Information Meeting 2022　Q&A

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Questioner1

Q.【Group-Wide】Regarding “introduce a business evaluation model based on growth potential and ROIC, review and revise business portfolio” mentioned on page 25 of the material for the Earnings Release Conference, will the assessment models and decision-making procedures be changed to strengthen the current business?

A. Our lithium secondary battery business targeted the smartphone market as we mainly produced laminate batteries. However, as a result of the business evaluation, our focus has shifted to a market for power tools. Our Wi-Fi module business also focused on smartphone demand initially. But, due to a change in the circuit configuration of smartphones mainly to a structure which separates the front-end part and the transceiver part, we have revised the business and focused on other markets. Our power supply modules for office equipment were transferred to other company, and we made efforts to focus on specific business areas including data center batteries. For the business evaluation, we have set milestones for making a significant change in the business portfolio. The aim is to verify if the business is developing as expected and to what extent P&L and capital efficiency deviate from our assumptions by conducting fixed-point observations in units close to our products, and we will revise the course of action as necessary.

Q.【Devices/modules】Regarding the technical differentiation of high-frequency modules, could you give us the outlook for the expansion of market share and the number of units installed in the next year and the year after?

A. First, the share of our high-frequency modules is expected to expand in overseas markets including the Chinese market, as they have currently been adopted in the new platform of a chip set manufacturer in the Chinese area as a recommended component and introduced widely. As for the technologies acquired last year, including Digital ET and XBAR, we will be able to conduct a superiority assessment and mass production in small volume from FY2023. However, these new technologies will become an asset in FY2024 and later when we assume there will be a major change in the platform. Until FY2024, we plan to focus on having an advantage over competitors in characteristics and increasing share with our overwhelming cost competitiveness.

Q. 【Devices/modules】Could you share with us a roadmap toward making the lithium secondary battery business profitable?

A. We are still in the middle of screening product types because there are so many. The market demand for electric tools, gardening tools, and cleaners on which we currently focus is growing, and we expect to have it enter positive territory by capturing the growth. However, as there is still a product group which needs to be produced for the time being and an increase in depreciation of large capital investment, we may need some more time to make it profitable.

Q. 【Group-Wide】Could you give us a rough sales composition of mobility and communication as of 2030?

A. What we assume will happen until 2030 is that 5G will be utilized in the communication world other than for smartphones, and the number of devices including those for local 5G will largely exceed that of smartphones which mainly use the current 5G. And we think these numbers will grow significantly in the second half of the 2020s. Until then, we expect the area which will advance the most significantly in technological innovation is mobility. We expect that the growth of layer 1 sales coming from the mobility market will be very large, and the whole company will be largely supported by growth for the mobility market.

Questioner2

Q. 【Group-Wide】While the current overseas production ratio is 35%, you announced a plan to make capital investments abroad. Could you share with us how the overseas production ratio will be in the future? Also, do you have a plan to integrate sales and production inside China in the future?

A. We divide production sites based on individual product features, and do not have a group-wide target ratio for overseas production. The merit of overseas production is that we can produce products near customers and secure abundant talented workforces locally. On the other hand, as most of our research and development functions are based in Japan, production in Japan is more suitable for the purpose of avoiding start-up losses and realizing quality improvement and cost reduction continuously. In addition, we have investigated geopolitical risks for some time. A supply chain that functions within China has yet to be established, but we always prepare for a worst-case scenario of a U.S.-China decoupling. For MLCCs, for example, we also invest outside of China, in Izumo (Japan) and Thailand.

Q. 【Devices/modules】Is there any technology in which you are behind competitors in the area of high frequency devices and communications modules? And what do you assume the competitive environment will be in and after 2024?

A. As you may already know, 5G will become 5G advanced and Wi-Fi® will use high frequencies such as 5 and 6 GHz. The filtering technology of XBAR can cover such high-frequency bandwidths alone. Yet, we also expect it will be possible to achieve this feature by combining BAW filters or I.H.P. SAW filters that have a certain level of performance and another filter. We assume that the downsizing advantage may differ depending on the customers' request levels. Assuming that virtual and real worlds will primarily call for wearables, we believe that the value of lightness, thinness, shortness and smallness will then be re-affirmed. By using XBAR that has an extremely sharp feature, we will be able to pursue downsizing and minimum cost, allowing us to have a significant advantage. Moreover, since the Digital ET technology requires us to work closely with platform suppliers, it will be difficult to cooperate with competitive companies. With the other platform suppliers, we have gradually expanded the range of cooperation to make this technology critical in order to become compatible with high-frequency bandwidths.

