2

Innovative Products and Services

2.1 R&D and Innovation

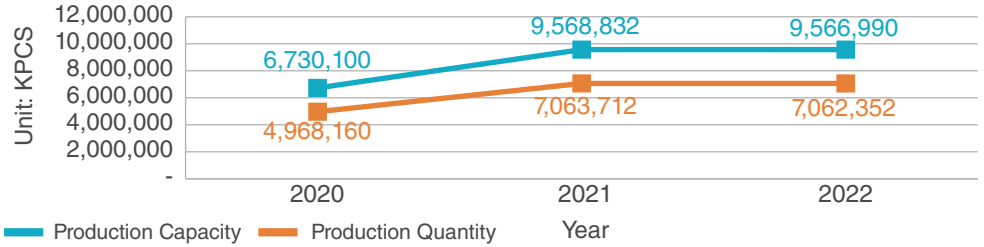
TSC aims to implement sustainable development, and hopes to reduce the environmental impact caused by manufacturing processes, in line with the spirit of "Taking from Society, Giving Back to Society". The Company has established product environmental protection specifications to control the hazardous substances in its products. As well as complying with the requirements of the EU RoHS directive and REACH regulation, TSC upholds the principles of environmental protection and HSF (Hazardous Substance Free) in the design and production stages, continuously incorporating the concept of green products. Measures such as using non-hazardous raw materials and adopting low-pollution and energy-saving production processes have gained favor from automotive customers, allowing TSC to contribute substantial benefits in greenhouse gas reduction through its core R&D capabilities.

2.1.1 Products and Services

TSC is mainly engaged in the manufacturing of Rectifiers, Transistors and LED Drivers, Assembly, Testing, and After-sales Service. Our products include Power Management ICs, Rectifiers, ESD Protection Devices, Bridge Rectifiers, MOSFETs, IGBTs, Trigger Diodes, and Silicon Controlled Rectifiers, which mostly are the automotive market (including gasoline and electric vehicles), industrial market (charging piles, power tools, pneumatic device equipment), and telecom market (5G, IoT).

Being an Integrated Device Manufacturer (IDM) is one of our competitive advantages. We provide end-to-end services, from R&D, production, to assembly, testing, and sales. This integrated approach optimizes the manufacturing process and enhance communication mechanism.

Total output of main products



*Note: Due to the wide variety of TSC's products and the significant differences in production units, considering the reasonableness and accuracy of the information, only the total production of the main product - Rectifiers is disclosed.

The production self-manufactured rate (percentage from sites) in 2022 is about 70%, with the remaining 30% being outsourced or purchasing. The sales revenue of our products has continued to grow over the past three years. Due to recent industry trends, the majority of customers in the automotive application market, which is the main focus of development, are from Europe and America. Therefore, the sales share in Europe and America has expanded in the past three years.

Main regional market sales status and proportion (NT$ thousand)

	2020		2021		2022	
Asia	2,057,790	57%	2,569,777	53%	2,905,882	51%
America	515,946	14%	755,533	16%	910,777	16%
Europe	1,031,126	28%	1,347,227	28%	1,776,181	31%
Others	37,599	1%	130,940	3%	106,315	2%
Total Sales Revenue	3,642,461	100%	4,803,477	100%	5,699,155	100%

Product Strategy and Development Policy

The types and application fields of products in TSC are relatively diverse. With a view to provide customers with more comprehensive product solutions, TSC has continuously improved technological innovation and R&D capabilities in recent years. We have also formulated short, medium, and long-term product development strategies to meet customer needs and market trends. In addition to establishing a sound product development strategy, we also promote a comprehensive quality management system. These two schemes are complementary to each other, forming the foundation of our competitiveness.

