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1. Family 51756454 (US2012210580 AA)

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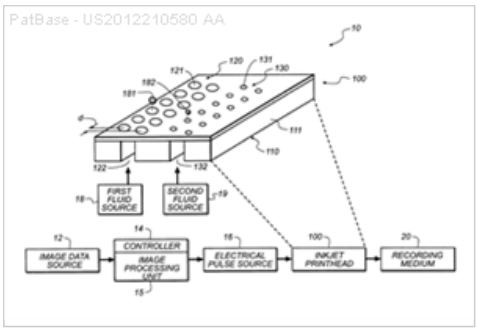

Title

[EN] METHOD OF ASSEMBLING AN INKJET PRINTHEAD

Abstract

[EN] A method of assembling an inkjet printhead, the method includes providing a printhead die including an array of nozzles on a first surface and an ink feed opening disposed on a second surface opposite the first surface, the ink feed opening being fluidically connected to the array of nozzles; positioning the printhead die adjacent to a flexible printed wiring member; making electrical interconnections between the printhead die and the flexible printed wiring member; overmolding a support structure in contact with the printhead die, the electrical interconnections and a die interconnect portion of the flexible printed wiring member; providing a manifold including an ink outlet and an ink path that is fluidically connected to the ink outlet; and providing a fluidic seal between the ink outlet of the manifold and the ink feed opening of the printhead die.

Probable Patent Assignee: EASTMAN KODAK CO

Earliest Publication Date: 20120823

2. Family 51767327 (US2012212540 AA)

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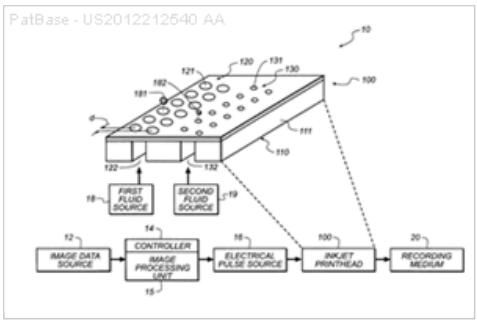


Title

[EN] PRINTHEAD ASSEMBLY AND FLUIDIC CONNECTION OF DIE

Abstract

[EN] An inkjet printhead includes a printhead die including an array of nozzles disposed along a nozzle array direction on a first surface, and an ink feed opening disposed on a second surface opposite the first surface, the ink feed opening being fluidically connected to the array of nozzles; a printhead chassis including an ink inlet port; a manifold affixed to the printhead chassis, the manifold including an ink outlet and an ink path that is fluidically connected to the ink outlet and to the ink inlet port of the printhead chassis; and a gasket that provides a fluidic seal between the ink outlet of the manifold and the ink feed opening of the printhead die.

Probable Patent Assignee: EASTMAN KODAK CO

Earliest Publication Date: 20120823

3. Family 60021394 (US2017072690 AA)

View in PatBase

Title

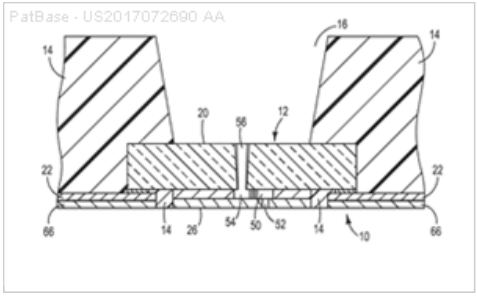
[EN] FLEXIBLE CARRIER

Abstract

[EN] The present disclosure includes a flexible carrier along with a system and a method including the flexible carrier.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20150806



4. Family 50913071 (US2012086764 AA)

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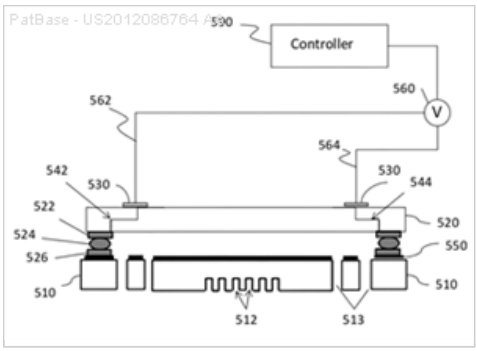

