The second volume of the Advanced Packaging Update provides an economic outlook for the electronics industry and the latest trends in organic substrates for flip chip BGAs and CSPs. Trends in coreless substrates and organic interposers for 2.5D are included. Material and equipment developments are also discussed. TechSearch International’s annual survey, providing special coverage of design rules from suppliers of organic flip chip substrates, PBGAs, and laminate CSPs (FBGAs) worldwide, is highlighted. The design rules include body size, core thickness, via and pad diameter, minimum bump pitch supported, and substrate finish.

Table of Contents
1 Industry and Economic Trends
1.1 Economic Trends
1.1.1 Macroeconomic Trends
2 Advances in Laminate Substrates
2.1 Flip Chip BGA
2.1.1 High-Performance Processors
2.1.2 Network/Server ASICs
2.2 Flip Chip CSP
2.2.1 Mobile Processors
2.3 Organic Interposers for 2.5D
Kinsus, Kyocera, NTK, SEMCO, Shinko Electric’s Organic MCP, and Unimicron
2.4 New Materials
Hitachi Chemical, MGC, Sekisui Chemical, and Zeon Chemicals
2.5 Laser Direct Imaging
2.6 New Fabrication Technologies
2.6.1 Averatek Corporation
3 Substrate Design Rules
3.1 Today’s Laminate Feature Size
3.1.1 Coreless Substrates
3.2 Company Design Rules
Access, ASE Materials, Daisho Denshi, FICT, Ibiden, i3 Electronics, JCI, Kinsus, Kyocera SLC, LG Innotek, Nanya PCB, NTK, SEMCO, Samsung Techwin, Shennan Circuits, Shinko, Simmtech, Toppan Printing, and Unimicron
Appendix: Substrate Suppliers
References
List of Figures
1.1. Monthly U.S. housing starts.
2.1. Interconnect density on flip chip substrates.
2.2. Bump trends.
2.3. Shinko’s Organic Multi-Chip Package.
2.4. High-density substrates.