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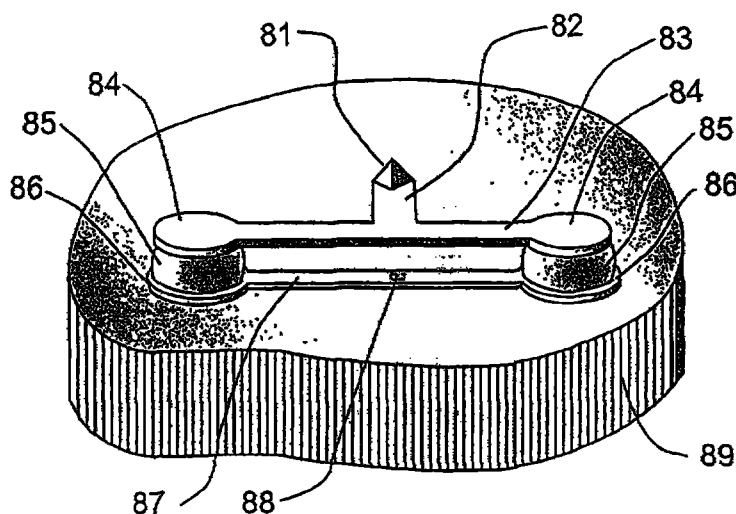
(43) International Publication Date
20 December 2001 (20.12.2001)

PCT

(10) International Publication Number
WO 01/96894 A1

- (51) International Patent Classification⁷: G01R 31/316, H01L 21/66 (72) Inventor: THOMAS H. Di Stefano; 16129 Greenwood Lane, Monte Sereno, CA 95030 (US).
- (21) International Application Number: PCT/KR00/00617 (74) Agent: KIM, Won-Ho; 7th Floor, Teheran Bd., 825-33, Yoksam-dong, Kangnam-ku, Seoul 135-080 (KR).
- (22) International Filing Date: 12 June 2000 (12.06.2000) (81) Designated States (national): CN, JP, KR, SG.
- (25) Filing Language: English Published:
— with international search report
- (26) Publication Language: English
- (71) Applicant: PHICOM CORP. [KR/KR]; 60-29, Gasan-dong, Kumchon-gu, Seoul 153-081 (KR). For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPLIANT PROBE APPARATUS



(57) Abstract: A mechanically compliant probe for electrically connecting to contact pads on microelectronic devices. The probe can be used for burn-in of integrated circuits at the wafer level. Additional applications include probe cards for testing integrated circuits and sockets for flip-chips. One configuration of the probe includes a probe tip (81), which is held on an extension arm (82) projecting laterally from an elongated flat spring (83). The spring is supported above a substrate (89) by posts (85) such that the probe tip is free to move vertically in response to a contact force on the probe tip. Deflection of the probe tip is compliantly limited by bending and torsional flexure of the sheet spring. Mechanical compliance of the tip allows arrays

of the probe to contact pads on integrated circuits where the pads are not precisely planar.

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