

ABSTRACT**BONDING WIRE FOR SEMICONDUCTOR DEVICE**

There is provided a Cu bonding wire having a Pd
5 coating layer on a surface thereof, that improves bonding
reliability of a ball bonded part in a high-temperature and
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 In of 0.011 to 1.2% by mass and has the Pd coating
layer of a thickness of 0.015 to 0.150 μm . With this
configuration, it is able to increase the bonding longevity
15 of a ball bonded part in a high-temperature and high-
humidity environment, and thus to improve the bonding
reliability. When the Cu alloy core material contains one
or more elements of Pt, Pd, Rh and Ni in an amount, for
each element, of 0.05 to 1.2% by mass, it is able to
20 increase the reliability of a ball bonded part in a high-
temperature environment of 175°C or more. When an Au skin
layer is further formed on a surface of the Pd coating
layer, wedge bondability improves.