Short-term Strategy	Mid-term Strategy	Long-term Strategy
Product Development		
• Gain a deep understanding of market demands and rapidly introduce products to the market; such as continuously developing more efficient automotive semiconductor components like advanced MOSFETs, Wide Bandgap Semiconductors, and High-Efficiency Rectifiers. • Develop new product variants using existing technology and product platforms to meet customer needs. • According to customer needs and market trends, conduct a comprehensive product portfolio optimization. • Discover new application scenarios and apply existing products to new markets and fields.	• Strengthen R&D on safety and reliability, and improve product quality and market trust. • Strengthen customer cooperation, provide custom products and services, and increase market share. • Develop a new product ecosystem. • Promote sustainable development and green manufacturing. • Continue developing new markets and application fields and increasing product application scenarios and market size.	• Strengthen research and practice on product life-cycle management to achieve long-term sustainable development. • Promote green design and green manufacturing of products to achieve environmental protection and sustainable development goals. • Develop cloud-based products and services to achieve the sharing and collaboration of smart and digital products. • Promote product circular economy and resource utilization, achieve product recycling and waste reduction, and achieve sustainable development goals.
Technological Advancement		
• Introduce new talents and technologies to enhance R&D and manufacturing capabilities. • Accelerate product smartification and digitization to enhance product added value and market competitiveness. • Strengthen the R&D and manufacturing procedures of products to improve efficiency and product quality. • Strengthen cooperation with suppliers to improve supply chain efficiency and reliability.	• Introduce new materials and technologies to improve product performance and power consumption ratio. • Promote product design and testing automation to improve product development efficiency and quality. • Promote smart manufacturing and industrial internet to enhance production efficiency and product quality. • Strengthen corporate innovation culture and R&D capabilities, enhance innovation vitality and competitiveness of the business. • Promote green manufacturing and strengthen green technology R&D.	• Promote the application of cutting-edge technologies such as artificial intelligence and machine learning to enhance product intelligence and autonomy level. • Continue to advance technology R&D to maintain a technological competitive advantage. • Promote comprehensive corporate digital transition to enhance corporate intelligence and digitization level. • Promote deep collaboration and innovation with industry chain partners, jointly advancing industrial development.

Product Quality Management

TSC follows the product development plan to carry out quality management and sets corresponding quality objectives to ensure that the quality standards of the products meet expectations. The Company implements measures such as control, improvement, and monitoring of product quality, and adopts a Zero Defect Strategy, especially in the automotive supply chain, with a rigorous mindset and strategy, focusing on continuous quality improvement. Since 2004, TSC has passed IATF 16949 and ISO 9001. Through a rigorous quality management system, TSC achieves the goal of continuous product improvement and defect prevention, providing high-quality products to customers in the global automotive industry.

Zero Defect Management Policy

- Comprehensive Zero Defect Goal
- Visibility of the Zero Defect Concept
- Horizontally and Vertically Integrated Communication

Risk-based Quality Management

- Project Quality Management
- Risk-oriented Audit Strategy for Change Control and Management
- Risk-oriented Audit Strategy

Continuous Improvement

- Professional Knowledge Management
- Passing on Experience
- Career Development

Stability of Products and Processes

- Defect Detection and Control
- System Integration and Automation
- Design for Manufacturability, Reliability, and Testability

Comprehensive Quality Management Capability Building

To effectively implement the quality management policy, TSC has undertaken relevant capability building in organizational culture, personnel skills, equipment, and system automation. This includes promoting horizontal and vertical communication to ensure the spirit of "zero defects" is company consensus. We have also introduced more talented individuals with extensive experience, strengthened the professional knowledge of internal engineers and supervisors, expanded training in specific automotive technologies, and laid the foundation for product quality management. Additionally, TSC is gradually introducing automated equipment and systems to enhance the efficiency of quality management.

Since 2000, the Company has been strengthening management and ensuring product quality to meet customer requirements through VDA6.3 process audits and IATF 16949. In response to the continuous improvement of the international automotive industry, we have fully implemented the latest version of AIAG-VDA FMEA (Failure Mode and Effect Analysis) in 2020 to optimize costs for products and manufacturing procedures.

Our main automotive customers attach great importance to the international standard VDA 6.3 process audits. In recent years, We have been committed to integrating the VDA 6.3 process audits with the existing quality management system to diagnose and optimize internal processes, control process risks, and achieve zero defects goals. This can further enhance our competitiveness in the automotive industry chain.

Establishment of Organizational Culture

- Implementation of Zero Defect Concept
- Employee Communication
- Cross-Departmental Communication

Staff Upskilling

- Employing More People with Professional Experience
- Continuing Education Training

System and Equipment Automation

- MES Factory Operations Control System
- Customer Relationship Management System
- QIMS Quality Integrated Management System
- SPC Statistical Process Control System

Health and Safety Impact Assessment of Products

In recent years, TSC has been developing the automotive market. Major European and American automotive manufacturers pay great attention to the high quality and precision of their products because of automobiles' importance in personal and traffic safety. If there are any malfunctions, it may result in unforeseen risks and impacts. Defects in automotive electronics not only pose potential risks to personal safety but also lead to negative impacts on corporate reputation through subsequent product recalls. Therefore, customers have extremely high requirements for the products provided by TSC. Only by offering high-quality products, implementing a Zero-Defect Policy, and continuously monitoring the development trends of harmful substance regulations at home and abroad can we maintain a competitive advantage.

