

plans are implemented.

## November 9, 2023 SHIBAURA MECHATRONICS CORPORATION

## (Reference) Summary of Q&A about the Results Presentation for Fiscal Year Ending March 2024 (FY2023)

- Q1: In the slide showing quarterly orders received by product field on page 43 of the presentation material, orders for SPE in Q2 of 2023 decreased compared to Q1. What are the factors behind this? Also, what is your outlook for Q3 and Q4?
- A1: Front-end process equipment in the SPE field slowed a little, resulting in a decrease in orders in Q2 compared to Q1. In contrast, orders for back-end process equipment in the SPE field increased in Q2.
  Among front-end process equipment in the SPE field, orders for single Si wafer cleaning equipment were very strong in FY2022, and they had decreased compared to that. In addition, some customers are somewhat cautious about investment. We have received a certain number of inquiries, and we hope to receive orders in the future when customer

Concerning our outlook for Q3 and Q4, we assume that the current level will be maintained during FY2023. We expect a slight recovery to begin from the end of FY2023 to early FY2024.

- Q2: What will drive the recovery from the end of FY2023 to early FY2024 in your view?
- A2: Flip chip bonders among the back-end process equipment in the SPE field is strong. And we expect that, among front-end process equipment in the SPE field, single Si wafer cleaning equipment and single-wafer phosphoric acid etching system will contribute.
- Q3: The "Wafer process" section of the Progress of the Mid-Term Management Plan on page 30 of the presentation material says that the evaluation of a new heating method has started with advanced logic products. Will this evaluation be made with new or existing customers? Also, for what reason will the "new heating method" be necessary?
- A3: We are proceeding with the evaluation with our existing customers. In the trend toward miniaturization, heating is a key factor in improving in-plane uniformity, increasing equipment performance, and creating differentiation. The new heating method is being evaluated for the purpose of improving in-plane uniformity by applying the method.

- Q4: What is the scale of orders for flip chip bonders for generative AI in the first half of FY2023 and what is the outlook for the second half and the next year?
- A4: As before, we will refrain from giving detailed information on orders received, but as shown on page 13 of the presentation material, orders for SPE in the first half of FY2023 totaled 25.8 billion yen, of which module process in the field of back-end process equipment among SPE accounted for approximately 6.0 billion yen. Orders for flip chip bonders for generative AI account for a significant portion of this.

We hope to continue increasing the orders in the second half of the year.

- Q5: Page 33 of the presentation material says that a successor model with improved productivity to the ultra-high-accuracy bonder was launched in August. What are your prospects for the business in the face of so many competitors? What are its applications, or purposes of use?
- A5: Existing models for hybrid bonding have already been adopted by our customers, and we are now in the process of evaluating the new model launched in August. Board cleaning and plasma treatment are required as pre-processing for hybrid bonding, and we possess the elemental technologies related to cleaning and plasma treatment cultivated in the front-end process equipment in the SPE field as our core technologies. Our strength is our ability to perform a series of evaluations in-house, from pre-processing such as cleaning and plasma treatment to bonding, and we are working on evaluations with customers.

In terms of applications, it is intended mainly for chiplets for logics at present, but an expansion of applications associated with the expansion of GPUs for generative AI and applications to lamination process, including the process for HBM, is also expected. There are many competitors, but we place hopes on the business. We will continue to focus our efforts to ensure that our equipment is adopted in response to expectations

Q6: The section for single Si wafer cleaning equipment on page 32 of the presentation material says "our proprietary new cleaning technology." How does it differ from existing ones? And what is its market?

that we can be met customers' demand by a single company.

A6: "Our proprietary new cleaning technology" refers to the freeze cleaning technology developed for use in the photomask cleaning equipment shown on the same page, and will be expanded to wafer cleaning.

Its market is Si wafer cleaning after polishing and final cleaning processes, where many pieces of existing single Si wafer cleaning equipment are used. However, because these processes require constant upgrading of cleaning performance, we will develop new cleaning technologies to differentiate our products and make them competitive.

- Q7: In the revised full-year forecast on page 18 of the presentation material, the forecast amount of operating profit was revised up by 2.7 billion yen (up 37.0%) as compared to an increase of 6.0 billion yen (10.2%) in the forecast amount of net sales. Is there any cost-related factor in addition to the higher sales behind the increase in the forecast amount of operating profit? We understand that front-end process equipment is more profitable than back-end process equipment. Is the profitability of back-end process equipment also increasing?
- A7: As shown in sales by segment on page 21 and sales by product field on page 22 of the presentation material, sales in the mechatronics systems segment and SPE field are expected to grow year on year (FY2022 to FY2023) at higher rates than in the previous forecast. This is mainly due to an increase in sales that results from an increase in orders for back-end process equipment in the SPE field, and the contribution of higher sales volume is also the main factor for the profit increase. Profitability does not differ greatly between front-end process equipment and back-end process equipment in the SPE field.
- Q8: What is the current status of equipment lead time, from acceptance of order to shipment? What about items for which particularly short lead time is required, such as flip chip bonders for generative AI?
- A8: We are trying to secure appropriate parts and shorten the equipment lead time in light of customers' forecast. However, equipment lead time is around one year because lead time of some parts remains long. In cases where a particularly short lead time is required, even if we secure parts ahead of time through forecasting, the lead time is still six months or longer. The impact of lead time of some parts is unavoidable, and we are having difficulty handling the situation.
- Q9: Do applications of the single Si wafer cleaning equipment mentioned on page 32 of the presentation material include silicon interposers? I have another question. Is single wafer phosphoric acid etching equipment for the wafer process used in FEOL in the front-end semiconductor manufacturing process, or is it used in BEOL in the process?
- A9: Cleaning equipment for the Si wafer manufacturing process is proven equipment. It has been used for cleaning after the polishing process and final cleaning in the Si wafer manufacturing process. We assume application for silicon interposers too. Single wafer phosphoric acid etching equipment for the wafer process is intended for the SiN etching process and is used on the FEOL side.

- Q10: The section for high-accuracy FO-PLP bonder on page 33 of the presentation material says "large substrate." How large are they? Are technologies developed for LCD panels also relevant?
- A10: The corresponding substrate size is approximately 650 mm square. This bonding equipment handles large square substrates, and we aim to deploy it into the market of substrate mounting equipment as well as the FO-PLP market by applying and developing our proprietary technologies.
- Q11: There are increasing number of cases where a customer builds plants in countries outside their own country. How are they classified for graphs showing results by region in presentation materials?
- A11: As the note in the upper right corner on page, for example 11 of the presentation material indicates, they are classified by destination on all of the slides showing results by region. Orders for and sales of products for plants in Japan built by foreign companies fall into Japan.

Forward-looking statements including business forecasts contained in this document are based on information currently available to the company and certain assumptions the company deems reasonable, and the Company does not guarantee that they will be realized. Please note that actual results may differ materially due to various factors.