

ABSTRACT

A package substrate a core having a first surface and a second surface that is opposite to the first surface in a vertical direction, the first surface and the second surface being substantially flat, the core including glass and a first recess in the first surface, a first bonding layer contacting the first surface of the core and filling the first recess, a through electrode extending from the first surface through the core in the vertical direction, the through electrode being spaced apart from the first recess in a horizontal direction, a first wiring structure on the first bonding layer and contacting the through electrode, a first insulation layer structure on the first bonding layer and partially covering the first wiring structure; and a first protective layer on the first insulation layer structure and covering an upper surface of a portion of the first wiring structure.

FIG. 1