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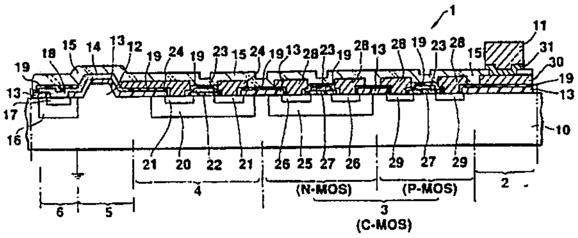
(71) Applicant: **CASIO COMPUTER COMPANY LIMITED**
6-1, 2-chome, Nishi-Shinjuku
Shinjuku-ku Tokyo(JP)

(72) Inventor: **Wakabayashi, Takeshi c/o Pat. Dep.**
Development Div
Hamura R&D C. Casio Comp. Co. Ltd. 3-2-1
Sakae-cho
Hamura-machi Nishitama-gun Tokyo
190-11(JP)
Inventor: **Ochi, Tsuneo c/o Pat. Dep.**
Development Division
Hamura R&D C. Casio Comp. Co. Ltd. 3-2-1
Sakae-cho
Hamura-machi Nishitama-gun Tokyo
190-11(JP)

(74) Representative: **Strasse, Joachim, Dipl.-Ing.**
Eisenführ, Speiser & Strasse
Zweibrückenstrasse 17
D-8000 München 2(DE)

(54) Thermal print head and a method for manufacturing the same.

(57) 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).



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EUROPEAN SEARCH REPORT

Application Number

EP 89 12 0874

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	EP-A-129914 (TELETYPE CORP.) * abstract; figure 2 * ---	1	H01L49/02 B41J2/335
A	US-A-4429321 (CANON K.K.) * abstract; figure 1 * -----	1	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

H01L
B41J

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	23 AUGUST 1990	PELSERS L.

CATEGORY OF CITED DOCUMENTS

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