Title

[EN] MODULAR PRINTHEAD FOR OLED PRINTING

Abstract

[EN] The disclosure generally relates to a modular printhead configured for ease of access and quick replacement of the printhead. In one embodiment, the disclosure is directed to an integrated printhead which includes: a printhead die supporting a plurality of micropores thereon; a support structure for supporting the printhead die; a heater interposed between the printhead die and the support structure; and an electrical trace connecting the heater to a supply source. The support structure accommodates the electrical trace through a via formed within it so as to form a solid state printhead containing all of the connections within and providing easily replaceable printhead.

Probable Patent Assignee: KATEEVA INC

Earliest Publication Date: 20120412

5. Family 61747782 (US2017225462 AA)

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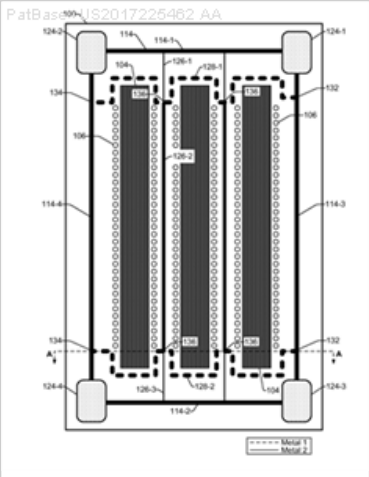


Title

[EN] ALTERNATIVE GROUND LINES FOR INTER-SLOT GROUNDING

Abstract

[EN] In an example implementation, a grounding structure includes a perimeter ground line around the perimeter of a printhead die, and having north, south, east, and west segments. The structure includes an inter-slot ground line extending from the north segment to the south segment between two fluid slots, and an alternative ground line extending from the east segment to the west segment and intersecting the inter-slot ground line in a connection area near ends of the fluid slots.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

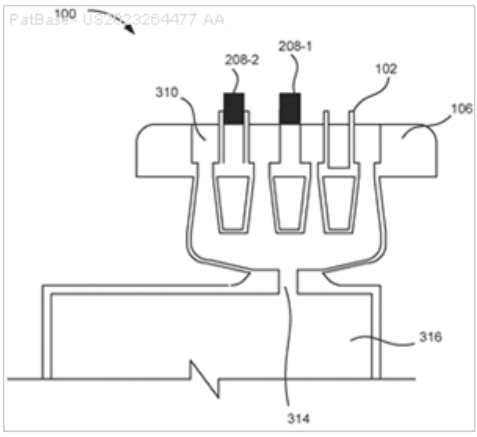
Earliest Publication Date: 20160225

6. Family 89336508 (US2023264477 AA)

View in PatBase

Title

[EN] PRINTHEAD CLEANING DEVICES WITH CLEANING AGENT FOUNTAINS



Abstract

[EN] In one example in accordance with the present disclosure, a printhead cleaning device is described. The printhead cleaning device includes a first spout to generate a first cleaning agent fountain to bathe a printhead die as it traverses over the printhead cleaning device. A pump passes the cleaning agent through the first spout to generate the first cleaning agent fountain. The printhead cleaning device also includes a structure to support the first spout.

Probable Patent Assignee: HEWLETT PACKARD DEV CO L P

Earliest Publication Date: 20220113

7. Family 58803283 (US2016221341 AA)

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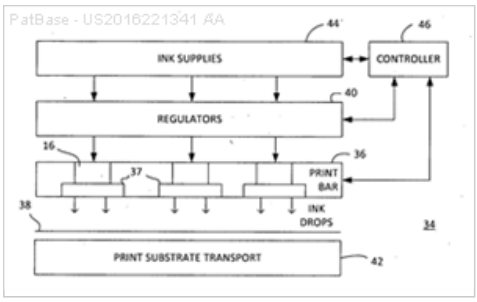


