

Abstract

ALUMINUM ALLOY BONDING WIRE

5 A wedge bonding wire which is soft during ultrasonic bonding, is capable of preventing chip breakage, and exhibits high temperature strength after wiring. An aluminum alloy bonding wire has a composition including 0.15 to 0.5 mass% of scandium (Sc) with the balance being
10 aluminum (Al) having purity of 99.99 mass% or more, a cold wire drawn structure in an aluminum alloy matrix which is forcedly dissolved, and Vickers hardness of 21 to 30 Hv. The aluminum alloy bonding wire may be reinforced by adding thereto 0.01 to 0.2 mass% of zirconium (Zr). The aluminum
15 alloy bonding wire is connected without causing chip breakage since it is soft during bonding, and high temperature strength thereof is improved by an aging heat treatment performed after the bonding.

20 Fig. 1