

Title (en)  
PIEZOELECTRIC ULTRASONIC TRANSDUCER AND PROCESS

Title (de)  
PIEZOELEKTRISCHER ULTRASCHALLWANDLER UND VERFAHREN

Title (fr)  
TRANSDUCTEUR ULTRASONORE PIÉZOÉLECTRIQUE ET SON PROCÉDÉ

Publication  
**EP 3166734 A1 20170517 (EN)**

Application  
**EP 15731441 A 20150608**

Priority

- US 201462022140 P 20140708
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- US 2015034729 W 20150608

Abstract (en)  
[origin: WO2016007250A1] A piezoelectric micromechanical ultrasonic transducer (PMUT) includes a multilayer stack disposed on a substrate. The multilayer stack may include an anchor structure disposed over the substrate, a piezoelectric layer stack disposed over the anchor structure, and a mechanical layer disposed proximate to the piezoelectric layer stack. The piezoelectric layer stack may be disposed over a cavity. The mechanical layer may seal the cavity and, together with the piezoelectric layer stack, is supported by the anchor structure and forms a membrane over the cavity, the membrane being configured to undergo one or both of flexural motion and vibration when the PMUT receives or transmits ultrasonic signals.

IPC 8 full level  
**B06B 1/06** (2006.01); **G06F 3/043** (2006.01); **H01L 41/09** (2006.01)

CPC (source: CN EP KR)  
**B06B 1/0622** (2013.01 - KR); **B06B 1/0648** (2013.01 - KR); **B06B 1/0651** (2013.01 - KR); **B06B 1/0666** (2013.01 - CN EP KR); **B06B 1/067** (2013.01 - KR); **B06B 1/0674** (2013.01 - KR); **B06B 1/0677** (2013.01 - KR); **G06F 3/043** (2013.01 - CN EP KR); **G06V 40/1306** (2022.01 - KR); **H10N 30/01** (2023.02 - EP); **H10N 30/2047** (2023.02 - EP KR); **B06B 1/0622** (2013.01 - EP); **B06B 1/0648** (2013.01 - EP); **B06B 1/0651** (2013.01 - EP); **B06B 1/067** (2013.01 - EP); **B06B 1/0674** (2013.01 - EP); **B06B 1/0677** (2013.01 - EP); **G06V 40/1306** (2022.01 - EP)

Citation (search report)  
See references of WO 2016007250A1

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Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
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DOCDB simple family (application)  
**US 2015034729 W 20150608**; BR 112017000134 A 20150608; CA 2950919 A 20150608; CN 201580035279 A 20150608; EP 15731441 A 20150608; JP 2017500036 A 20150608; KR 20177000538 A 20150608