

[Document Name] ABSTRACT

[Abstract]

[Title of Invention] CORROSION-RESISTANT ALUMINUM ALLOY
BONDING WIRE

[Problem to be Solved] To inhibit intergranular corrosion of a high-purity aluminum wire for connecting semiconductor devices under a high-temperature and high-humidity environment.

[Solution] An aluminum alloy bonding wire comprising high-purity aluminum having a purity of 99.99% by mass or more and 10 to 200 ppm by mass of rhodium (Rh) and/or palladium (Pd) is provided. The rhodium and/or palladium element is forcibly solid-soluted to form a dispersed phase of an intermetallic compound with aluminum in an aluminum matrix having a grain size of 10 to 100 μm . Rhodium (Rh) and palladium (Pd) prevent atomic hydrogen generated on the aluminum surface from diffusing and infiltrating into the aluminum matrix by converting the atomic hydrogen into H_2 by the catalytic function and inhibit intergranular corrosion by binding of atomic hydrogen into H_2 .

[Selected drawing] Fig. 1