ABSTRACT OF THE DISCLOSURE

A high strength bonding tool and a process for the production of the same

The present invention provides a thermocompression tool, i.e. high strength bonding tool used for mounting a semiconductor device or element such as IC, LSI, etc. on a substrate, for example, a tool of pulse heating type used for soldering, and a mounting tool (bonding tool) used for heating, melting and bonding or thermocompression bonding in a lump a number of workpieces to be bonded, making up a part of electronic parts, in particular, a high precision tool called outer lead bonding tool. The high strength bonding tool comprises a substrate consisting of a cemented carbide having microscopic protrusions of hard carbides and/or hard carbonitrides on at least one surface and a coefficient of linear expansion of 4.0×10^{-6} to 5.5×10^{-6} /℃ at room temperature to 400℃ and a polycrystalline diamond coating formed on the above described surface having microscopic protrusions by a gaseous phase synthesis method, the surface coated with the polycrystalline diamond coating being used as a tool end surface.

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