



SHINKAWA LTD.

News Release

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Shinkawa to Release Package Bonder for Multiple Processes: FPB-1s NeoForce

Shinkawa Ltd. (President: Takashi Nagano, Headquarters: 51-1, Inadaira 2-chome, Musashi-Murayama-shi, Tokyo, Japan) has developed a new package bonder platform for multiple-process FPB, and as a first step will release a substrate package bonder: FPB-1s NeoForce.

Shinkawa has focused on providing the TCB(*1) process required for 3D packages and apply the through-silicon-via (TSV) process, which is a key technology enabling the speed-up and energy-saving for computers and communication devices. Meanwhile, the high-precision mass reflow process is applied widely in the flip-chip bonder market, and new processes such as FO-WLP(*2) are being proposed. Considering these market trends, Shinkawa developed equipment capable of handling several kinds of processes such as C2(*3), C4(*4), and FO-WLP as well as TCB. The FPB-1s NeoForce is capable of high-accuracy bonding by adopting the unique NVS (*5) technology. The FFG (*6) improves the productivity of 2.4 times compared with conventional models, at high load up to 350N. In addition, the FPB-1s combines Shinkawa's best technologies, such as high throughput TCB bonding, are achieved for rapid heating and cooling with a high-speed pulse heater.



【Features of FPB-1s NeoForce】

- (1) Capable of handling face down process (face up process as an option)
- (2) Capable of handling several kinds of processes such as TCB (NCP(*8)/NCF(*9)/TC-CUF(*10)), C2 and C4, and FO-WLP
- (3) High-accuracy bonding achieved by adopting the NVS technology
- (4) Capable of handling high force up to 350N with FFG
- (5) High throughput TCB bonding achieved by rapid heating and cooling with high-speed pulse heater
- (6) Capable of bonding various devices such as 2.5D and 3D-stacking with automatic product-type changeover unit
- (7) Thin die handling capability

【Package bonder FPB-1s NeoForce】

*1: Thermal Compression Bonding *2: Fan-out Wafer Level Package *3: direct Chip Connection
*4: Controlled Collapse Chip Connection *5: Non Vibration System *6: Force Free Gantry
*7: Comparison based on Shinkawa standard bonding conditions *8: Non-Conductive Paste
*9: Non-Conductive Film *10: Thermal Compression Capillary Underfill

SHINKAWA LTD.

2-51-1 Inadaira, Musashimurayama-shi, Tokyo 208-8585, Japan



■ Other Product Line-ups

Wire Bonder, Die Bonder, Flip Chip Bonder

■ Contacts

Customer Inquiries: Tatsuya Shimura

Global Sales Management Dept. (TEL : +81-42-560-1225)

Press Inquiries: Takuya Mori

Corporate Planning Dept. (TEL : +81-42-560-4848)