

[Title of Invention] GOLD (Au)-DISPERSED COPPER WIRE FOR BALL BONDING

[Title of Document] Abstract

[Problems to be Solved]

The present invention has been made in order to solve a problem that the formation of a molten ball of a mass-produced bonding wire by means of a FAB becomes unstable, and an object of the present invention is to provide a gold (Au)-dispersed copper wire for ball bonding which is capable of forming a stable molten ball.

[Constitution of Invention]

The gold (Au)-dispersed copper wire for ball bonding according to the present invention has: a palladium (Pd)-coated copper wire for ball bonding having a wire diameter of 10 to 25 μm , in which the palladium (Pd)-coated copper wire for ball bonding has a core material made of a copper alloy containing copper (Cu) with a purity of 99.9 mass% or more, and in which the palladium (Pd)-coated copper wire for ball bonding has a coating layer made of palladium (Pd) and a surface layer made of gold (Au) formed thereon, characterized in that the theoretical film thickness obtained by the chemical analysis of the gold (Au) is 0.1 nanometer (nm) or more and 10 nanometers (nm) or less, and that the distribution of gold (Au) observed by the surface analysis using an electron probe microanalyzer (EPMA) is such

that fine particles of the gold (Au) are distributed on the coating layer made of the palladium (Pd) in an innumerably scattered manner.

[Figure] Fig. 2