Through assessment, the products and services provided by TSC in 2022 have no significant impact on health and safety, and there have been no incidents that violate relevant health and safety regulations for products and services. We will continue to strive to manage the health and safety impacts of its products, and make the sustainable development blueprint more complete.

Product Chemical Substances Control and Disclosure

Many chemical substances are used in the production process of TSC products, and there is a risk of harm to human beings and the environment. As such, the control of chemical substances is crucial. In recent years, environmental substance regulations have been updated frequently, and the number of regulated items has increased year by year, reflecting the increasing international attention to chemical management. Meanwhile, customers also attach great importance to the composition, showing their attention to the subsequent R&D, design, manufacturing and quality maintenance of purchased parts. To allow customers to quickly understand the chemical substances contained in products for accelerating demand matching, we launched a product chemical substance disclosure project and set up an intranet Material Composition Declaration system in 2022.

IT Department has designed the MCD Environmental System to control and manage the chemical composition of products and establish a list of hazardous substances. The information on the substances contained in the products is continuously compiled and disclosed on the official website. Currently, all products have MCD data sheets, and customers, suppliers, and other stakeholders can quickly search for specific products that meet their needs through the self-service feature on the official website, accelerating the overall communication process and saving time on back-and-forth communication.

In 2022, TSC preliminary disclosed full substance information for 9,131 products, with a disclosure rate of 95% by product weight percentage. It is expected that through continuous communication with suppliers, factory education and training, and system optimization, a disclosure rate of 97% by product weight percentage will be achieved by 2023. In the future, we will continue to promote the declaration of full substance disclosure for product components, consolidate them into a transparent and complete material information database, identify high-risk material analysis, and ensure that TSC manufactures environmentally and human-friendly products.

Hazardous Substances Management

The management of hazardous substances is a crucial part of sustainable management, which is also important for customers. The Company strictly complies with international regulations, such as the EU RoHS directive, REACH chemical regulations, etc., and has established a database - TSC Environmental Compliance - to manage hazardous substances. We provide manufacturing services that are more environmentally friendly and disclose hazardous substances in response to customer needs, supporting customers in expanding the green product market. For a complete list of environmental laws and regulations followed by TSC, please refer to the official website's "Compliance with Environmental Laws and Regulations".

In 2022, all product and packaging design and manufacturing of our products have complied with regulations and 100% meet customer requirements for hazardous substance management. There were no violations of regulations on product information labeling or voluntary agreements, nor were there any incidents leading to fines or warnings.

We strictly complies with the product import regulations or instructions of various countries. After internal verification by the Company, the product pass rate in 2022 is 100%. Regarding the EU RoHS directive, TSC has obtained third-party testing reports.

Laws or Directives	Compliance Rate of TSC Products
RoHS[*1]	100%
REACH	100%
Safe Drinking Water and Toxic Enforcement Act	100%
End-of-Life Vehicle (ELV)	100%
Persistent Organic Pollutants (POPs)	100%
US Environmental Protection Agency - Toxic Substances Control Act (TSCA)	100%
JEDEC J-STD-609	100%

Note: 1. This refers to the instruction for restricting the use of certain hazardous substances in electronic and electrical equipment (Restriction of Hazardous Substances).

2.1.2 Innovation and R&D

TSC continues to invest in product R&D and technological innovation, gradually introducing more professional talents and technologies. As the scale continues to grow, TSC expanded R&D team in 2022, including new technical professionals in ESD, Wide Bandgap semiconductors, and other product lines. The workforce of the R&D team is expected to increase by 60% in 2023. Additionally, We incorporated the R&D performance of new products into the performance bonus evaluation criteria for researchers to encourage the team to actively pursue innovation. Since 2020, the annual investment in innovative R&D has increased year by year, and its percentage of net revenue has also increased with revenue growth.

R&D Expenses and Percentage of Revenue

(Unit: NT$ thousand)

	2020	2021	2022
R&D Expenses	42,296	56,976	81,604
Net Revenue	3,642,461	4,803,477	5,699,155
Percentage of Net Revenue	1.16%	1.19%	1.43%

New Product Development Plan

In 2022, TSC launched a number of new product development projects, including MOSFETs, voltage stabilizer ICs, ESD and other products, aiming to complete verification and mass production from 2023 to 2025. The products involve different semiconductor technology applications, such as automotive electronics, Advanced Driver Assistance Systems (ADAS), Internet of Things, 5G, etc., laying the foundation for the company's long-term development.