Q. 【Devices/modules】When you work with a platform supplier, do you expect to offer value primarily in hardware where you can realize lightness, thinness, shortness and smallness? Could you also tell us about your technical advantages?

A. Digital ET technology requires control of the transceiver chip software, an area where we assume to cooperate. By using a transceiver chip and our power amplifier (PA), or a device using envelope tracking devices, power consumption can be lowered significantly.

Questioner3

Q. 【Group-Wide】Could you tell us what you think about the future technological innovation of mobility, and how you will expand your business? And what do you think will be necessary for it?

A. From the perspective of technological breakthrough, an electric vehicle (EV) powertrain may be a business opportunity for us. Since the voltage required for automobiles is increasing, SiC and other power semiconductors are coming into use in order to enhance efficiency. When SiC is used, film capacitors and MLCCs that can be mounted directly on a busbar and used at high temperatures will be required to reduce the float resistance. We have already proposed to customers an alternative to deal with such changes, and we are confident that the market of technologies and products where we are planting seeds will grow in two to three years. However, these changes in trend alone will not allow us to achieve the scale of sales and profit growth that accompanied the technological innovation we saw in the past. Wireless communication tools outside vehicles and inertial sensors for self-driving will also be the key to growing business.

Q. 【Group-Wide】Do I understand that you will strengthen the first-layer business first, use wireless communication as a trigger and approach to the second-layer business, and then develop into the third-layer business?

A. Yes, exactly.

Q. 【Group-Wide】Could you give us some insight into your strategy for the volume zone of communication components? Will the added-value decrease when the market becomes more competitive in terms of volume?

A. 5G has been available since 2020, but we don't think its effects have been tested on applications other than smartphones. The throughput speed is currently attracting attention as 5G's advantageous characteristics, but other characteristics such as its many-to-many connection and low latency will come into use in the future. In particular, when 5G matures and achieves low latency, all computing operations will be performed on the cloud using AI, allowing them to be accessed in real time on devices and most storage to be cloud-based. This means that smartphones will no longer need to be smart. We have a risk that the functions of smartphones and other edge devices themselves may not have to be rich. However, even if it is sufficient to have a communication function, a certain user interface, or a battery to drive it, the communication function must be stable. The shape of devices may then be wearable, implantable, or even much larger in size. Amid such technological changes, it is very important to increase cost competitiveness by selling in volume. In order to promote the standardization of device modules, one of the measures we will take is to produce small devices. As we thoroughly downsize devices, we think that a market that highlights cost merit rather than size merit will be formed. In such cases, even if the added value is slightly low, we plan to increase the volume by promoting standardization.

Q. 【Devices/modules】Is the platform supplier referred to in your explanation about Digital ET technology a chipset manufacturer?

A. Yes, exactly. Half of the transceiver chip manufacturers are positive about our proposal.

Q. 【Devices/modules】Could you share with us the prospects for all-solid-state batteries for 2030? Could you tell us whether you plan to deploy them in the current applications and increase the quantity for small-edge devices, or take another proactive step to increase the capacity?

A. Let me explain it from our technology perspective. We know that there will be a need for larger batteries for automobiles and other sectors. From a technical aspect, however, it may take an enormous effort for us to raise the degree of perfection of small-sized products. Assuming that the advantage of our all-solid-state batteries will be well recognized by a market of wearables and hearables, we will define the market as a target of our future business.

Questioner4

Q. 【Components】On page 21 of the material for the Earnings Release Conference, the number of units of automobile MLCCs increased by an annualized rate of 8% on average. What percentage of growth per year do you expect to achieve on a capacitance basis?

A. I cannot provide specific numbers, but the percentage of MLCC's growth on a capacitance basis is expected to exceed the one on a volume basis. The past growth trend of MLCCs has some distinctive characteristics, including personnel reduction due to the expansion of capacity. For example, by replacing two 4.7 microfarads with a single 10 microfarad, we saved space, reduced personnel, and cut costs. We expect that the trend will be unchanged in the mobility and other markets in the future. When the volume starts increasing, the capacitance is expected to grow along with the adjustment of volume. So we expect the growth will continue in the future. At present, our capacitors are mainly used for decoupling. As the number of integrated circuits (IC), etc. increase further and are additionally used also for controlling power, the capacitance volume may also grow accordingly. On the other hand, when a change in the current trend and structure of IC packaging design technology occurs, the volume is expected to decrease naturally. We are prepared to respond to it in combination with our ultra-small and thin capacitors and silicon capacitors.

