



US006703851B1

(12) **United States Patent**
Howell

(10) **Patent No.:** **US 6,703,851 B1**
(45) **Date of Patent:** **Mar. 9, 2004**

- (54) **TEST SOCKET INTERPOSER**
- (75) **Inventor:** **Robert P. Howell**, San Jose, CA (US)
- (73) **Assignee:** **Exatron, Inc.**, San Jose, CA (US)
- (*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 31 days.

6,400,169 B1 * 6/2002 Hembree 324/755
 6,426,642 B1 * 7/2002 Akram et al. 324/765
 6,529,027 B1 * 3/2003 Akram et al. 324/756

* cited by examiner

Primary Examiner—Kamand Cuneo
Assistant Examiner—Jermele Hollington
 (74) *Attorney, Agent, or Firm*—Blakely, Sokoloff, Taylor & Zafman, LLP; Stephen M. De Klerk

- (21) **Appl. No.:** **10/213,045**
- (22) **Filed:** **Aug. 5, 2002**
- (51) **Int. Cl.⁷** **G01R 1/073**
- (52) **U.S. Cl.** **324/754; 324/755**
- (58) **Field of Search** 324/754, 755, 324/756, 758, 762, 765

(57) **ABSTRACT**

The invention relates to a test socket interposer. The interposer includes a flexible substrate with an upper signal contact and an upper ground contact on its top surface and a lower signal and a lower ground contact on its bottom surface. A portion of an upper surface of the upper signal contact is higher and to the right of an upper surface of the ground contact so that a signal contact of a device contacts the upper signal contact before a device ground slug contacts the upper ground contact. Also, a downward force exercised by the device signal contact causes pivoting of the upper signal contact and the substrate is sufficiently flexible to allow for this pivoting of the upper signal contact.

- (56) **References Cited**
- U.S. PATENT DOCUMENTS**
- 5,811,982 A * 9/1998 Beaman et al. 324/754
- 6,208,025 B1 * 3/2001 Bellaar et al. 257/696
- 6,242,932 B1 * 6/2001 Hembree 324/755
- 6,373,273 B2 * 4/2002 Akram et al. 324/765

21 Claims, 4 Drawing Sheets