TSC has established an effective project management system to track and manage tasks and progress across departments to respond to the technical challenges, market uncertainties, product design, and quality control issues associated with developing new products. Additionally, the Company conducts training and exchange activities to enhance employees' skills and knowledge in product development, and to promote cross-department collaboration and communication.

Expected Benefits of Product Development

Practicing Intelligent Factory

To improve factory efficiency, enhance process quality, and meet customer delivery requirements, TSC established the Automation Development and Integration Department in 2018. It introduced Manufacturing Execution System (MES) and Equipment Automation Program (EAP) to optimize processes and product traceability, thereby improving efficiency and achieving intelligent production. We plan to invest over NT$200 million in new equipment to expand MOSFET production capacity from 2022 to 2025. Additionally, it plans to invest approximately NT$7 million in unlimited quantity EAP software licenses to meet the needs of the new equipment. As of 2022, the overall equipment automation coverage rate of the two factories has reached 68.8%, and it is expected to reach 70% equipment automation by the end of 2024.

- Digital System Management (MES/EAP):Equipment can remotely and automatically perform parameter setting, and automatically retrieve production programs. When products are put into production, the system can immediately designate the process flow*. Additionally, production information can be digitized and visualized.

  Note: Automotive products can be produced with designated equipment, and operators must pass verification before operating, using materials, and automatically downloading programs.
- Automatic equipment:Intelligent sensing technology allows the robotic arm to load and unload materials automatically. The equipment can complete the entire process automatically, enhancing operational efficiency.
- Product traceability:Through data management for statistical analysis, it provides preventive and troubleshooting functions. For example, it can query the product batch code to track all quality issues during the production process, and perform traceability analysis on the entire history of that batch of products, achieving effective production and continuous improvement purposes.

Li-Je Site

Li-Je Site has been investing in the planning of factory automation since 2017 in order to enhance its efficiency, improve process quality, and meet customer delivery requirements. The digital transition of the factory is being driven by three main aspects: digital management, smart manufacturing processes, and intelligent inspection, with the aim of winning customer trust through advanced information technology.

Digital Management

- Material management: Managed through digital systems, it can automatically schedule the order of material issuance and verify its accuracy. Meanwhile, the system isolates expired and abnormal items to reduce the impact of human error.

Smart Manufacturing Process

- Diffusion process: Using intelligent sensing technology, the equipment can automatically load/unload throughout the process, control temperature, and automatically perform air intake.
- Photolithography process: Using intelligent sensing technology, the equipment is equipped with an automatic alignment control system to reduce the risk of manual alignment and improve the appearance yield.
- Etching process: Using intelligent sensing technology, the equipment can automatically acidify/soak/swing/change the tank according to the formula, while monitoring whether the water resistance value reaches the standard, improving electrical yield.
- Thin film process: Using intelligent sensing technology, the equipment can load/unload the whole process and automatically switch the coating material.
- Probing and testing process: Using intelligent sensing technology and digital management, the equipment can automatically switch production between different wafers and upload information, as well as monitor wafer yield and provide alerts and analysis for low-yield wafers.

Intelligent Detection

- Visual inspection: Using intelligent sensing technology and digital management, it is possible to conduct automatic visual inspection and mark defective products, and simultaneously uploading photos of defects data facilitates analysis and continuous improvement.

I-lan Site

Regarding the assembly testing equipment at the I-lan Site, TSC has been gradually purchasing new types of networked and automated machines since 2017 and conducting assembly testing processes. We have also invested in EAP software licenses to achieve process parameter control and automation access. The applicable products include diodes and MOSFETs. Due to the increasing number of newly purchased equipment each year, more software automation engineers are needed to assist in the implementation and development of EAP. As of February 2023, through hardware, software, and manpower recruitment, the I-lan Site has used machines with EAP automation capabilities to produce over 95% of its products. Future new products and machines will also be equipped with EAP functionality to maintain the intelligent operation of the factory.

