

Title (en)

Ink jet recording head and ink jet recording apparatus comprising the same

Title (de)

Tintenstrahlaufzeichnungskopf und diesen enthaltendes Tintenstrahlaufzeichnungsgerät

Title (fr)

Tête d'enregistrement à jet d'encre et appareil d'enregistrement à jet d'encre comprenant cette tête

Publication

EP 0985535 A3 20010829 (EN)

Application

EP 99116295 A 19990818

Priority

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- JP 29977998 A 19981021
- JP 3459299 A 19990212
- JP 22206299 A 19990805

Abstract (en)

[origin: EP0985535A2] An ink jet recording head comprises a nozzle forming member (16) provided with a plurality of nozzle orifices (15) for jetting ink, a channel forming substrate (10) provided with a plurality of pressure generating chambers (12) communicated with the associated nozzle orifices (15), one face of which is bonded to the nozzle forming member (16), a plurality of piezoelectric elements (70) provided on an face of the channel forming substrate (10) which is opposed to the face bonded to the nozzle forming substrate (16) for causing pressure change to occur in the associated pressure generating chambers (12), and a reservoir forming member (20) bonded to the face of the channel forming substrate (10) on which the piezoelectric elements (70) are provided, the reservoir forming member (20) having a reservoir section (21) forming at least a part of a reservoir communicated with the pressure generating chambers (12) for supplying ink thereto and a piezoelectric element holding section (24) for defining a space in an area facing the piezoelectric elements (70) such an extent that motion of the respective piezoelectric elements (70) is exhibited while sealing the space hermetically. <IMAGE>

IPC 1-7

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Citation (search report)

- [X] EP 0707961 A2 19960424 - SEIKO EPSON CORP [JP]
- [A] EP 0738599 A2 19961023 - SEIKO EPSON CORP [JP]
- [A] EP 0677386 A2 19951018 - SEIKO EPSON CORP [JP]
- [DA] PATENT ABSTRACTS OF JAPAN vol. 018, no. 065 (M - 1554) 3 February 1994 (1994-02-03)

Cited by

EP1164015A1; CN104044347A; GB2513466A; CN109484032A; EP3456537A3; US6802597B2; EP1145853A1; KR100498851B1; CN104339869A; US10682854B2; US8944567B2; US6481834B2; WO2011023551A1; DE102009028909A1; US6547373B2; US7153459B2; JP2013222743A

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