Patent Chat

TITLE

Comparison of Patent US5207584 (Johnson's Patent) vs US6244874 (Tan's Patent)

US005207584A

United States Patent [19]

Johnson

[11] **Patent Number: 5,207,584**

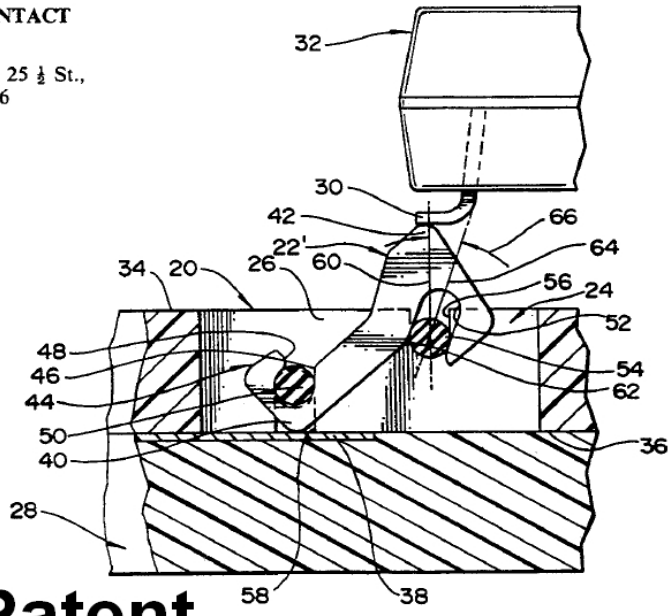
[45] **Date of Patent: May 4, 1993**

[54] **ELECTRICAL INTERCONNECT CONTACT SYSTEM**

[76] Inventor: **David A. Johnson**, 5600 W. 25 ½ St., St. Louis Park, Minn. 55416

[21] Appl. No.: **801,694**

[22] Filed: **Dec. 2, 1991**



Johnson's Patent

US006244874B1

(12) **United States Patent**
Tan

(10) **Patent No.: US 6,244,874 B1**
(45) **Date of Patent: Jun. 12, 2001**

(54) **ELECTRICAL CONTACTOR FOR TESTING INTEGRATED CIRCUIT DEVICES**

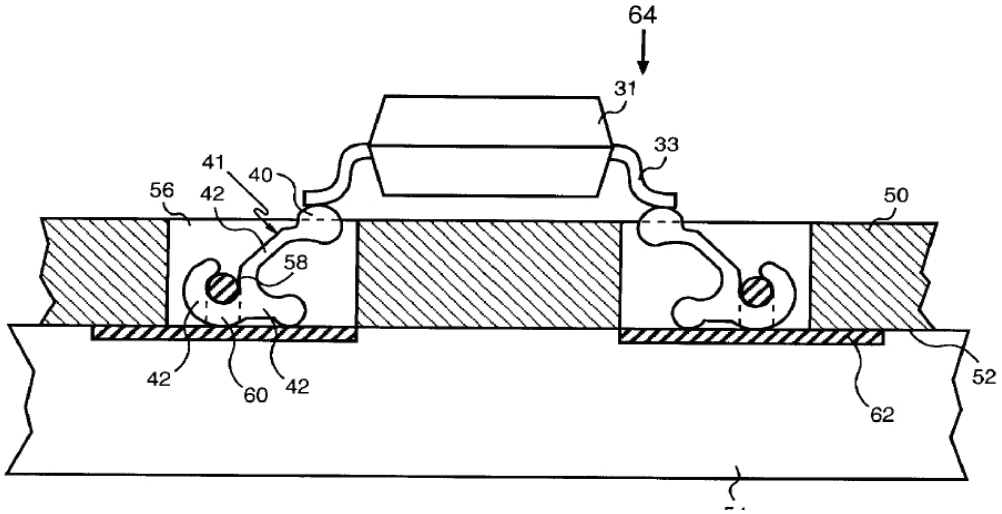
(76) Inventor: **Yin Leong Tan**, Blk. 22, St. George's Road, #25-182, Singapore (SG), 321022

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/508,194**

(22) Filed: **Mar. 8, 2000**

Tan's Patent



Johnson's Claim

What is claimed is:

1. Apparatus for electrically interconnecting a lead of a device to a terminal spaced at a distance from the lead, comprising:

(a) a housing interposed between the lead and the spaced terminal, said housing having at least one contact receiving slot formed therein, said slot extending substantially parallel to an axis extending between a corresponding lead and spaced terminal, said housing further having oppositely facing first and second surfaces, said first surface having a trough formed therein proximate the lead, and said second surface having a trough formed therein proximate the spaced terminal;

(b) a first elastomeric element received in said trough formed in said first surface, said first elastomeric element having a measure of compressibility and tensile extendability;

(c) a second elastomeric element received in said trough formed in said second surface, said second elastomeric element having a measure of compressibility and tensile extendability; and

(d) a generally planar contact received within said slot, said contact having a protrusion extending outward from said first surface for engagement by a lead, a nub extending outward from said second surface for engagement of the spaced terminal, a first hook portion, proximate said protrusion, encircling said first elastomeric element to hold said contact to said first elastomeric element, and a second hook portion, proximate said nub, encircling said second elastomeric element to hold said contact to said second elastomeric element;

(e) wherein, as said protrusion is engaged by a lead, said first and second elastomeric elements deform to permit movement of said contact in directions along two mutually-perpendicular axes, wherein wiping action of said protrusion across the lead and said nub across the spaced terminal occurs.

Tan's Claim

What is claimed is:

1. A contact pin for electrical connection comprising:

a body having a first arm and a second arm, said first arm including a head and a neck, said head adapted for contact with a lead of a test IC device; said second arm adapted for connection with a testing terminal, and further acting as a brake against wiping, said first and second arms forming generally into a C-shape; and

a hook segment extending from said body in a direction generally opposite to the second arm and adapted for engagement with a securing element, wherein said contact pin has a generally planar and tau-shaped configuration.

Tan's Claim

What is claimed is:

3. An apparatus for electrically interconnecting a lead of a test device to a terminal spaced at a distance from the lead, said apparatus having a housing interposed between the lead and said terminal, said housing having at least one contact receiving slot formed therein, said slot extending substantially parallel to an axis extending between a corresponding lead and said terminal, said housing further having oppositely facing first and second surfaces, said first surface proximate said lead and said second surface proximate the spaced terminal, said second surface having a trough formed therein proximate said terminal and traversing said slot, characterized in that

a resilient element is received in said trough;

a metallic contact pin is received in said slot, said contact pin having a first arm, a second arm and a hook segment;

said first arm having a head protruding from said first surface adapted for effective contact with said lead,

said second arm extending towards said second surface and adapted for electrical contact with said terminal, said first and second arm forming generally into a C-shape, such that lateral movement of the contact pin due to the downward pressure on said first arm by said lead under testing is prevented;

said hook segment extending in a direction generally opposite to that of the second arm, said hook segment adapted to receive said resilient element such that said hook segment is pressed into fixed contact with said terminal when properly installed,

wherein said contact pin has a generally planar and tau-shaped configuration, and

whereby testing of IC device is accomplished effectively without wiping action.

Patent Chat

Johnson's Claims	Tan's Claims
A Housing	A Body
Trough formed in said second surface	A Hook Segment
	First Arm
Trough formed in said first surface	Second Arm