Q. 【Components】What is your forecast for the supply and demand trends of automobile MLCCs in the medium term?

A. We expect them to continue growing. For increasing xEVs, powertrain capacitors are essential. We also expect that capacitors in advanced driver assistance systems (ADAS) will increase as technologies evolve, and capacitors installed on communication modules, etc. inside and outside vehicles will also increase.

Questioner5

Q. 【Components】Regarding supply and demand of MLCCs, do you assume a change in demand where you may find it difficult to have supply keep pace in the medium term? Or do you expect stable growth?

A. According to the automobile MLCC market forecast presented on page 21 of the material for the Earnings Release Conference, for example, powertrains require extremely large-sized MLCCs of high voltages. However, since the demand may completely differ in volume from that of infotainment and other communication sectors, we expect that discontinuities in volume will be limited. On the other hand, we understand that there will be a certain discontinuity on a production burden basis instead of volume basis. In preparation for a rapid growth of xEVs, we have reinforced production capacity at an annual 10% or so increase. We are ready for a change as we have prepared ourselves on the assumption that a change in our product mix will be significant.

Q. 【Devices/modules】When there is a change in the platform of high-frequency modules, you normally explain that it can bring a substantial change to the adoption percentage. Could you share with us the reasons behind this idea?

A. If we attempt to increase share when the platform is unchanged, customers need motivation to replace the existing components because they have to clear restrictions that, for example, the pin configuration must not be changed. On the other hand, customers design the entire platform when renewing it. While we are not alone in being advantageous, we believe we are in a superior position to competitors because our resources have been already shifted to deal with platform renewals.

Q. 【Devices/modules】Could you share with us to the extent possible what specific restrictions are applied to the current high-frequency modules, and in what area you think you will be competitive when the restrictions are removed in the future?

A. Generally speaking, to capture the share for customers, many of whom have component inventories on a worldwide scale at present, we must offer them considerable motivation in terms of price and characteristics. Since it is extremely difficult to lead in characteristics at the current technological level, we will be required to supply standardized products at a low price or have a slight advantage over competitors in characteristics. In contrast, it is easy for us to compete in cases of designing a platform from scratch.

Q. 【Devices/modules】Do you mean that a change in the pin configuration inside smartphones may change the number of necessary components and offer greater flexibility? In such a case, do you think you will have an advantage with your assembly and other technologies?

A. Yes, we do. As the situation changes, we may gain a considerable competitive advantage if customers install our product in their initial prototype.

Q. 【Group-Wide】If customers have changed their smartphone and PC sales strategies in response to the current sluggish market, in what area will you see business opportunities under changed circumstances? And what do you think about risks?

A. We also feel that the current smartphone market is slow. From the perspective of what triggers a demand recovery, except governmental support, customers may be motivated to replace their devices to some extent if new models with improved speed, rich incidental functions, and addition of sophisticated 5G features are released around the new year season. We also expect that novel, well-crafted flip-type smartphones will be released in early year. We are preparing to launch them, though it is unpredictable how much they will appeal to end-users.

Q. 【Devices/modules】Do you expect a positive effect if Chinese smartphone manufacturers promote modularization?

A. The move may be beneficial for us because a larger share can lead to greater sales. It is also difficult for customers to do effective marketing and decide what quantity of materials they should procure and how many units they should produce. In such circumstances, standardization can be an effective measure. We are pushing forward with efforts to win market share.

Questioner6

Q. 【Group-Wide】Could you tell us in what area you plan to allocate resources in 2030?

A. In reference to the medium- to long-term CAGR, we make investment from medium- to long-term viewpoints, having spare resources. On the other hand, assuming that the market growth rate will be 7 to 10% and the demand growth will reach as high as 15%, it may be difficult for us to increase production so rapidly. Given the conditions that we need to mass produce and increase production while promoting research and development using internal resources, engineers may be a factor that controls production. For this reason, we think making constant investment is reasonable.

