Title (en)

Thermal print head.

Title (de)

Thermischer Druckkopf.

Title (fr)

Tête d'impression thermique.

Publication

EP 0369347 A2 19900523 (EN)

Application

EP 89120874 A 19891110

Priority

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Abstract (en)

Disclosed is a thermal print head (1) in which heating resistance elements (14) are arranged with high density. The thermal print head comprises a head substrate (10), formed of a single-crystal silicon wafer, and a print driver circuit element (3, 4). The print driver circuit element (3, 4), which is formed by doping the head substrate (10) directly with an impurity, is composed of an MOS-FET. A FET used to form the single-crystal silicon substrate (10) has high electrical mobility, and serves to improve the operating speed of the thermal print head (1). Each heating resistance element (14), whose base material is polycrystalline silicon, is adjusted to a predetermined resistance value by being subjected to diffusion of an impurity. The resistance elements (14) are formed on a protuberance (12) which is formed on the head substrate (10). Thus, the portion of an insulating protective film (15) which corresponds to the protuberance (12) projects outward from the rest, thereby ensuring contact with a printing sheet. An earthing diode (16, 17) or laminate structure is used for an earth line of each heating resistance elements (14) so that the resistance element (14) is situated close to a side edge portion of the head substrate (10).

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

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