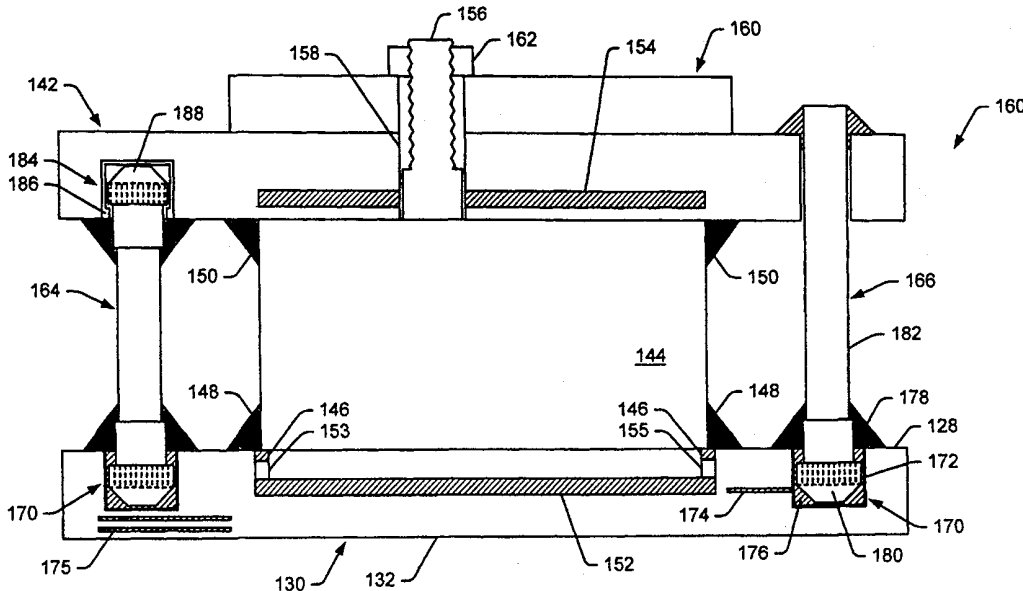




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification <sup>7</sup> : <b>H01L 21/44, 21/48, 23/48, H05K 9/00</b></p>	<p><b>A3</b></p>	<p>(11) International Publication Number: <b>WO 00/05748</b> (43) International Publication Date: 3 February 2000 (03.02.00)</p>
<p>(21) International Application Number: PCT/US99/16745 (22) International Filing Date: 22 July 1999 (22.07.99) (30) Priority Data: 60/093,833 22 July 1998 (22.07.98) US 09/359,057 21 July 1999 (21.07.99) US 09/359,058 21 July 1999 (21.07.99) US (71) Applicant: DIGIRAD CORPORATION [US/US]; 9350 Trade Place, San Diego, CA 92126 (US). (72) Inventors: COLLINS, Timothy, C.; 1052 Seahorse Court, Carlsbad, CA 92009 (US). PI, Bo; 7862 Via Coscaja, Carlsbad, CA 92009 (US). BRUNSCH, James; 11015-1/2 Camino Playa Carmel, San Diego, CA 92124 (US). (74) Agent: LAND, John, F.; Fish &amp; Richardson P.C., Suite 1400, 4225 Executive Square, La Jolla, CA 92037 (US).</p>	<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> <p>(88) Date of publication of the international search report: 4 May 2000 (04.05.00)</p>	

(54) Title: BLIND PIN PLACEMENT ON CIRCUIT BOARDS



(57) Abstract

A technique for use in manufacturing electronic assemblies involves forming a hole (170) in one side (128) of a circuit board (130) and only partially through the board. A pin (164, 166), such as an electrically conductive lead, is then inserted into the hole, and an adhesive material (176, 178) is used to bond the pin to the circuit board.

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US99/16745

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) :H01L 21/44, 21/48, 23/48; H05K 9/00 US CL :438/106, 125; 257/773; 361/818 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 438/106, 109, 125; 257/692, 697, 698, 773; 361/772, 816, 818 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) NONE		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,625,166 A (NATARAJAN) 29 April 1997, (29/04/97) all	1-25
Y	US 5,483,102 A (NEAL et al) 09 January 1996, (09/01/96) fig. 1 and related text.	1-25
Y, P	US 5,872,026 A (PASCH) 16 February 1999, (16/02/99) fig. 2 and related text.	1-25
A	US 5,006,922 A (MC SHANE et al) 09 April 1991, (09/04/91) entire document.	1-25
A	US 5,485,037 A (MARRS) 16 January 1996, (16/01/96) entire document.	1-25
A	US 5,744,863 A (CULNANE et al) 28 April 1998, (28/04/98) entire document.	1-25
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Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer KEVIN M. PICARDAT <i>K. Picardat</i> Telephone No. (703) 308-0956	

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PCT/US99/16745

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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A	US 5,615,086 A (COLLINS et al) 25 March 1997, (25/03/97) entire document.	1-25