## 1982 <u>Development of MSPs</u> ~ Packaging ~

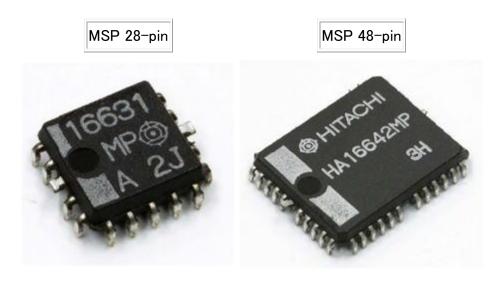
Around 1982, Hitachi developed a compact surface mount package MSP (Mini Square Package) in which leads connecting PCB were vertically shaped, in order to cope with the miniaturization of camera integrated VCRs for home use.

This package has a feature of small size and high heat dissipation, and it was adopted for analog IC for color signal processing and servo drive IC, etc.

The MSP outline was classified as Butt Lead type as a result of discussions at the Semiconductor Package Outline Committee later because it was soldered by butting the leads to be connected to PCB. It was called QFI, because of its vertical lead configuration on the four sides, and It was equally positioned as gull wing type QFP and QFJ with J leads.

leads are vertically extending from the four sides of the package body So it came to be called QFI.

Note that the one with two side pin arrangement is called SOI.



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