Title (en)

MICROFLUIDIC CHECK VALVES

Title (de)

MIKROFLUIDISCHE RÜCKSCHLAGVENTILE

Title (fr)

CLAPETS DE NON-RETOUR MICROFLUIDIQUES

Publication

EP 2074341 A4 20130410 (EN)

Application

EP 07843872 A 20071004

Priority

- US 2007080489 W 20071004
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Abstract (en)

[origin: WO2008043046A2] The present invention is a robust, microfluidic check valve and a method of using the check valve in microfluidic devices. The check valve is comprised two stacked chambers that are separated by a pore-containing membrane. The membrane is composed of an elastomeric material and can be configured in normally open or normally closed state. The normally open check valve can be implemented so that the degree of back pressure necessary to close the valve can be set. The normally closed embodiment can maintain a closed state with essentially no back pressure. Both the normally open and the normally closed version can be readily produced by multilayer soft lithographic techniques and may retain effective functioning through many thousands of opening and closing cycles without failure. Such check valves can substitute for active valve structures in microfluidic devices and, when appropriately implemented, can simplify the design, manufacture, and/or operation of the devices containing them.

IPC 8 full level

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CPC (source: EP)

B01L 3/502738 (2013.01); **F16K 99/0001** (2013.01); **F16K 99/0026** (2013.01); **F16K 99/0057** (2013.01); B01L 2200/12 (2013.01); B01L 2300/0887 (2013.01); B01L 2400/0605 (2013.01); B01L 2400/0638 (2013.01); F16K 2099/0078 (2013.01); F16K 2099/008 (2013.01)

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- See references of WO 2008043046A2

Designated contracting state (EPC)

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DOCDB simple family (publication)

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