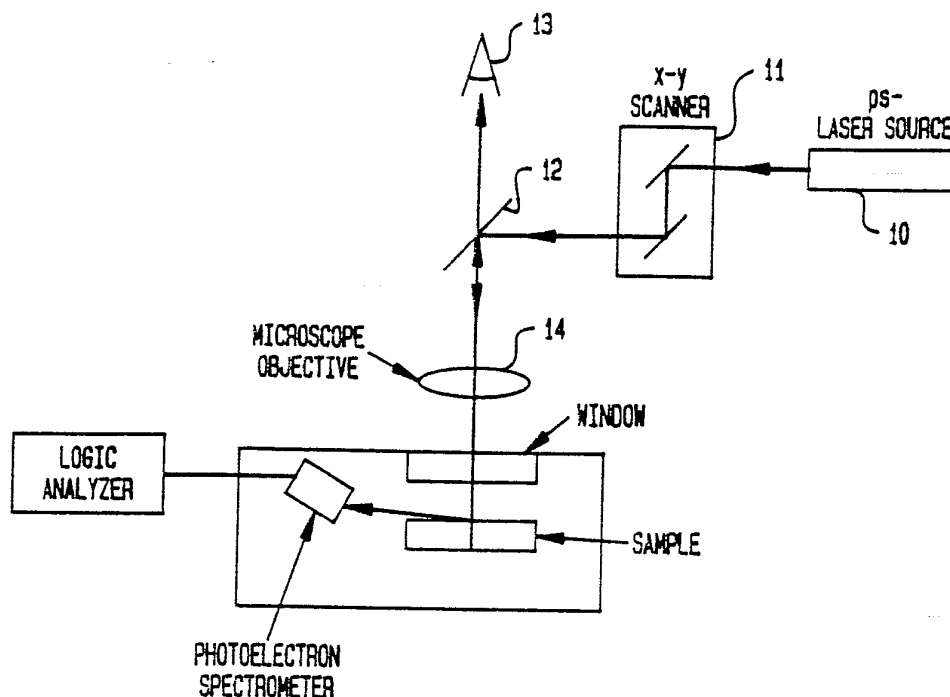




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Title: HIGH SPEED LASER PROBE**(57) Abstract**

An apparatus for testing a high speed semiconductor device or integrated circuit which includes a device for directing a pulsed laser beam at a surface element of a device or integrated circuit to be tested; a device for detecting emitted photoelectrons from the surface element; and a device for computing the local potential of the surface element at the time of irradiation by the pulsed laser beam from an analysis of the emitted photoelectrons.

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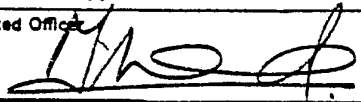
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INTERNATIONAL SEARCH REPORT

PCT/US 87/00631

International Application No

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC		
IPC ⁴ : G 01 R 31/28		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
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Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT ⁹		
Category ⁹	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
X	EP, A1, 0180780 (IBM) 14 May 1986 see the whole document	1,4,6,7 3
A	--	
A	IBM Technical Disclosure Bulletin, vol. 25, no. 3A, August 1982 (New York, US) G.W. Rubloff: "Contactless measurement of voltage levels using photoemission", pages 1171-1172, see the whole document	1,7
A	--	
A	Applied Physics Letters, vol. 46, no. 12, 15 June 1985 (New York, US) W.H. Knox et al.: "Optical pulse compression to 8 fs at a 5-kHz repetition rate", pages 1120-1121, see page 1120, left-hand column, lines 1-12 (cited in the application)	2,8
A	--	
A	Proceedings of the 21st Electronic Components Conference, 10-12 May 1971	./.
⁹ Special categories of cited documents: ¹⁰ "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 "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		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
26th October 1987	24 NOV 1987	
International Searching Authority	Signature of Authorized Officer	
EUROPEAN PATENT OFFICE	M. VAN MOL 	

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category *	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No
	(Washington D.C., US) R.E. McMahon: "Testing integrated circuits with a laser beam", pages 412-416, see page 412, right-hand column, lines 14-26	3
	--	
X,P	Applied Physics Letters, vol. 49, no. 6, 11 August 1986 (New York, US) R.B. Marcus et al.: "High-speed electrical sampling by fs photo-emission", pages 357-359, see the whole document	1-8

ANNEX TO THE INTERNATIONAL SEARCH REPORT ON

INTERNATIONAL APPLICATION NO.

PCT/US 87/00631 (SA 16979)

This Annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 05/11/87

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A- 0180780	14/05/86	JP-A- 61108148	26/05/86
		CA-A- 1220559	14/04/87

For more details about this annex :
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