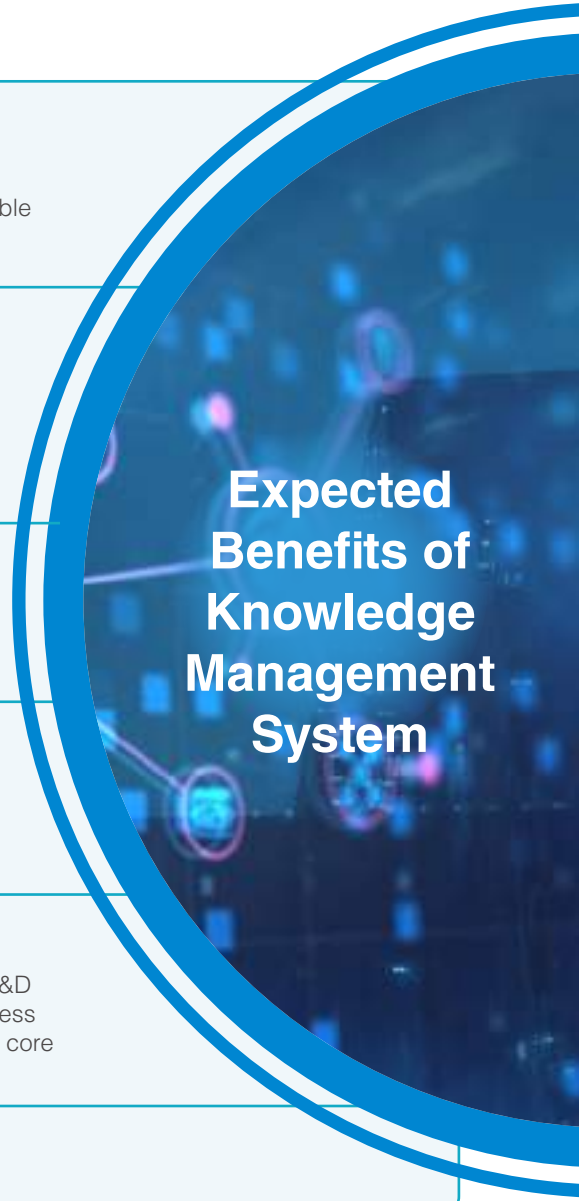
- Material management: Utilize digital systems to achieve visualized warehouse management, thereby improving inventory turnover efficiency, reducing stagnant materials, enhancing product quality traceability, and increasing production efficiency.
- Assembly and Test process: Using digital management, it is possible to achieve automatic parameter setting, health index warning and disposal, and visualization of all production information.

Highlights

Establishment of Knowledge Management System

In pursuance of continue practicing product innovation, TSC not only improves the manufacturing process, but also considers the long-term development of technology and the accumulation of experience. Therefore, TSC began to establish a Knowledge Management System (KMS) starting in 2022 to systematically store technical data and documents, enhance the convenience of technical data transfer and reuse, and accelerate the development timeline of R&D projects. In the past, without establishing a project technology and research data knowledge base, once the project took a long time or the R&D personnel resigned, the experience of the R&D project would be challenging to pass on, hindering the accumulation of product technology and knowledge. Thus, starting in 2022, we have successively completed the KMS hardware equipment construction and plans to introduce R&D projects in 2023, transforming existing technical documents from paper to digital format, and establishing an SOP document library related to electrical measurement and instrument equipment.

KMS will provide functions such as document management, advanced search, and knowledge mapping. We will classify and manage technical documents based on the Advanced Product Quality Planning (APQP) framework, and establish a knowledge map that includes relevant resources such as technical development documents, databases, and expert opinions. The main purpose of this system is to establish a database for project R&D technology, greatly improving team efficiency and increasing the reference value or re-usability of technical documents.



- Establish a systematic and scalable R&D project technical database.
- Analyze the usage and development needs of the R&D Department and introduce a suitable and mature commercial knowledge management platform.
- Optimize project document management comprehensively to enhance team productivity.
- Expand the project and technical knowledge map to improve the reference value and re-usability of technical documents.
- The R&D engineer publishes a R&D memorandum on technical progress to help the company accumulate core competitiveness.

Intellectual Property Protection

Intellectual property represents the intellectual results and achievements of the company's investment in technology development, especially for the long-term development of the company; it is a significant intangible asset. TSC has formulated the Intellectual Property Management Measures as the basis for managing and maintaining group intellectual property rights. Meanwhile, to enhance the importance and economic value of our company's R&D technology and cultivate patents, our company regularly commissions external firms to provide intellectual property and patent-related training courses for internal R&D and technical personnel.

In the face of the changing structure and rapidly advancing technology in the semiconductor industry, TSC has redefined its goals and strategies for managing and maintaining intellectual property rights. We aim to optimize existing technologies and focus on researching core technologies, conducting an inventory and review of all patents within the group, and retaining patents with economic value. Additionally, we place greater emphasis on applying for new invention patents with higher levels of "originality" and "novelty". As of now, TSC has been granted and holds 38 valid patents, including 33 invention patents, 4 utility model patents, and 1 design patent.

In addition, the Company's R&D and technical personnel continue to submit new case applications (all of which are invention patent applications) to collaborate with a technology company in the United States for joint development of new technologies. This demonstrates our company's goal and strategy for intellectual property management and maintenance, which is not quantity-oriented but quality-oriented.

