

Abstract

A wire bonder and method of calibrating a wire bonder

Disclosed is a wire bonder comprising: a processor; a bond head coupled to the processor, the processor being configured to control motion of the bond head; a bonding tool mounted to the bond head, the bonding tool being drivable by the bond head to form an electrical interconnection between a semiconductor die and a substrate to which the semiconductor die is mounted using a bonding wire; and a measuring device coupled to the bond head, the measuring device being operable to measure a deformation of a bonding portion of the bonding wire as the bonding tool is driven by the bond head to connect the bonding wire to the semiconductor die via the bonding portion. Specifically, the processor is configured to derive at least one correlation between the measured deformation of the bonding portion and an operating parameter of the wire bonder; compare the at least one derived correlation against a predetermined correlation between the operating parameter of the wire bonder and a desired deformation of the bonding portion; and calibrate the operating parameter of the wire bonder based on the comparison between the at least one derived correlation and the predetermined correlation of the deformation of the bonding portion against the operating parameter of the wire bonder. A method of calibrating a wire bonder is also disclosed.

[Fig. 1b]