

Submicron Au Particles for Low Temperature Au to Au Bonding

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Abstract

This paper will introduce low temperature bonding of conductive materials and will include: epoxy base resin, Sn solder, AuSn solder, sintered Au and sintered Ag. It will discuss the sintering behavior of sub-micron Au particles. A comparison of the properties of AuSn solder and Au sub-micron material will be reviewed. In addition, the storage as well as use-age will be addressed (needle dispensing, daubing and flip chip bumping). Examples of this material in microelectronic applications will be shown for LED, SiC, MEMS hermetic sealing and wafer-to-wafer bonding.