

Technology & Market Trends Report on FC-BGA Substrates -2023-

Japan Marketing Survey Co., Ltd.

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Outline of Survey-1

1. Objective of the Publication

This report thoroughly analyzed the global market trends of FC-BGA substrates by delving into the technology, market dynamics, and supply & demand trends. The aim is to furnish industry professionals with essential insights for strategic business planning.

2. Items of the survey

FC-BGA Substrates, 2.xD Package Substrates (by Substrate Layer Counts, ICs and Applications)

3. Period of the survey

From June to November 2023

4. Method of the Survey

Direct interviews, questionnaires, newspapers, academic, technical journals and internet survey, etc.

5. Remarks

- All of the numerical data in this report is prepared by JMS unless so noted.
- The market sizes are all worldwide basis.
- The data is a calendar year basis.
- The price market was calculated in USD. The exchange rates in 2022 were as follows.
 - * 2022 ⇒ 1USD = 130.63Yen = 1,287KRW = 29.49NTD = 6.72RMB = 0.9507EUR = 7.83HK\$

6. Special notes

Abbreviations are used on graphs in this Report. The official names of the package substrate manufacturers are as follows

Abbreviation	Official Name of the Company
Ibiden	IBIDEN CO., LTD.
Shinko	SHINKO ELECTRONIC INDUSTRIES CO., LTD.
Kyocera	KYOCERA Corporation
Toppan	TOPPAN INC.
Unimicron	Unimicron Technology Corporation
Nan Ya	Nan Ya PCB Corporation
Kinsus	KINSUS INTERCONNECT TECHNOLOGY CORP.
ZDT	Zhen Ding Technology Holding Limited
SEMCO	Samsung Electro-Mechanics Co., Ltd.
Simmtech	SIMMTECH Co., Ltd.
KCC	KOREA CIRCUIT CO., LTD.
Daeduck	DAEDUCK ELECTRONICS Co., Ltd.
LG Innotek	LG Innotek Co., Ltd.
AT&S	AT & S Austria Technologie & Systemtechnik Aktiengesellschaft

1. Technology Trends of the Advanced IC Packages (for HPC)

- Analyzed the packaging technology roadmap by ICs
- Analyzed the packaging technology trends of the global key semiconductor companies

2. Market Trends for the FC-BGA Substrates

- Analyzed the global FC-BGA substrate market for the year 2022, categorized by the substrate layer counts, IC types and applications. The analysis encompassed the market's performance in terms of sales value, volume, and area.

Furthermore, forecasted the global FC-BGA substrate market from 2023 to 2032.

*By Substrate Layer Counts: Up to 2-n-2, Up to 4-n-4, Up to 6-n-6, Up to 8-n-8, 9-n-9 and above, Coreless, 2.xD PKG

*By IC Types: MPU, GPU, Chipset, FPGA/ASIC

*By Applications: PC, Server/AI, Gaming/Tablet, Network, Automotive, Others

- Analyzed the global demand and supply dynamics of the FC-BGA substrate market and projected future trends in both demand and supply for the FC-BGA substrate market.
- Analyzed the supply status of the key substrate manufacturers and the purchasing status of the key semiconductor companies categorized by applications.

3. Case studies of the global key substrate manufacturers

- Covering aspects such as investment in facilities, production sites/capacity, and sales performance

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