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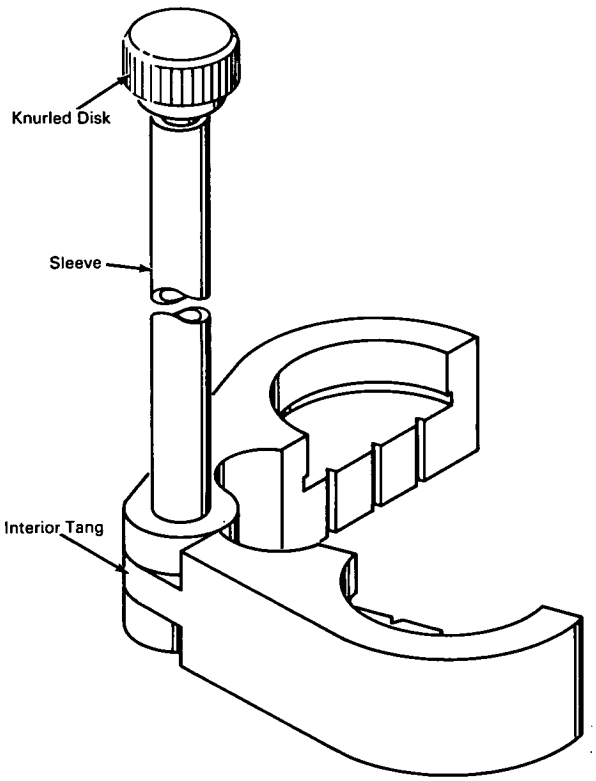
NASA TECH BRIEF

Jig Protects Transistors from Heat While Tinning Leads



The problem:

In tinning transistor leads, heat from the molten tin must be dissipated before it reaches and damages the transistor body. Previous methods involving hand dipping the leads one at a time, with an alligator clip on the lead to provide a heat sink, are too time-consuming and produce nonuniform tinning.

The solution:

An aluminum fixture, used to dip all transistor leads at the same time and whose mass shunts excess heat from the transistor body.

How it's done:

The fixture is in two halves with a tang on an end of one sandwiched between an upper and lower tang

(continued overleaf)

on an end of the other. A pin within a sleeve that is press fit into the upper tang, engages the interior tang by a spline arrangement and is fitted with a knurled disk at the other end. The ends opposite the tangs are held together and machined to form three small through-holes for the leads plus a circular recess to receive the transistor body.

With the transistor resting in one of the semicircular recesses and the leads resting in the through holes, the knurled disk is turned counterclockwise to close the two halves about the transistor body and leads as the jig is held by the sleeve. The leads extending below the jig are dipped in the molten tin and any heat trying to reach the transistor body is absorbed by the mass of the jig.

Note:

Inquiries concerning this innovation may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas, 77058
Reference: B66-10240

Patent status:

No patent action is contemplated by NASA.

Source: A. J. Pelletier and G. A. Willis
of North American Aviation, Inc.
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