Title

[EN] PRINTBAR AND METHOD OF FORMING SAME

Abstract

[EN] A printbar module and method of forming the same are described. In an example, a printbar module includes a printed circuit board (PCB), a plurality of printhead die slivers, and a manifold. The printhead die slivers are embedded in molding and attached to the PCB. The molding has a plurality of slots in fluidic communication with fluid feed holes of the printhead die slivers. The manifold is in direct fluidic communication with the slots to supply fluid thereto.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

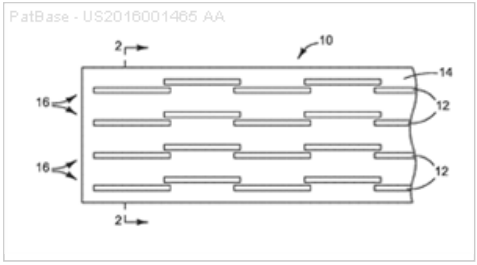
Earliest Publication Date: 20150326

8. Family 57314896 (US2016001465 AA)

View in PatBase

Title

[EN] MOLDING A FLUID FLOW STRUCTURE



Abstract

[EN] In one example, a process for making a micro device structure includes molding a micro device in a monolithic body of material and forming a fluid flow passage in the body through which fluid can pass directly to the micro device.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20140904

9. Family 65494770 (US2018222202 AA)

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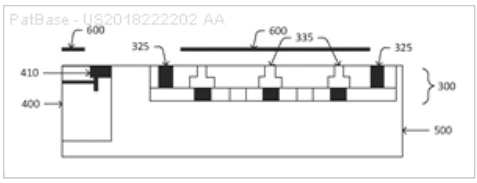


Title

[EN] PRINTHEAD ELECTRICAL INTERCONNECTS

Abstract

[EN] In one example, a method for fabricating a printhead is described. The method may include applying an electrical interconnect between a printhead die and an electrical fan out structure embedded in a molding of a printhead via a direct patterning additive process. The method may further include applying a passivation layer over the electrical interconnect as a dry film laminate.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

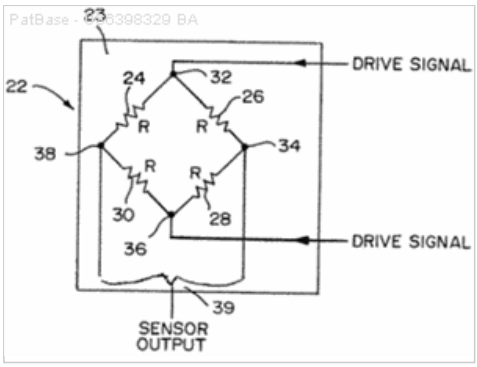
Earliest Publication Date: 20170427

10. Family 23245768 (US6398329 BA)

View in PatBase

Title

[EN] THERMAL INKJET PEN HAVING A BACKPRESSURE SENSOR



Abstract

[EN] A backpressure sensor is integrated into a printhead die, or alternatively to a pen body. The backpressure sensor is susceptible to ink pressure from ink within a printhead ink slot, ink channel or nozzle chamber, and to ambient pressure. For the alternative embodiment, the backpressure sensor is susceptible to ink pressure from ink within an ink slot, ink channel or ink cavity away from a printhead die, and to ambient pressure.

Probable Patent Assignee: HEWLETT PACKARD CO

Earliest Publication Date: 20020604

11. Family 61808071 (US2017266973 AA)

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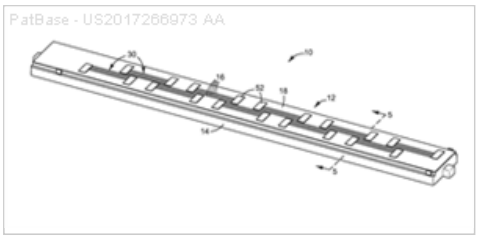

Title

[EN] PRINTHEAD ASSEMBLY

Abstract

[EN] In one example, a printhead assembly includes a molding with multiple printhead dies exposed at a front part of the molding and channels in a back part of the molding to carry printing fluid to the dies. The printhead assembly also includes a printed circuit board affixed to the back part of the molding, not covering any of the channels, and an electrical connection between each die and the printed circuit board.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20160303

