

ABSTRACT

SEMICONDUCTOR ELEMENT MOUNTING STRUCTURE, AND COMBINATION OF SEMICONDUCTOR ELEMENT AND SUBSTRATE

Provided is a semiconductor element mounting structure, including: a semiconductor element including an element electrode, and a substrate including a substrate electrode that is provided on a surface facing the semiconductor element at a position facing the element electrode, the semiconductor element and the substrate being connected via the element electrode and the substrate electrode, in which: one of the element electrode or the substrate electrode is a first protruding electrode including a solder layer at a tip portion thereof, the other of the element electrode or the substrate electrode is a first electrode pad including one or more metal protrusions on a surface thereof, the one or more metal protrusions of the first electrode pad extend into the solder layer of the first protruding electrode, and a bottom area of each of the one or more metal protrusions of the first electrode pad is 70% or less with respect to an area of the first electrode pad, or 75% or less with respect to a maximum cross-sectional area of the solder layer of the first protruding electrode.

FIG. 3