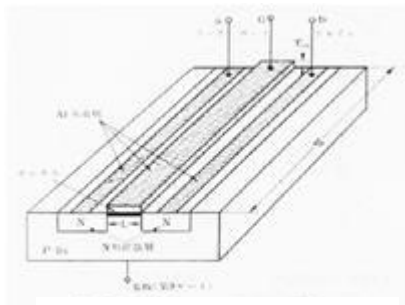


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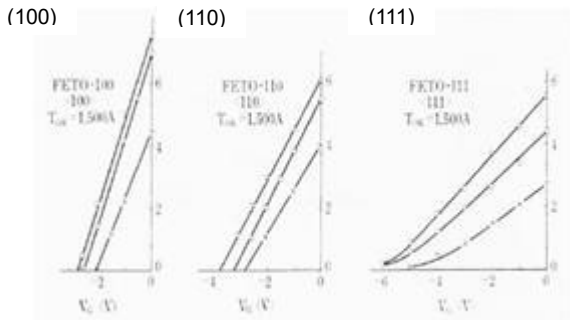
Around 1965 Birth of MOS transistors

~ Packaging ~

In 1965, Hitachi found that the operation of Si MOS transistors was stabilized by forming a channel layer on the crystal surface orientation of <100> of the silicon substrate. It commercialized the products applying this technology, which were assembled in can type packages. The structure of MOSFET formed on the <100> crystal surface became the main stream in the MOS type IC / LSI afterwards.



Structure of MOS transistor

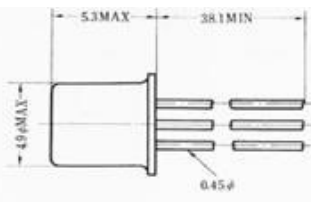


GC-VG characteristics
(Relation with crystal orientation)

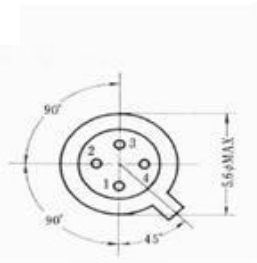
Specification of Hitachi MOS transistor

---大定格 (Ta=25°C)

| 項 | 目 | 記号 | 単位 |
|-------------|-------------------|---------|----|
| ドレインソース電圧 | V_{DS} | +20 | V |
| ゲートソース電圧 | V_{GS} | +2 | V |
| ドレイン電流 | I_D | -20 | mA |
| 電力損失 | P | 100 | mW |
| 総合温度 (保存時共) | T_{CS}, T_{stg} | -55~150 | °C |



Structure of alloy joint type transistor



Structure of pan cake type transistor