

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

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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)

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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)
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WO 2016007250 A1 20160114; BR 112017000134 A2 20171107; CA 2950919 A1 20160114; CN 106660074 A 20170510; CN 106660074 B 20190924; EP 3166734 A1 20170517; JP 2017528940 A 20170928; JP 6599968 B2 20191030; KR 20170029497 A 20170315

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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