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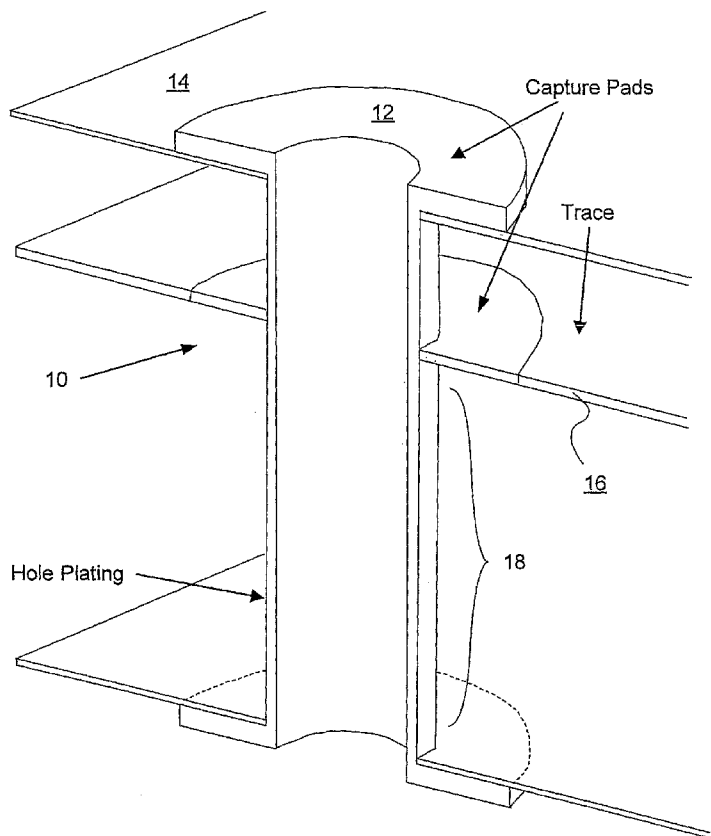
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[Continued on next page]

(54) Title: APERTURES FOR SIGNAL SHAPING USING GROUND AND SIGNAL PTH BACK-DRILLING



(57) Abstract: A method and apparatus for shaping signals transmitted via plated through holes (PTHs) utilizes standard back-drilling techniques to reduce the resonant stub lengths of ground PTHs in the vicinity of a back-drilled signal PTH.



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**INTERNATIONAL SEARCH REPORT**

International application No.

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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC: **H05K 1/03( 2007.01)**

USPC: 174/255

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)  
U.S. : 174/255, 262-266; 361/792-795

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

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

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,392,160 B1 (ANDRY et al) 21 May 2002 (21.05.2002) see entire document.	1-4
Y		5, 6
Y	US 2003/0042991 A1 (COTANT et al) 06 May 2003 (06.05.2003) see entire document.	5, 6
A,P	US 2006/0023439 A1 (FRALEY et al) 02 February 2006 (02.02.2006) see entire document.	1-6
A	US 6,233,820 B1 (HUMMELINK) 22 May 2001 (22.05.2001) see entire document.	1-6

Further documents are listed in the continuation of Box C.

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	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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**INTERNATIONAL SEARCH REPORT**

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PCT/US06/15838

Continuation of B. FIELDS SEARCHED Item 3:

EAST; US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM\_TDB; modeling and signal, and (via feedthrough through-hole),  
back adj (drill drilled drilling)