

TITLE OF THE INVENTION: SEMICONDUCTOR PACKAGE ASSEMBLY WITH DUAL HEAT SINK PLATES

Abstract

A semiconductor package assembly comprises a first semiconductor package with a first semiconductor element and a first set of conductive patterns exposed thereon; an interposer mounted thereon via a set of interconnect structures, wherein the interposer has a second set of conductive patterns on its back surface aligned with the first set, electrically connected through the interconnects; and the interposer includes at least one opening extending through it; a second semiconductor package mounted on the front surface of the interposer; and a heat sink, comprising a back heat sink plate mounted thereon between the first package and the interposer, thermally coupled with the first semiconductor element; a front heat sink plate mounted thereon between the interposer and the second package, in contact with the interposer's front surface; and a heat sink plate connector extending through the opening, connecting the plates for heat transfer.

[Fig. 1A]