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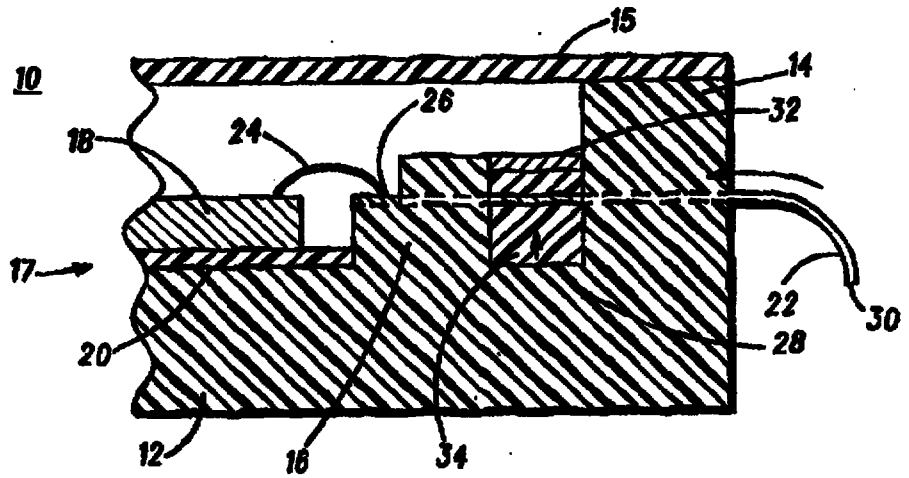
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(54) Title: ELECTRONIC CONTROL MODULE HAVING FLUID-TIGHT SEALS



(57) Abstract

An electronic control module (10) includes a package substrate (12) having an interior cavity (28) through which a package lead (22) traverses. The interior cavity (28) is filled with an expandable polymer material (34). The expandable polymer material (34) is constrained within the cavity by a pressure resistive layer (32, 35) that overlies expandable polymer material (34). In one embodiment, an epoxy layer (32) forms an upper surface of the interior cavity (28). The expandable polymer material (34) is responsive to a fluid, such that upon contact with a fluid diffusing along the package lead (22), the expandable polymer material (34) will swell and form a fluid-tight pressure seal around the package lead (22). The fluid-tight pressure seal prevents the fluid from diffusing to interior portions of the electronic control module (10) and causing the failure of electronic components (18) mounted within the electronic module (10).