

1981

Microprocessor shifted to CMOS (Hitachi)

~ Integrated Circuit ~

Consistency with software assets developed by customers and with development environment is important for microprocessors. The selected strategy was to stay software compatible with US products from Intel and Motorola which were already de-facto-standard (usability compatible), and to make hardware differentiated (adoption of superior technologies in the internal architecture and processes). It is a strategy to rapidly commercialize the quickly-advancing latest technologies and to rebuild the history of the industry. For example, SRAM which adopted CMOS process made significant achievements in terms of business in memory field. It was also an important strategy in computer field. Hitachi's HD6301 was developed based on this strategy, by making the best use of superior hardware technologies such as low power CMOS technology which had been developed for consumer electronics equipment market such as calculators and watches, and microprogram control technology based on the accumulated technology in Hitachi computer business. At the time, it was developed under collaboration of Hitachi company-wide resources including laboratories beyond the framework of the semiconductor

business operation, and it was introduced to the market in 1981. The installation of the nonvolatile memory developed later was also widely accepted in the fields of automobile engine control, OA equipment such as FAX and printer, computer peripherals such as HDD etc., all of which were expanding at the time. This product was the pioneer followed by many other products including 6305 series and 64180 series which were developed based upon the same strategy.

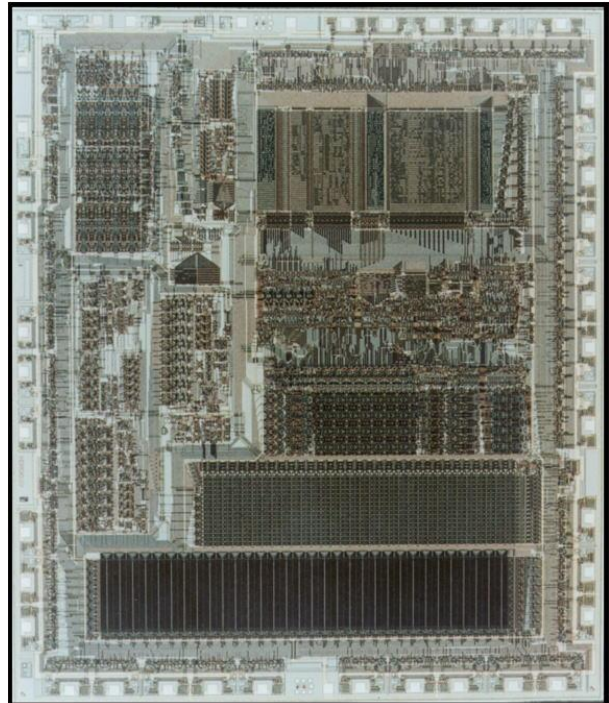


Fig. Die Photo of HD6301V
(By courtesy of Hitachi)