Abstract

The present invention relates to a lead frame for a semiconductor device. An object of the present invention is to provide a lead frame, made of a copper alloy, capable of preventing the creation of delamination between encapsuling resin attributable to a lead frame without sacrificing the wire bondability and, at the same time, to provide a process for producing the lead frame and a semiconductor device using the lead frame.

According to the present invention, (1) there is provided a lead frame for a plastic molded type semiconductor device, made of a copper alloy material partially plated with at least one noble metal, for wire bonding or die bonding purposes, selected from silver, gold, and palladium, wherein the whole area or a predetermined area of the surface of the copper at least on its side to be contacted with a encapsuling resin has a thin noble metal plating of at least one member selected from silver, gold, platinum, and palladium. (2) A copper strike plating is provided as a primer plating for the partial noble plating, a copper plating is provided on the thin noble metal plating, and the partial noble metal plating is provided on the copper plating in its predetermined area. (3) A die pad for mounting a semiconductor chip is provided, a partial silver plating is provided, and a zinc flash plating and a copper strike plating are provided in that order at least one on the surface of copper in the back surface of the die pad remote from the surface on which the semiconductor chip is mounted.

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