Aiming to strengthen the determination of our intellectual property deployment, the Legal Department, together with the senior management of the Company, not only plans regular intellectual property training or industry-related courses for R&D and technical personnel, but has also started planning and formulating new internal management measures and systems (including the introduction and promotion of trade secret systems) to enhance the content of technology and patents, and protect the core technology and patents of the Company.

Patent Application Incentive Measures

To encourage employees to actively engage in research, invention, and innovation, and to improve product quality and functionality, thereby enhancing competitiveness, there are numerous incentive measures, including proposal rewards, approval rewards, patent infringement reporting rewards, patent rejection rewards, licensing rewards, and annual rewards, which encourage employees to protect intellectual property rights through diverse criteria collectively. In 2022, the R&D Department received rewards and was granted patents for two projects, "Multi-protected Ring Schottky Diode" and "Multi-trench Schottky diode", in the United States and Taiwan.

2022 Patent Highlights

Patent Obtained in the United States – Schottky Diode with Multiple Guard Rings Structures

For 150V and 200V high junction temperature Schottky Diode products, the multi-protection ring terminal area design can evenly distribute the electric field in the terminal area and make it gradually increase, effectively improving the stability of the collapse voltage, and making the product remain in a stable state at high voltage.

Patent Obtained in Taiwan - Multi-trench Schottky Diode

TSC began to develop the second-generation multi-trench terminal design in 2020. In addition to the original uniform distribution and progressive electric field design, it is expected to save one layer of photomasking, reducing costs and shortening the process time. It also saves resources and avoids environmental pollution.

2.1.3 Developing Sustainable Products

Except for continuing to roll out smart factories, improve production efficiency, and achieve process energy saving, we also pay attention to the proportion of renewable materials and recycled materials used. TSC uses recyclable packaging materials and expects to reduce energy consumption and indirectly reduce carbon emissions through the overall performance improvement of products, allowing end customers to reduce energy usage. We actively involved in product innovation design, developing high-efficiency products to gradually replace energy-consuming products in the past, such as replacing traditional diodes with low loss diodes (LLD), and continuing to use sustainable packaging materials in response to the energy-saving and carbon reduction trend.

Development of Third-generation Semiconductor Materials Products

With the advent of the era of 5G and electric vehicles, the demand for products resistant to high temperatures and high pressure, high power, and low power consumption has increased. Considering the excellent performance and good heat dissipation of SiC semiconductors in high voltage and high power applications, as well as their wide use in electric vehicles, charging piles, and 5G, TSC launched a new generation R&D project of power devices in 2022. The project applied third-generation semiconductor materials, SiC and GaN, to existing products with the view to introduce power MOSFET products with lower power consumption and higher efficiency.

Since 2022, we have collaborated with the integrated industry's professional wafer fabs and power semiconductor assembly factories to jointly develop SiC Schottky Rectifiers. The samples fully meet the design specifications and are undergoing reliability and trustworthiness testing. The first generation of SiC Schottky Rectifiers is expected to be launched by the end of 2023. In the future, we will continue to make efforts to apply silicon carbide materials to products of different specifications, such as 650V-1200V Schottky products or higher power 1200V MOSFET products. This will not only maintain robust growth in operations but also contribute to energy savings, in line with sustainable operation.

Utilization of Recycled Materials

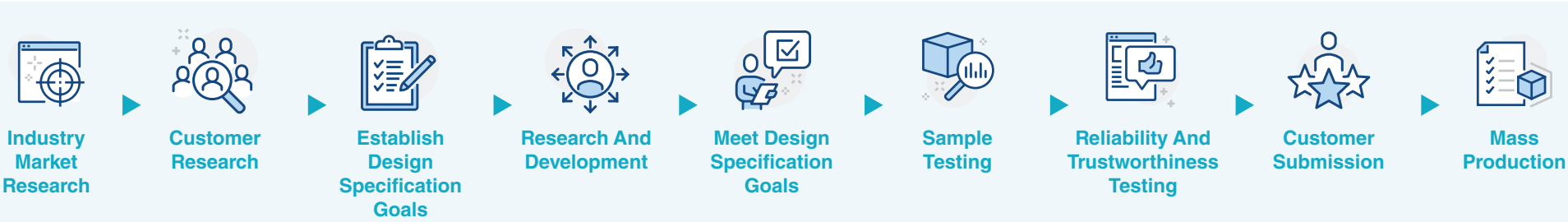
In the past three years, due to the expansion of business scale, the total amount of raw materials used by TSC has increased. Nevertheless, TSC is committed to reducing the environmental impact of its operations and actively increasing the use of renewable materials. From 2020 to 2022, the proportion of renewable materials used in our main products exceeds 50%, with a total renewable material usage of over 1,291 tons in 2022.