12. Family 95608656 (WO23287428 A1)

View in PatBase

Title

[EN] PRINTHEAD CAP ASSEMBLY

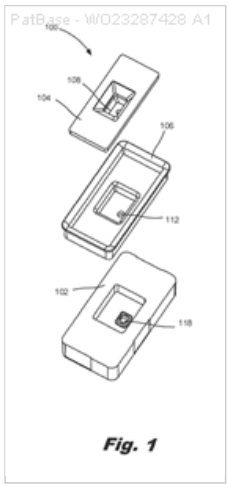

Fig. 1

Abstract

[EN] In one example in accordance with the present disclosure, a printhead cap assembly is described. The printhead cap assembly includes a lower cap structure that includes a fluid port. The printhead cap assembly also includes an upper cap structure that includes a fluid channel. The printhead cap assembly also includes an elastomer seal. The elastomer seal includes a floor that is to be compressed between the lower cap structure and the upper cap structure. The floor has a passage between the fluid channel of the upper cap structure and the fluid port of the lower cap structure. The elastomer seal also includes sidewalls that extend above the upper cap structure to surround a printhead die on a printhead cartridge and to press against a substrate on which the printhead die is disposed.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO

Earliest Publication Date: 20230119

13. Family 65471239 (US2018215152 AA)

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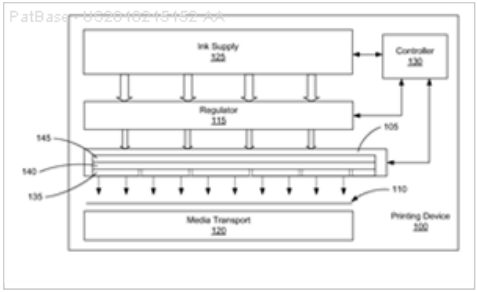

Title

[EN] FLUID MANIFOLD

Abstract

[EN] A fluid manifold may include a number of blades and a number of end pieces securing the blades in place wherein the fluid manifold interfaces between a printhead die and a number of fluid source slots. A method of manufacturing a fluid manifold may include arranging a number of metal blades to form a relatively larger pitch between blades on a bottom side of the arranged blades than on a top side the arranged blades and mounting the arranged blades to a mounting structure formed to receive each blade as arranged.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20170420

14. Family 9359292 (US5258781 A)

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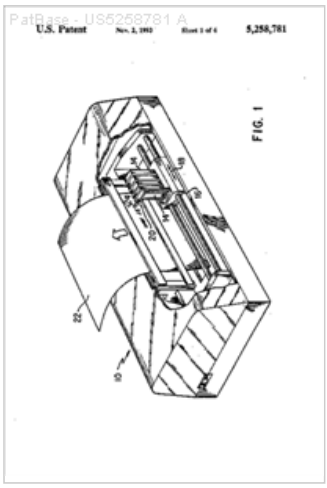


Title

[EN] ONE-STEP ENCAPSULATION, AIR GAP SEALING AND STRUCTURE BONDING OF THERMAL INK JET PRINTHEAD

Abstract

[EN] A one-step process bonds a manifold to a printhead die and interconnection board located on a heat sinking substrate, encapsulates wire bonds extending from the interconnection board and the printhead die, and seals air gaps between the manifold and printhead die. A through hole is made in the heat sink substrate and communicates with a cavity defined by the manifold. During assembly, the manifold is positioned on top of the substrate containing the printhead die and the interconnection board and retained by pins. An encapsulation fluid is injected from an underside of the substrate through the through hole and into the cavity. Injection is stopped when the fluid flows nearly to the front of the printhead. The process provides encapsulation of wire bonds, sealing of any air gap between the manifold and the printhead along a front face, and enhances structural bonding of the manifold to printhead components.

