

To search page

1986

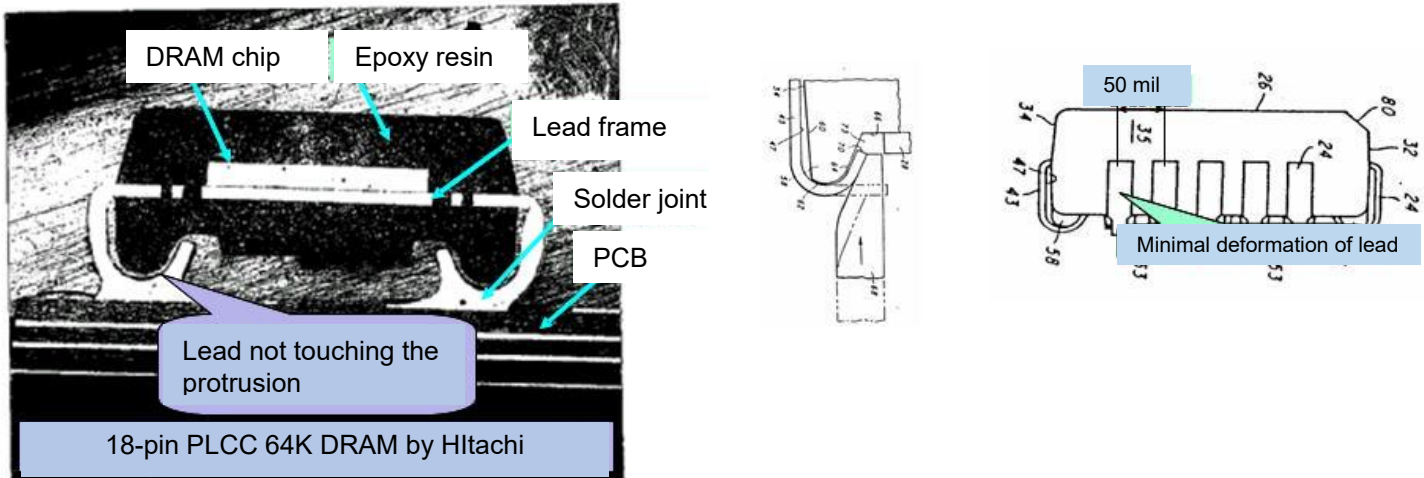
U.S. files for an injunction against the import of DRAMs in PLCC-type packages

~ Packaging ~

In May 1986, TI in the U.S. filed a case of import suspension of 64M DRAM to ITC in the U.S. (International Trade Commission) against 9 DRAM manufacturers, Hitachi, Toshiba, NEC, Mitsubishi, Matsushita, Oki, Sharp, Fujitsu, and Samsung, for infringing the patent of PLCC (Plastic Lead Chip Carrier) which TI developed, and for causing damage to US manufacturers because of their unfair export and sales.

The Japanese DRAM business was sweeping the world at that time, and TI's corporate profits in the semiconductor sector were rapidly deteriorating. They were carrying out patent negotiations with DRAM manufactures utilizing their superior position with their basic patent of IC as the weapon. They aimed to revitalize their business by the paten revenue.

The figure below on the left side explains the TI's patent, in which a resin protrusion is made in the transfer mold method, and the tips of the leads are formed into a J letter shape along this protrusion. The figure on the right is a cross-sectional picture of Hitachi 64M DRAM in 18 pin PLCC soldered to PCB. Hitachi's J shaped forming method was explained so that it was done with a metal mold, not using resin protrusions, and changed to a structure without a resin protrusion.



Cross section of assembled package