

SOLDER MEDIUM FOR CIRCUIT INTERCONNECTION**Abstract**

Electronic devices having at least two components with mating contact pads are provided with high-aspect-ratio solder joints between the mating pads.

- 5 These joints are formed by placing a composite solder medium containing solder wires in an electrically insulating matrix such that at least two solder wires are in contact with the mating pads, and fusing the wires to the pads. The insulating matrix with remainder of solder wires is then optionally removed from between the said at least two components. The composite solder medium is formed by preparing an
- 10 elongated body of solder wires in an insulating matrix and cutting off slices of the composite solder medium, the solder wires having a high-aspect-ratio of length to their diameter. Alternatively sheets of the composite solder medium are prepared by magnetically aligning solder coated magnetic particles into columns arranged transverse of an insulating matrix and heating sufficiently to fuse the solder in each
- 15 column into a continuously conducting solder path.

This Sheet Has Been Replaced

