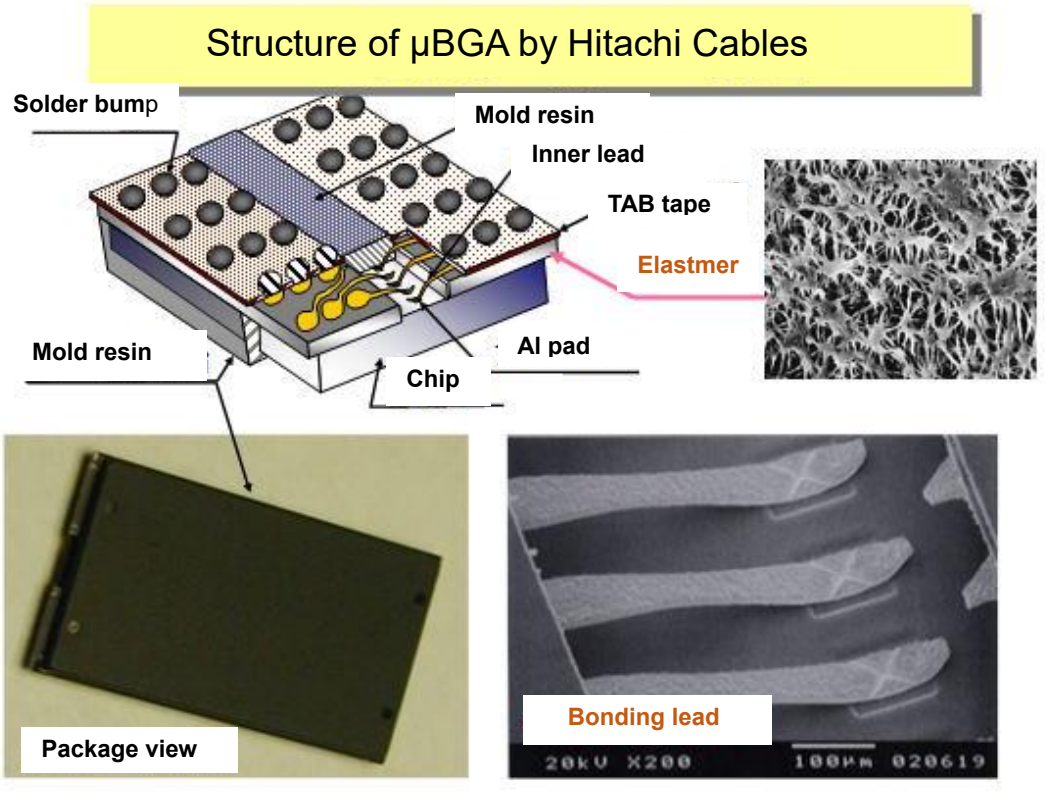
A proprietary elastomer having stress buffering and water vapor discharging capability was formed between the DRAM chip and the flexible TAB tape, and the outer shape was formed by a continuous transfer molding method.
This packaging technology was applied to DRAM by Elpida Memory (now Micron Technology) and the both companies were jointly awarded the Monozukuri Award from Nikkan Kogyo Shimbun in 2007.

Pattern of 72Mbit Direct Rambus



Chip side joints

Solder ball side joints



Version 2019/1/31