

ABSTRACT

(Fig. 1)

EMI SHIELDING HAVING FLEXIBLE CONDUCTIVE ENVELOPE

An electronic device such as a portable computer is shielded against electromagnetic interference using a flexible envelope that surrounds a circuit card within the housing of the device. The flexible envelope forms a shielding enclosure and has an electrically insulating flexible sheet, for example of polyethylene, and a sheet of conductive fibers embedded in the flexible sheet so as to leave a nonconductive face oriented toward the circuit card. The conductive fibers can be metallized nylon and are sufficiently dense to obtain a resistivity of 10^{-1} to $100^{-2} \Omega/\square$. The enclosure forms a hollow envelope with the conductive fibers coupled electrically across a seam, for example by cutting the flexible sheet and embedded fibers using heat. For use with a portable computer having a pivoting screen, a neck extension of the enclosure carries conductors through the area of the pivot. For access to circuit board elements, for example for changing or adding chips, an access opening is provided with a conductive extension that is movable to overlap the opening or to expose the opening. The flexible envelope can be joined to a circuit ground by clamping conductive fibers on an exposed face to a metal connector panel of the device.

