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(54) COMPOSITE WIRING SUBSTRATE AND SEMICONDUCTOR DEVICE

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(57)ABSTRACT

A composite wiring substrate includes a first wiring substrate including a first connection terminal, a second wiring substrate including a second connection terminal facing the first connection terminal, and a joint material joining the first connection terminal and the second connection terminal. The first outline of the first connection terminal is inside the second outline of the second connection terminal in a plan view. The joint material includes a first portion formed of an intermetallic alloy of copper and tin, and contacting each of the first connection terminal and the second connection terminal, and a second portion formed of an alloy of tin and bismuth, and including a portion between the first outline and the second outline in the plan view. The second portion contains the bismuth at a higher concentration than in the eutectic composition of a tin-bismuth alloy, and is separated from the second connection terminal.

