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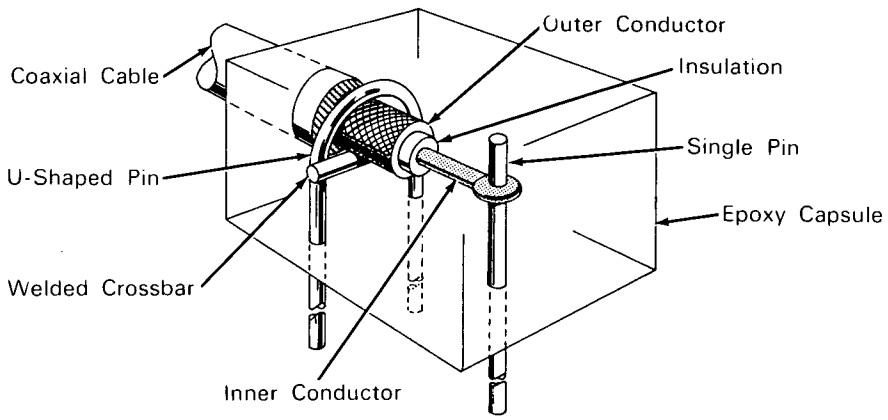
NASA TECH BRIEF

Compact Coaxial Connector for Printed Circuit Adds Reliability



The problem: Connecting a coaxial cable to a printed-circuit board where the cable terminates. Coaxial connectors generally used are bulky and heavy, so that the connection to a printed-circuit board may be of doubtful reliability. For high-reliability equipment, an improved device is needed to minimize these problems.

The solution: A compact coaxial connection that utilizes soldering and welding techniques and eliminates standard coaxial connectors for permanent connections.

How it's done: In place of a coaxial connector normally used, a U-shaped pin having a welded crossbar is utilized. The outside insulation of the cable is stripped back and the shielding is soldered to the U-pin, thus providing the ground contact.

A connection is made to the inner conductor by soldering to a single pin. After connections have been made, the entire device is enclosed in a rigid epoxy resin block that provides structural strength and protects the connections from damage.

Notes:

1. This method eliminates coaxial connectors and is most useful where the coaxial cable is to be permanently connected to a printed-circuit board. Applications could include aerospace equipment and aviation electronic devices where high reliability and low weight are important.
2. For further information about this innovation inquiries may be directed to:
   Technology Utilization Officer
   Manned Spacecraft Center
   P.O. Box 1537
   Houston, Texas 77001
   Reference: B64-10016

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