Q. 【Group-Wide】Under a recession, will it be easier for you to hire engineers?

A. It should be in the long term, but we currently have difficulties finding industry-ready personnel.

Q. 【Components】What do you assume will be the impact of a metaverse market expansion on your business, especially MLCCs?

A. Please refer to page 5 of the material for the Earnings Release Conference. Although we didn't use the expression "metaverse," the future trend will be virtual spaces where real and virtual worlds will create a metaverse, which will represent a digital twin and Web3 ahead. We expect that our work will rather remain on the real world side. Considering that vital signs, thoughts and health conditions will be transmitted as tools that connect a real world to the virtual world, or to the cloud, we expect that wearables and implantables will be used widely. This change is assumed to create demand for many components, and the number can't be compared with that of smartphones. For these markets, MLCC's cutting-edge downsizing and capacity enhancement technology is expected to become increasingly important, an area where we will deepen our expertise.

Questioner7

Q. 【Components】How do you plan to strengthen your cutting-edge technology which is referred to as a first-layer key issue on page 20 of the material for the Earnings Release Conference?

A. We are paying careful attention to inside applications of customers who currently use our components. We are trying to identify clearly where a critical technical point will be after powertrains are changed in the mobility market. This includes everything about high-voltage and high-efficiency engineering. We also understand that a cost reduction ability will be the key to differentiate ourselves. This applies not just to capacitors but also to inductors and EMI filters.

Q. 【Components】Could you share with us the reasons for the investment and alliance, etc. in the material area?

A. Our strength is optimizing in areas from materials and process to design and production. In addition, to promote stable supply, collaborating with customers has been a possible option from the past to some extent. From this perspective, the recent deal was a natural choice for us, and we hope to find another opportunity in the future.

Q. 【Components】Do you aim to strengthen your capability by establishing a joint venture with Fuji Titanium Industry Co., Ltd.?

A. We aim to improve capability and quality. For advancing future initiatives, we want to create an environment that facilitates more in-depth discussions.

Q. 【Devices/modules】Could you share with us an area that you think will have growth potential, and a new area that you are interested to study and explore, if any, though it belongs to the second-layer business area and is currently out of reach?

A. First, we are interested in the full modularization of 5G. Applications installed in things other than smartphones will be usable with extremely high frequency and future terahertz waves only if antennas and base band are integrated. A deal that can be realized by a module of local 5G will come into consideration. We expect that such a market has room to grow in volume. The technology of MetroCirc (a resin multi-layer circuit board with laminated liquid crystal polymer (LCP) sheets) used for substrates may be effective, while individual device technology is also available. We believe that we can produce modules with superior characteristics and size. Second, we are interested in the area of sensors. As the autonomous driving level is raised to Level 3 and Level 4, our high-performing inertial force sensors will become necessary. We are building another production base in Kanazawa (Japan) to establish a system to cover global demand for the products that were originally developed and produced in Finland. Lastly, we are interested in lithium secondary batteries. As we have come to provide structurally novel, extremely powerful products, we expect the market to grow.

Questioner8

Q. 【Components】Regarding vehicle MLCCs, as EVs become more widely used and SiC replaces the current technology for inverters, what change can be expected in capacitance and added value?

A. If SiC is widely applied, the surrounding parts tend to be exposed to high temperatures because SiC does not need to be cooled. Under this environment, we believe what can differentiate ourselves the most is our reliability, stability, and capacitance stability, an area in which we can provide value.

Q. 【Components】What grade products for infotainment are increasing in volume in the figure of the volume of vehicle MLCCs used on page 7 of the material for the Earnings Release Conference?

A. Honestly speaking, the criteria for what products are used for infotainment differ by individual customers. Some customers require the quality of vehicle MLCCs they have used, and others aim to reduce costs by adopting consumer-grade MLCCs. We assume that the role of an infotainment area will change to some extent, depending on the autonomous driving levels, and this may bring a certain change. If the function of safety is additionally required, the market calls for a highly reliable and trouble-free feature. In that case, we assume that our strength will be advantageous.

Q. 【Devices/modules】Where is MetroCirc positioned compared with competitive technologies? And what business development can be expected after the next fiscal year?

A. Our efforts are made in two strategic directions to enhance our technological advantage. One is that, by demonstrating our advantage in developing materials resistant to higher frequencies and having superior materials, we can obtain high-frequency and highly functional features. However, the extremely-high-frequency market has not grown as expected. While there is a clear difference in device characteristics, we recognize that our technology is not always our customers' choice. Since the market will not stop adopting higher frequencies until 6G launches anyway, we will ensure we proceed with development to prepare for it. Another is that we have substantially improved the process to strengthen our cost competitiveness against inexpensive MPI (modified polyimide) whose characteristics are inferior to MetroCirc's. These efforts have yielded some positive results in the current fiscal year.