Probable Patent Assignee: XEROX CORP

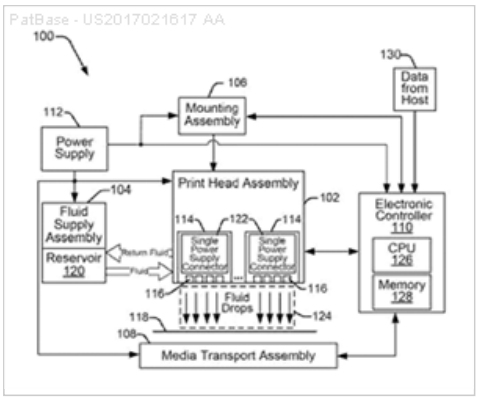
Earliest Publication Date: 19931013

15. Family 59416906 (US2017021617 AA)

View in PatBase

Title

[EN] FLUID EJECTION APPARATUS WITH SINGLE POWER SUPPLY CONNECTOR



Abstract

[EN] An example provides a fluid ejection apparatus including a fluid feed slot along a length of a print head die of the fluid ejection apparatus to supply a fluid to a plurality of drop ejectors, control circuitry adjacent to at least one side of the fluid feed slot to control ejection of drops of fluid from the plurality of drop ejectors, and a single power supply connector at an end of the print head die to supply power to the control circuitry.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20150604

16. Family 60688992 (US2017028725 AA)

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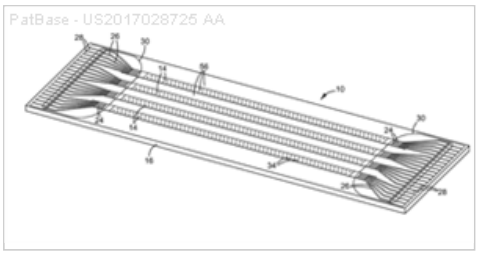


Title

[EN] FLUID FLOW STRUCTURE

Abstract

[EN] In one example, a fluid flow structure includes a fluid dispensing micro device embedded in a molding having a channel therein through which fluid may flow directly to the device. The device contains multiple fluid ejectors and multiple fluid chambers each near an ejector. Each chamber has an inlet through which fluid from the channel may enter the chamber and an outlet through which fluid may be ejected from the chamber. A perimeter of the channel surrounds the inlets but is otherwise unconstrained in size by the size of the device.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20151029

17. Family 59416886 (US2017021614 AA)

View in PatBase

Title

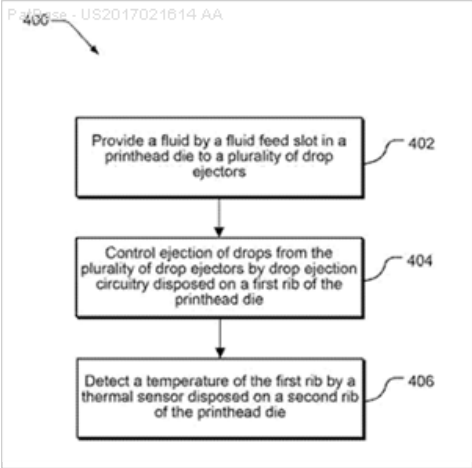
[EN] FLUID EJECTION APPARATUS WITH SINGLE-SIDE THERMAL SENSOR

Abstract

[EN] An example provides a fluid ejection apparatus including a fluid feed slot to supply a fluid to a plurality of drop ejectors, a first rib at a first side of the fluid feed slot and supporting drop ejection circuitry to control ejection of drops of the fluid from the plurality of drop ejectors, and a second rib at a second side, opposite the first side, of the fluid feed slot supporting a thermal sensor to facilitate determination of a temperature of the first rib and the second rib.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20150604



