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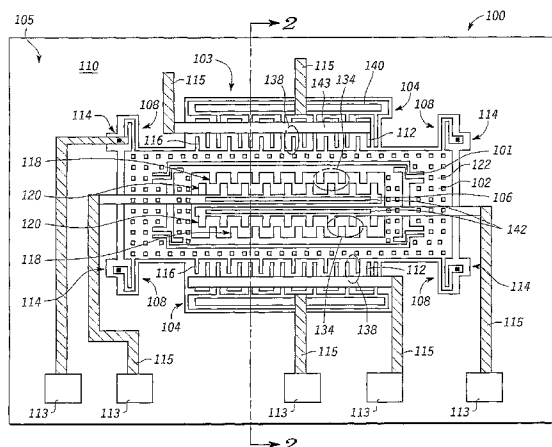
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ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: WIDE AND NARROW TRENCH FORMATION IN HIGH ASPECT RATIO MEMS



(57) Abstract: Methods have been provided for forming both wide and narrow trenches on a high-aspect ratio microelectromechanical (MEM) device on a substrate including a substrate layer (126), an active layer (128), and a first sacrificial layer (130) disposed at least partially therebetween. The method includes the steps of forming a first trench (154), a second trench (156), and a third trench (152) in the active layer (128), each trench (154, 156, 152) having an opening and sidewalls defining substantially equal first trench widths, depositing oxide and sacrificial layers thereover and removing the oxide and sacrificial layers to expose the third trench (152) and form a fourth trench (190) in the active layer (128) from the first and the second trench (154, 156), the fourth trench (190) having sidewalls defining a second trench width that is greater than the first trench width.

WO 2007/018813 A3

INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H01L 21/30, H01L 21/46 (2007.01)

USPC -438/456

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC -438/456Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC -438/456 (text search - see terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST (PGPB,USPT,USOC,EPAB,JPAB); Google

Search Terms: MEM, Interconnect, oxidize, photoresist, trench, substrate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 6,649,947 B2 (Rodgers et al.) 18 November 2003 (18.11.2003), figs 2A-2L; col 4, ln 66 to col 7, ln 67	12-16, 19 ----- 1-11, 17-18
Y	US 5,660,680 A (Keller) 26 August 1997 (26.08.1997), figs 3A-3C, 6A-C, 9A-E, 12A-D and 14A-H; col 3, ln 36 to col 4, ln 25; col 6, ln 63-65	1-11, 17-18
A	US 2004/0207074 A1 (MacDonald et al.) 21 October 2004 (21.10.2004), figs. 1(a)-(e), 2; para [0043]-[0058]	1-19

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Further documents are listed in the continuation of Box C.

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