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(54) **Title:** HIGH BANDWIDTH CONNECTOR

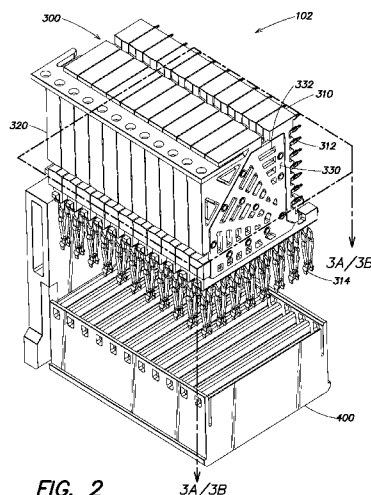


FIG. 2

(57) **Abstract:** An improved open pin field connector is provided for enhanced performance when carrying high speed signals by selective application of one or more techniques for controlling electrical performance parameters. Lossy material may be positioned adjacent to conductive elements of the connector so as to reduce resonance in pairs of conductive elements and/or to provide a desired characteristic impedance for pairs of differential signal conductors. The lossy material may be shaped and positioned to avoid capacitive coupling that might otherwise increase cross talk. In a right angle connector, the lossy material may have a step-wise increase in thickness to provide comparable loss along longer and shorter conductive elements. Conductive elements may be shaped to balance performance characteristics of pairs selected to carry differential signals regardless of orientation along a row or column. Alternatively, conductive elements may have narrowed regions, covered with lossy portions, for reducing resonance while supporting DC signal propagation.



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**A. CLASSIFICATION OF SUBJECT MATTER*****H01R 13/658(2011.01)i, H01R 24/30(2011.01)i***

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 13/658; H01R 13/648; H01R 12/14

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) &amp; Keywords: connector, bandwidth, lossy, material, open pin field connector

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
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| A         | US 2004-0121652 A1 (MARK W. GAILUS) 24 June 2004<br>See abstract; paragraphs [0071]-[0079]; figures 4-5.                               | 1-51                  |
| A         | US 2008-0248660 A1 (BRIAN KIRK et al.) 09 October 2008<br>See abstract; paragraphs [0086]-[0109]; figures 3-4.                         | 1-51                  |
| A         | US 2006-0068640 A1 (MARK W. GAILUS) 30 March 2006<br>See abstract; paragraphs [0036]-[0044]; figures 1-5.                              | 1-51                  |

 Further documents are listed in the continuation of Box C. See patent family annex.

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