Total Quantity and Percentage of Materials Used in the Production of Main Products and Services.

Unit: Kg

	2020		2021		2022	
	Weight	Percentage	Weight	Percentage	Weight	Percentage
Total Amount of Renewable Material	912,962	60.31%	1,190,213	57.35%	1,291,661	52.73%
Total Amount of Non-Renewable Material	600,891	39.69%	885,051	42.7%	1,157,710	47.27%
Total Amount of Material Consumption	1,513,853	100%	2,075,264	100%	2,449,371	100%

Progress of the New Generation MOSFET Development Project

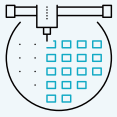


Utilization of Green Packaging Materials

TSC supports the concept of using green packaging materials and strives to select materials that are recyclable and reusable. Management is carried out by measuring the monthly recycling of product categories and their packaging methods.

I-lan and Li-Je Sites entirely use recyclable packaging materials and reusable cartons, plastic packaging materials, buffer materials, and other packaging for products to be shipped to customers. We also continue to pay attention to customers' instructions and requirements for packaging materials, and integrates with upstream packaging suppliers in real time to ensure recycling labels are clearly marked on the packaging according to international standards. The total consumption of non-renewable materials in TSC in the past three years has shown a continuous downward trend. In response to growing pushes for energy conservation and environmental protection, and to make packaging as sustainable as possible, renewable materials accounted for 35% of the percentage of packaging materials in 2022, a significant increase of 25% compared with 2021.

Main Recyclable Packaging Materials Used in Each Site



Li-Je Site
(Front-end wafer manufacturing)

- Cardboard Box
- PP Buffer Material
- PS Wafer Packaging Box
- PP Wafer Packaging Box
- Dust-free Wrapping Paper
- Round Foam Pads
- Anti-Static Flat Pockets
- 4"Tubes
- 6"Tubes

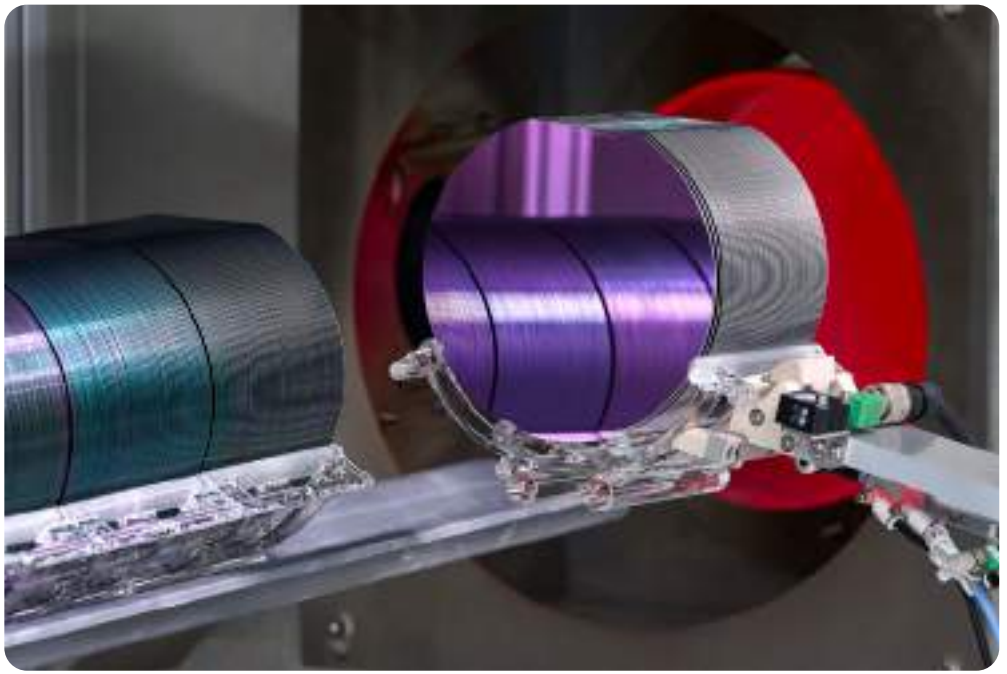
I-lan Site
(Back-end assembly and testing)

- Cardboard Boxes, Inner Boxes
- Carrier Tape
- Cover Tape
- Anti-Static Reels
- Electronic Component Packaging Tubes

