

Electronic Packaging Techniques

A characteristic of aerospace system design is that equipment size and weight must always be kept to a minimum, even in small components such as electronic packages. The dictates of spacecraft design have spawned a number of high-density packaging techniques, among them methods of connecting circuits in printed wiring boards by processes called stitchbond welding and parallel gap welding. These processes help designers compress more components into less space; they also afford weight savings and lower production costs.

Odetics, Inc., Anaheim, California, an aerospace-oriented company which produces tape recording equipment for spacecraft, developed advanced stitchbonding and parallel gap welding processes for spacecraft applications, including equipment aboard the Space Shuttle, Spacelab and several unmanned satellites. Called Multi Link, Odetic's space-originated welding concepts have found their way into a number of commercial applications; for example, the circuit boards pictured are part of a microfilm storage and retrieval system produced by Odetics. Commercial demand for these processes resulted in establishment of a separate element of the Odetics company, called the Multi Link Division, which provides automated electronic packaging services for Odetics' own commercial products and for such other customers as Xerox, Dalmo Victor, Sperry Sun and Sierra Research.

