

METHOD AND APPARATUS FOR WIRE BONDING CHARACTERIZATION IN INTEGRATED CIRCUITS

ABSTRACT

Apparatuses, methods and systems for wire bonding characterization and quality monitoring are provided. According to at least one aspect of the present embodiments, a method for determining a quality of a wire bonding process includes determining a wire diameter of a wire being used by a wire bonding tool during the wire bonding process and defining an alarm threshold for displacement of a wire bonding tool in response to the wire diameter. The method further includes detecting displacement of the wire bonding tool by capacitance change based on relative positions of the wire bonding tool and one or more of a first plurality of sensing elements and determining a position of the wire bonding tool in a three-dimensional Cartesian coordinate system in response to the detected displacement of the wire bonding tool. And then the method includes generating an alert in response to the position of the wire bonding tool in the three-dimensional Cartesian coordinate system and the alarm threshold for displacement of the wire bonding tool.

FIG. 1