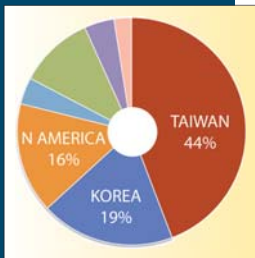
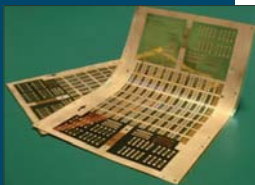
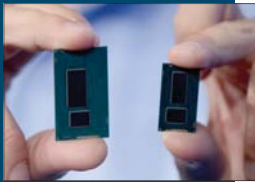
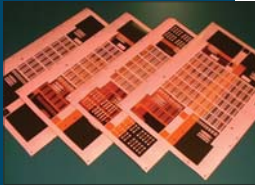


2015 Flip Chip and WLP: Emerging Trends and Market Forecasts



Flip chip interconnect and wafer level packaging (WLP) markets remain exciting areas in advanced packaging. With demand for fine pitch bumps, the industry is experiencing a dramatic transition from plated solder bumps to Cu pillar, resulting in a projected 29% CAGR for Cu pillar bumping. As an increasing number of WLPs are found in each new smartphone, the WLP volumes continue to grow. Conventional fan-in WLP dominates the shipments, but new products are being announced for fan-out WLPs. This report outlines drivers and trends in the latest technology developments, including FO-WLPs, fine pitch copper pillar bumping and microbumps, flip chip bonding methods and equipment, and underfill material developments. Flip chip market projections include number of wafers and units by bump type, with specific projections for Cu pillar. A market forecast for conventional WLP versus the fan-out WLP is provided. Industry capacity for flip chip and WLP is included. Infrastructure requirements for the use of panel processing are discussed. A set of PowerPoint slides accompanies the report.

Executive Summary

1 Technology Developments

1.1 Fan-in WLP Process and Material Trends

- 1.1.1 Dielectric Materials
- 1.1.2 FlexLine™ Process

1.2 Reliability Improvements

- 1.2.1 Singulation and Edge Protection
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1.7 Copper Pillar

1.8 Pb-Free Bumping

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2015 Flip Chip and WLP: Emerging Trends and Market Forecasts

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