

ABSTRACT**BONDING WIRE FOR SEMICONDUCTOR DEVICE**

There is provided a Cu bonding wire having a Pd coating layer on a surface thereof, that improves bonding
5 reliability of a ball bonded part in a high-temperature, high-humidity environment and is suitable for on-vehicle devices.

The bonding wire for a semiconductor device includes a
10 Cu alloy core material and a Pd coating layer formed on a surface of the Cu alloy core material, and the bonding wire contains Ga and Ge of 0.011 to 1.2% by mass in total. With this configuration, it is able to increase bonding longevity of the ball bonded part in the high-temperature, high-humidity environment, and thus to improve the bonding
15 reliability. The thickness of the Pd coating layer is preferably 0.015 to 0.150 μm . When the bonding wire further contains one or more elements of Ni, Ir, and Pt in an amount, for each element, of 0.011 to 1.2% by mass, it is able to improve the reliability of the ball bonded part
20 in a high-temperature environment at 175°C or more. When an alloy skin layer containing Au and Pd is further formed on a surface of the Pd coating layer, wedge bondability improves.