

[Document Name] ABSTRACT

[Title of the Invention] NOBLE METAL-COATED SILVER WIRE FOR BALL BONDING AND METHOD FOR PRODUCING THE SAME, AND SEMICONDUCTOR DEVICE USING NOBLE METAL-COATED SILVER WIRE FOR BALL BONDING AND METHOD FOR PRODUCING THE SAME

An object of the present invention is to provide a noble metal-coated silver bonding wire that suppresses corrosion at the bonding interface even under severe conditions of high temperature and high humidity in automobiles and the like and does not cause energization failure in a semiconductor device in which electrodes of a semiconductor chip and electrodes of lead frames or the like are connected by the bonding wire. Further, another object of the present invention is to provide a noble metal-coated silver bonding wire that can be ball-bonded in the air. The noble metal-coated silver wire for ball bonding of the present invention is a noble metal-coated silver wire including a noble metal coating layer on a core material made of pure silver or a silver alloy, wherein the wire contains at least one sulfur group element, the noble metal coating layer includes a palladium intermediate layer and a gold skin layer, the palladium content relative to the entire wire is 0.01 mass% or more and 5.0 mass% or less, the gold content relative to the entire wire is 1.0 mass% or more and 6.0 mass% or less, and the sulfur group element content relative to the entire wire is 0.1 mass ppm or more and 100 mass ppm or less.