ABSTRACT

A lead frame substrate, including: a metal plate having a first surface and a second surface; a semiconductor element mount portion and a semiconductor element electrode connection terminal that are formed on the first surface; an external connection terminal formed on the second surface and electrically connected to the semiconductor element electrode connection terminal; a conducting wire that connects the semiconductor element electrode connection terminal and the external connection terminal to each other; a resin layer formed on the metal plate; a hole portion that is partly formed in the second surface of the metal plate and does not penetrate the metal plate; and a plurality of protrusions that are formed on a bottom surface of the hole portion and protrude in a direction away from the metal plate, the protrusions having a height lower than a position of the second surface, not being in electrical conduction with the conducting wire, and being dispersed separately.

162162

G00002