

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 September 2001 (13.09.2001)

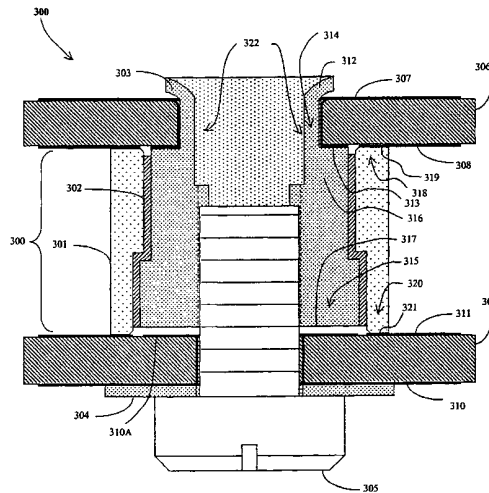
PCT

(10) International Publication Number
WO 01/67512 A3

- (51) International Patent Classification⁷: **H01R 12/04**, (72) Inventors: **DIBENE, Joseph, Ted, II**; 19 Shasta Court, Oceanside, CA 92057 (US). **HARTKE, David**; 340 C.R. 245, Durango, CO 81301 (US). **DERIAN, Edward, J.**; 13134 Polvera Avenue, San Diego, CA 92128 (US). **HOGUE, Carl, E.**; 11265 Affinity Court #108, San Diego, CA 92131 (US). **BRODER, James, M.**; 17043 Obsidian Drive, Ramona, CA 92065 (US). **SAN ANDREAS, Jose, B.**; 690 Main Street, #8, El Cajon, CA 92020 (US). **RIEL, Joseph, S.**; 13853 Tobiasson Road, Poway, CA 92064 (US).
- (21) International Application Number: PCT/US01/07410
- (22) International Filing Date: 8 March 2001 (08.03.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
- | | | |
|------------|--------------------------------|----|
| 60/187,777 | 8 March 2000 (08.03.2000) | US |
| 60/196,059 | 10 April 2000 (10.04.2000) | US |
| 60/219,813 | 21 July 2000 (21.07.2000) | US |
| 60/232,971 | 14 September 2000 (14.09.2000) | US |
| 60/251,222 | 4 December 2000 (04.12.2000) | US |
| 60/251,223 | 4 December 2000 (04.12.2000) | US |
| 60/251,184 | 4 December 2000 (04.12.2000) | US |
- (74) Agent: **COOPER, Victor, G.**; Gates & Cooper LLP, Suite 1050, 6701 Center Drive West, Los Angeles, CA 90045 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
- (71) Applicant: **INCEP TECHNOLOGIES, INC.** [US/US]; 10650 Treena Street, Suite 308, San Diego, CA 92131 (US).

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR DELIVERING POWER TO HIGH PERFORMANCE ELECTRONIC ASSEMBLIES



(57) Abstract: A method, apparatus, and article of manufacture for providing power from a first circuit board having a first circuit board first conductive surface and a first circuit board second conductive surface to a second circuit board having a second circuit board first conductive surface and a second circuit board second conductive surface is described. The apparatus comprises a first conductive member, including a first end having a first conductive member surface electrically coupleable to the first circuit board first conductive surface and a second end distal from the first end having a first conductive member second surface electrically coupleable to the second circuit board first surface. The apparatus also comprises a second conductive member, having a second conductive member first surface electrically coupleable to the first circuit board second surface and a second conductive member second surface distal from the second conductive member first surface electrically coupleable to the second circuit board second conductive surface.



WO 01/67512 A3



SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

Published:

— with international search report

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, 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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:

10 May 2002

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.

INTERNATIONAL SEARCH REPORT

International Application No

PC1/US 01/07410

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H01R12/04 H05K3/36		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) IPC 7 H01R		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, PAJ		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 582 145 A (WHITAKER CORP) 9 February 1994 (1994-02-09) the whole document ---	1-5, 9
X	US 6 231 352 B1 (GONZALES OLIVIER) 15 May 2001 (2001-05-15) the whole document ---	1, 12-24
X	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 12, 26 December 1996 (1996-12-26) & JP 08 204304 A (MEIDENSHA CORP), 9 August 1996 (1996-08-09) abstract ---	1, 25, 26, 28, 30
X	US 5 065 280 A (KAW RAVINDHAR ET AL) 12 November 1991 (1991-11-12) figure 3 ---	1, 3
A	figure 3 ---	2, 5
	-/--	
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
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 when the document is taken alone *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
Date of the actual completion of the international search 28 January 2002		Date of mailing of the international search report 04/02/2002
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Toussaint, F

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/07410

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 825 633 A (PETSINGER JEFFREY M ET AL) 20 October 1998 (1998-10-20) the whole document -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/07410

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0582145	A	09-02-1994		JP 6314580 A	08-11-1994
				CN 1082776 A	23-02-1994
				DE 69307620 D1	06-03-1997
				DE 69307620 T2	07-05-1997
				EP 0582145 A1	09-02-1994
				US 5380211 A	10-01-1995
US 6231352	B1	15-05-2001		FR 2789811 A1	18-08-2000
				CN 1266295 A	13-09-2000
				DE 1028490 T1	15-03-2001
				EP 1028490 A1	16-08-2000
				JP 2000243490 A	08-09-2000
JP 08204304	A	09-08-1996		NONE	
US 5065280	A	12-11-1991		JP 3126174 B2	22-01-2001
				JP 4330745 A	18-11-1992
US 5825633	A	20-10-1998		NONE	