TPT application: bonding of aluminum-coated copper wire

Here we present a special bond application: wedge bonding with aluminum-coated copper wire.

Overview:

Copper wires have bonding characteristics similar to gold, but have to be handled in an inert atmosphere due to the oxidation. Because of this effort copper wires are only used if there is a special requirement to do so.

A user-friendly alternative is copper wire with aluminum coating. This wire can be easily wedge bonded and has good storage characteristics.

Equipment:

- 25µ copper-wire (Cu-HC4) sputtered with a aluminum layer of 20 – 30 nm
- Standard 25µ gold wedge
- Semi-automatic wedge bonder HB16

Bonding process:

- The wire can be bonded & handled like 25µ gold wire.