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(54) Title: FINE PITCH ELECTRICAL INTERCONNECT ASSEMBLY

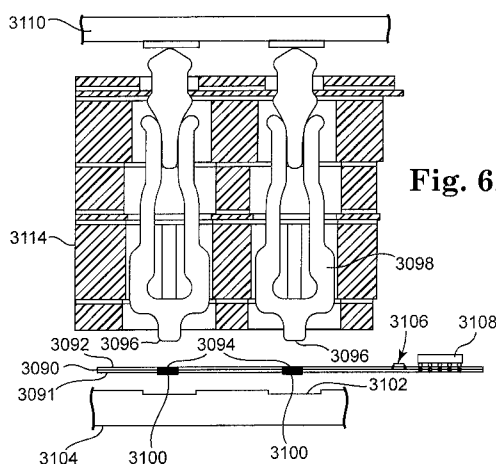


Fig. 62

(57) Abstract: An electrical assembly including a socket assembly, a first circuit member electrically coupled to contact members along a first side of a socket assembly, and a second circuit member electrically coupled to the contact members along a second side of the socket assembly. A flexible circuit member is interposed between the socket assembly and the second circuit member. The flexible circuit member comprises a plurality of electrical traces electrically coupled with the contact members on the socket assembly. In one embodiment the flexible circuit member comprises a distal portion extending the electrical traces beyond the socket assembly.



## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/058998

**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. H01R9/00 H05K1/14

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)

H01R H05K

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

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                                                                     | Relevant to claim No. |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| X         | US 6 409 521 B1 (RATHBURN JAMES J [US])<br>25 June 2002 (2002-06-25)<br>cited in the application<br>column 19, line 38 - column 21, line 18;<br>figures 38-40<br>----- | 1-15                  |
| X         | US 6 428 327 B1 (TAMARKIN VLADIMIR K [US]<br>ET AL) 6 August 2002 (2002-08-06)<br>paragraph [0042]; figures 5,6<br>-----                                               | 1-15                  |
| A         | EP 1 033 787 A (MOLEX INC [US])<br>6 September 2000 (2000-09-06)<br>abstract; figure 4<br>-----                                                                        | 1,2                   |
| A         | US 6 347 946 B1 (TROBOUGH MARK B [US] ET<br>AL) 19 February 2002 (2002-02-19)<br>column 5, line 13 - line 55; figures<br>5A,5B,6<br>-----<br>-/--                      | 1,2                   |

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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\*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

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Date of the actual completion of the international search

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Name and mailing address of the ISA/

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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/058998

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                                                 | Relevant to claim No. |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| A         | US 2005/221675 A1 (RATHBURN JAMES J [US]<br>ET AL) 6 October 2005 (2005-10-06)<br>paragraph [0094] - paragraph [0097];<br>figures 17A-17D<br>----- | 1-15                  |

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2008/058998

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-15

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15

Extended contact member on the socket assembly  
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2. claims: 16-20

flexible circuit member comprising contact arrays of  
different pitches on each side  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/058998

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date         |
|-------------------------------------------|---------------------|----------------------------|-----------------------------|
| US 6409521                                | B1                  | 25-06-2002                 | NONE                        |
| US 6428327                                | B1                  | 06-08-2002                 | NONE                        |
| EP 1033787                                | A                   | 06-09-2000                 | NONE                        |
| US 6347946                                | B1                  | 19-02-2002                 | NONE                        |
| US 2005221675                             | A1                  | 06-10-2005                 | US 2006035483 A1 16-02-2006 |