

Title (en)  
THERMAL PRINT HEAD

Publication  
**EP 0186059 A3 19870304 (EN)**

Application  
**EP 85115850 A 19851212**

Priority  
US 68706984 A 19841228

Abstract (en)  
[origin: EP0186059A2] A thermal print head includes electrical heating elements (36, 38) for marking a heat sensitive medium, and buses (46, 50, 60, 64) for delivering power to the elements (36, 38) (each bus being connected in common to a number of the elements); a power source applies to one of the buses (46, 60) a first voltage level which is at least sufficient, when applied to one of the elements (36, 38), to cause marking, and the power source holds a second bus (50, 64) at a fixed second voltage level insufficient for causing marking to improve reliability and to reduce manufacturing costs. In other aspects, each element (36, 38) in the row (30, 32) is connected between a conductor (52, 57) for supplying power to and a conductor (44, 48, 58, 62) for sinking power from the element (36, 38), and some of the sink conductors (44, 48) extend on one side of the row (30, 32) while other sink conductors (58, 62) extend on the other side of the row (30, 32) (for making electrical connection to a power sink); there are a number (N) of parallel rows of elements (36, 38), and there are 2N buses (23), each bus being connected in common to a plurality of elements (36, 38), and there is control logic for routing power via each one of the buses in turn; and at least one (46, 50) of the buses (46, 50, 60, 64) is on one side of the rows (30, 32) of elements (36, 38), and at least another one (60, 64) of the buses (46, 50, 60, 64) is on the opposite side of the rows to reduce density of the required switching circuitry.

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**B41J 3/20**

IPC 8 full level  
**B41J 2/345** (2006.01); **B41J 2/355** (2006.01); **H04N 1/032** (2006.01)

CPC (source: EP)  
**B41J 2/345** (2013.01)

Citation (search report)  
• [X] EP 0112472 A2 19840704 - IBM [US]  
• [A] EP 0112473 A2 19840704 - IBM [US]  
• [A] US 4428690 A 19840131 - MITA TSUNEMASA [JP]  
• [AP] US 4513296 A 19850423 - SVAY LENG [JP], et al  
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**EP 0186059 A2 19860702; EP 0186059 A3 19870304; EP 0186059 B1 19900627**; AU 4644985 A 19860703; AU 584915 B2 19890608; CA 1237337 A 19880531; DE 3578406 D1 19900802; JP H0657457 B2 19940803; JP S61154955 A 19860714

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**EP 85115850 A 19851212**; AU 4644985 A 19850820; CA 496198 A 19851126; DE 3578406 T 19851212; JP 21777285 A 19850930