

OVERMOLDED ELECTRONICS ENCLOSURE

Abstract

An enclosure for electronics includes a body with a metal component and a polymeric component overmolded onto the metal component so as to be connected to the metal component without fasteners. The body defines a recess. A heat sink is defined in the metal component. A printed circuit board is located in the recess and includes a plurality of electronic components mounted thereon. The polymeric component includes at least one attachment feature that captures the printed circuit board at a select location in the recess such that: (i) at least a first one of the electronic components is electrically connected to a contact region of the metal component that is exposed through a portion of said polymeric component; (ii) at least a second one of the electronic components is electrically isolated from the metal component by an electrical isolation zone of the polymeric component; and (iii) at least a third one of the electronic components is located adjacent a thermal transfer region of the metal component that underlies the heat sink. The thermal transfer region is uncovered by the polymeric component so as to be exposed in the recess.

Fig. 1