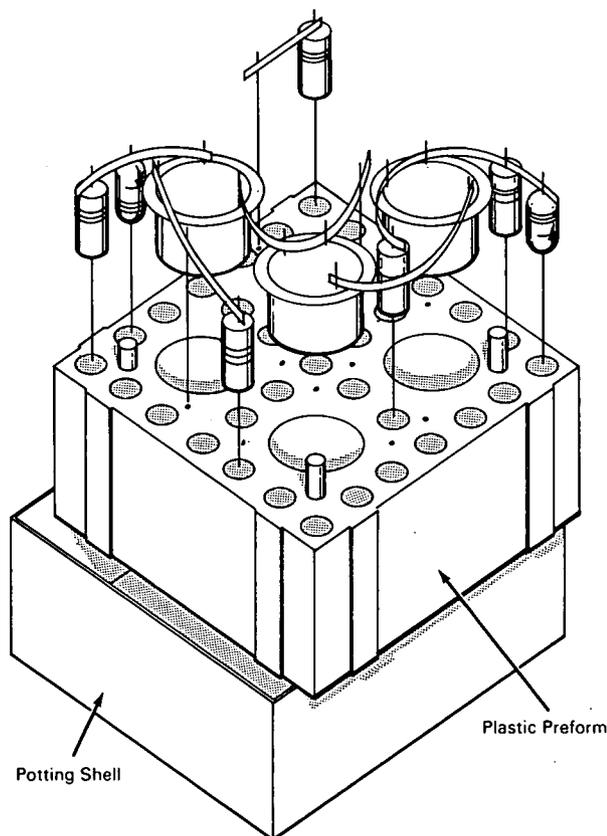


NASA TECH BRIEF



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Plastic Preforms Facilitate Fabrication of Welded Cordwood Electronic Modules



A reliable method has been developed to facilitate the fabrication of small lots (prototypes, experimental circuits, and other limited production quantities) of welded cordwood circuits. The essential feature of this method is the use of a molded plastic preform, or nesting jig, which retains the components during welding and electrical checkout. The preform also facilitates encapsulation of the welded module when used with a conventional potting shell. As the preform

and shell provide considerable structural support for the components, relatively soft resins can be used as encapsulants, thus permitting modifications or repairs to be readily made.

Large holes in the preform are for transistors. Axial lead components fit in the smaller holes, which are molded with lands at one end to retain the components during the welding operation. Although not a desirable operation, drilling out a few holes when

(continued overleaf)

necessary for slightly larger components eliminates the sloppy fits which would result if larger holes were originally molded in the preform. Drilled holes are also used for feedthrough of wires, since the holes are too small to be economically molded in the preform. Projections on the faces and sides of the preform allow it to be centered in the potting shell and ensure proper flow of encapsulant.

Note:

Complete details can be obtained from:
Technology Utilization Officer
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135
Reference: B68-10063

Patent status:

No patent action is contemplated by NASA.
Source: John C. Sturman.
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