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## (54) HIGH DENSITY ELECTRICAL CONNECTOR ASSEMBLY AND CONNECTOR FOR USE THEREWITH

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(58) **Field of Search** ...... 439/67, 66

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## (57) ABSTRACT

A high density electrical connector assembly comprising first and second sheet-like bodies. The first sheet-like body is made from an insulating material and has a surface and a plurality of electrical traces extending to a plurality of first interconnect pads disposed on the surface in a first pattern. The second sheet-like body is also made from an insulating material and has a surface and a plurality of second electrical traces extending to a plurality of second interconnect pads disposed on the surface of the second sheet-like body in a second pattern. The second pattern is substantially a mirror image of the first pattern. The surface of the first sheetlike body faces the surface of the second sheet-like body so that the first interconnect pads face the second interconnect pads. A flexible sheet of an insulating and compliant material is disposed between the first and second interconnect pads and has first and second opposite surfaces. A plurality of first connector pads is disposed on the first surface in the first pattern and a plurality of second connector pads is disposed on the second surface in the second pattern and electrically connected through the flexible sheet to the first connector pads. A Clamping assembly is mountable to the first and second sheet-like bodies for urging the first and second sheet-like bodies and the flexible sheet together so that the first interconnect pads register with and engage the first connector pads and the second interconnect pads register with and engage the second connector pads. The compliant material of the flexible sheet facilitates electrical connections between the first interconnect pads and the first connector pads and between the second interconnect pads and the second connector pads for making electrical connections between the first and second interconnect pads.

## 16 Claims, 4 Drawing Sheets

