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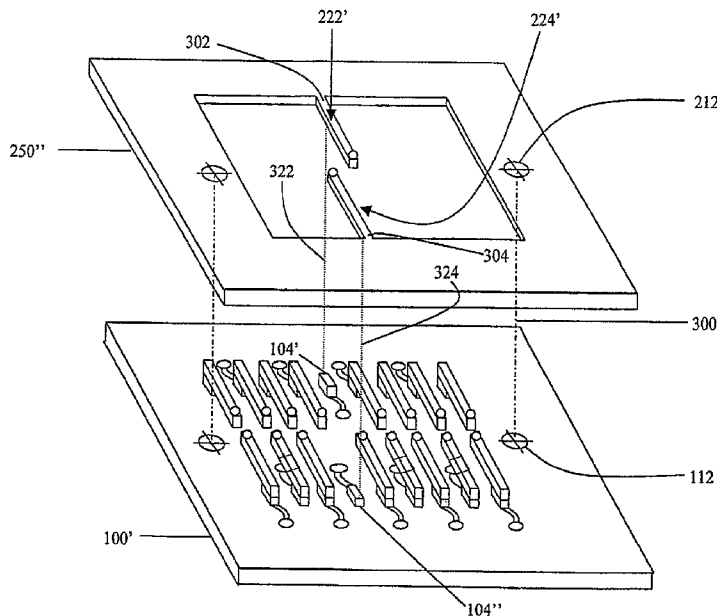
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(54) Title: PROBE REPAIR METHODS



(57) Abstract: A method for repairing a probe on a probe card is provided. A plurality of beams (222', 224') is formed on a beam panel (250''). The plurality of beams includes a replacement beam. After identifying a damaged beam on the probe card, the damaged beam is removed from the probe card. The beam panel is aligned with the probe card. After the beam panel is aligned, the aligned beam panel is temporarily affixed to the probe card. After the beam panel is temporarily affixed to the probe card, the replacement beam is affixed at a location previously occupied by the damaged beam. After the replacement beam is affixed at the location, the beam panel is removed from the probe card.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/009376 A1 (TAKEKOSHI KIYOSHI [JP] ET AL) 26 July 2001 (2001-07-26) paragraph [0080] - paragraph [0100]; figures 1,3,8,9	1-10
A	US 2003/113990 A1 (GRUBE GARY W [US] ET AL) 19 June 2003 (2003-06-19) paragraph [0028] - paragraph [0049]; figures 1-7	1
A	US 2002/194730 A1 (SHIH DA-YUAN [US] ET AL) 26 December 2002 (2002-12-26) abstract; figure 4	1
A	US 2005/179456 A1 (BEAMAN BRIAN S [US] ET AL) 18 August 2005 (2005-08-18) abstract; figures 1-8	1
<input type="checkbox"/> Further documents are listed in the continuation of Box C.		
<input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents :		
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family	
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2001009376	A1	26-07-2001	
		JP 2001281268 A	10-10-2001
		KR 20010076394 A	11-08-2001
		TW 476125 B	11-02-2002

US 2003113990	A1	19-06-2003	NONE

US 2002194730	A1	26-12-2002	NONE

US 2005179456	A1	18-08-2005	NONE
