

Abstract

ALUMINUM ALLOY WIRE FOR POWER SEMICONDUCTOR DEVICE

It is intended to improve chip breakage and thermal shock test properties in an aluminum alloy bonding wire for power semiconductor. Provided is an aluminum alloy wire containing 0.01 to 0.2 mass% of iron (Fe) and 1 to 20 mass ppm of silicon (Si) with the balance being aluminum (Al) having purity of 99.997 mass% or more, wherein the aluminum alloy wire has a Fe solid solution amount of 0.01% to 0.06%, has a Fe precipitation amount of 7 times or less of the Fe solid solution amount, and has a microstructure having an average crystal grain diameter of 6 to 12 μm . A thermal shock test property is improved by suppressing precipitation of the AlFe compound.

Selected Drawing: Fig. 1