18. Family 42067883 (US2008180485 AA)

View in PatBase

Title

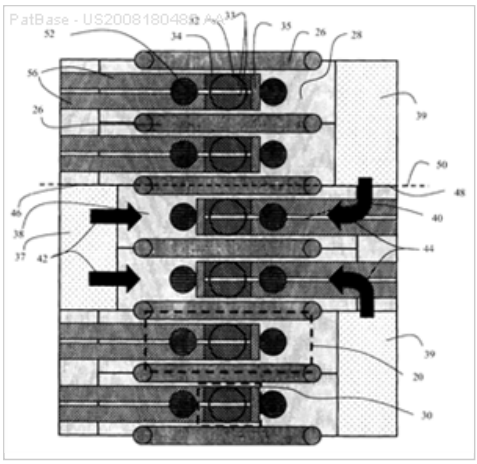
[EN] DUAL FEED LIQUID DROP EJECTOR

Abstract

[EN] A liquid ejector includes a structure defining a chamber. The chamber includes a first surface and a second surface. The first surface includes a nozzle orifice. A drop forming mechanism is located on the second surface of the chamber opposite the nozzle orifice. A first liquid feed channel and a second liquid feed channel are in fluid communication with the chamber. A first segment of a segmented liquid inlet is in fluid communication with the first liquid feed channel and a second segment of the segmented liquid inlet is in fluid communication with the second liquid feed channel.

Probable Patent Assignee: HONG KONG POLYTECHNIC UNIV

Earliest Publication Date: 20080731



19. Family 33084385 (US2006134561 AA)

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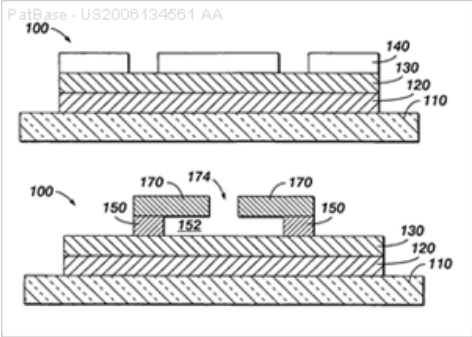

Title

[EN] ELECTROPLATED THREE DIMENSIONAL INK JET MANIFOLD AND NOZZLE STRUCTURES USING SUCCESSIVE LITHOGRAPHY AND ELECTROPLATED SACRIFICIAL LAYERS

Abstract

[EN] Mechanical and/or structural devices are formed using electroplating techniques in conjunction with sacrifical materials that can also be formed using electroplated techniques. This can produce devices that are attached at only selected points to a substrate and/or structures having enclosed cavities on or above a working substrate. A particularly relevant use of such structure forming techniques is in the fabrication of an ink jet manifold and nozzle structure for use in an ink jet print head, particularly a MEMS-based ink jet print head.

Probable Patent Assignee: PALO ALTO RESEARCH CENTER INC

Earliest Publication Date: 20060622

20. Family 73840493 (US2020215835 AA)

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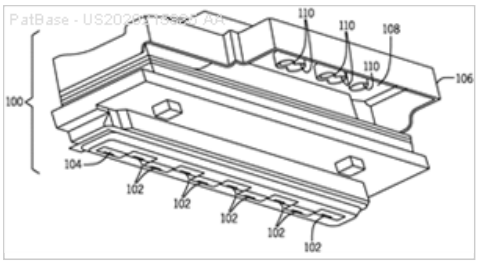


Title

[EN] ENGAGEABLE FLUID INTERFACE MEMBERS AND CONNECTORS

Abstract

[EN] In some examples, a fluid ejection assembly is removably mountable in a system, and includes a fluid ejection device, and a removable frame on which the fluid ejection device is mounted. The removable frame includes a plurality of fluid interface members that share a common design to releasably engage with a plurality of fluid interface connectors together as the removable frame is brought into engagement with a support structure in the system and on which the plurality of fluid interface connectors are mounted. Engagement of a first fluid interface member with a first fluid interface connector establishes a gas path through the first fluid interface member and the first fluid interface connector, and engagement of a second fluid interface member with a second fluid interface connector establishes a liquid path through the second fluid interface member and the second fluid interface connector, the liquid path to deliver a liquid to the fluid ejection device.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO

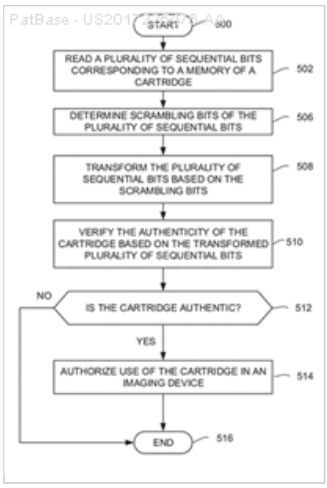
Earliest Publication Date: 20190404

21. Family 62247060 (US2017225476 AA)

View in PatBase

Title

[EN] ENCRYPTION OF FLUID CARTRIDGES FOR USE WITH IMAGING DEVICES



Abstract

[EN] Encryption of fluid cartridges for use with imaging devices is disclosed herein. One disclosed apparatus includes a memory of a fluid cartridge comprising a plurality of sequential bits, where the plurality of sequential bits are written to the memory after the plurality of sequential bits are transformed based on scrambling bits of the plurality of sequential bits, and a memory interface of the fluid cartridge to enable access to the memory to authenticate the fluid cartridge.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20160506

22. Family 74701899 (US2021129543 AA)

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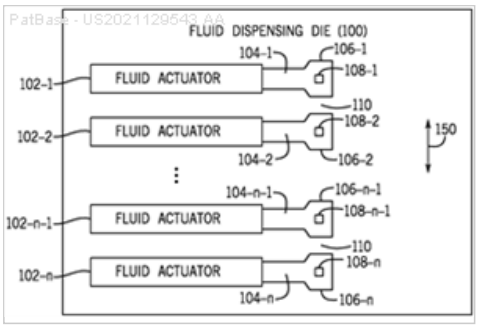

Title

[EN] GAPS BETWEEN ELECTRICALLY CONDUCTIVE GROUND STRUCTURES

Abstract

[EN] In some examples, a fluid dispensing die includes a plurality of fluid actuators to cause dispensing of a fluid from respective nozzles of the fluid dispensing die, and an electrically conductive layer including electrically conductive ground structures to connect respective fluid actuators of the plurality of fluid actuators to a ground, wherein the electrically conductive layer includes gaps provided between the electrically conductive ground structures of the electrically conductive layer.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO

Earliest Publication Date: 20190613

23. Family 80424800 (US2021354460 AA)

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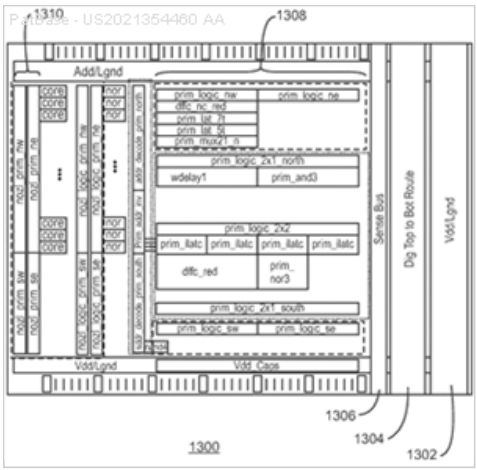

Title

[EN] DIE FOR A PRINTHEAD

Abstract

[EN] A die for a printhead is described herein. The die includes a number of fluid feed holes disposed in a line parallel to a longitudinal axis of the die, wherein the fluid feed holes are formed through a substrate of the die. A number of fluidic actuators are proximate to the fluid feed holes, to eject fluid received from the fluid feed holes A number of field-effect transistors are parallel to the fluid feed holes, where each of the fluidic actuators is powered by an associated field effect transistor. Logic circuitry to actuate the plurality of field-effect transistors is disposed on the die on an opposite side of the fluid feed holes from the field-effect transistors, wherein traces, disposed between the fluid feed holes, electrically couple the logic circuitry to the field-effect transistors. The die has a repeating structure comprising one fluid feed hole, two fluidic actuators, and two field-effect transistors placed at an interval of two times a dot pitch in a line along the die.

Probable Patent Assignee: HEWLETT PACKARD DEVELOPMENT CO LP

Earliest Publication Date: 20200813