Total Quantity and Percentage of Materials Used in Main Products and Services

Unit: kg

	2020		2021		2022	
	Weight	Percentage	Weight	Percentage	Weight	Percentage
Total Amount of Renewable Material	12,696	5.95%	14,024	10.13%	16,942	35%
Total Amount of Non-Renewable Material	200,552	94.05%	124,366	89.97%	31,458	65%
Total Amount of Material Consumption	213,247	100%	138,391	100%	48,400	100%



2.2 Customer Relationship Management

2.2.1 Customer Satisfaction Improvement

TSC is committed to maintaining customer trust and service quality, and as such takes responsibility for customer satisfaction. In order to establish a smooth communication with our customers, Sales and Field Application Engineers cooperate with agents to hold product application briefings from time to time, so that customers can obtain the latest and most complete product information.

The Company maintains close communication with customers through comprehensive customer service, including proactively contacting and visiting customers, conducting satisfaction surveys, and providing a smooth channel for communication of grievances. Based on customer needs and feedback on products and services, TSC continuously optimizes customer experience and reduces product defect and recall rates, thereby improving customer retention and Company performance.

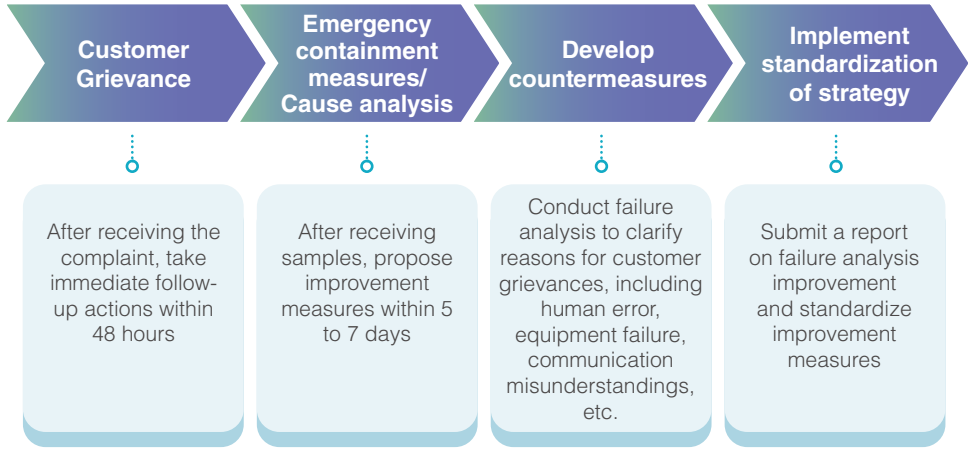
Regarding customer inquiries, orders, and other demands, our goal and commitment is to reply to customers' inquiries within 48 hours. The process is as follows:

Product Information Inquiry Platform

To provide customers with more comprehensive product information, TSC is planning to revamp the official website in 2023. The website will provide complete information on product items, types, and fields of application, allowing customers to compare and query in real-time online, and filter based on specifications and their needs, thereby improving customer satisfaction in accessing product-related information. In addition, when conducting business and contacting customers, specific product URLs can be provided as references to enhance matching demands and communication efficiency. In the future, website interface and information updates will also be continuously optimized.

Customer Grievance Channel

To protect customer rights, we provide customers with diverse channels for filing grievances. For example, customers can provide feedback or file grievances through various regional Sales Departments in a timely manner. When the Sales Department receives a grievance, the department will proactively contact the customer within 48 hours to understand the situation of the abnormal product, including quality, delivery, and service, and promptly handle the grievance case according to the operating regulations per the Company's Procedures of the Customer Service Management. Then, the FAE/AE and the Quality Assurance Department would understand the grievance situation and clarify the cause to formulate a solution and minimize losses for both parties. In 2022, TSC did not receive any customer grievances.



Customer Satisfaction Survey

In addition to a smooth grievance channel, customer satisfaction surveys are crucial for maintaining strong customer relationships. TSC conducts annual surveys to understand customer needs and improve our products, converting those needs into actions to boost our long-term competitiveness. We select survey list based on the previous year's revenue and send out surveys covering product, delivery, and service. After collecting these and analyzing the feedback, we proactively seek further input from customers who gave lower scores and implement specific improvements. We then follow up six months later with another survey to confirm the effectiveness of these measures. Our consistent customer satisfaction scores of 4.5 or above over the past three years demonstrate our commitment to providing high-quality service.

Customer Satisfaction Survey Rate

Year	2020	2021	2022
Key Customer Satisfaction Survey Index (Max Score: 5/5)	4.6	4.7	4.6

Customer Audit

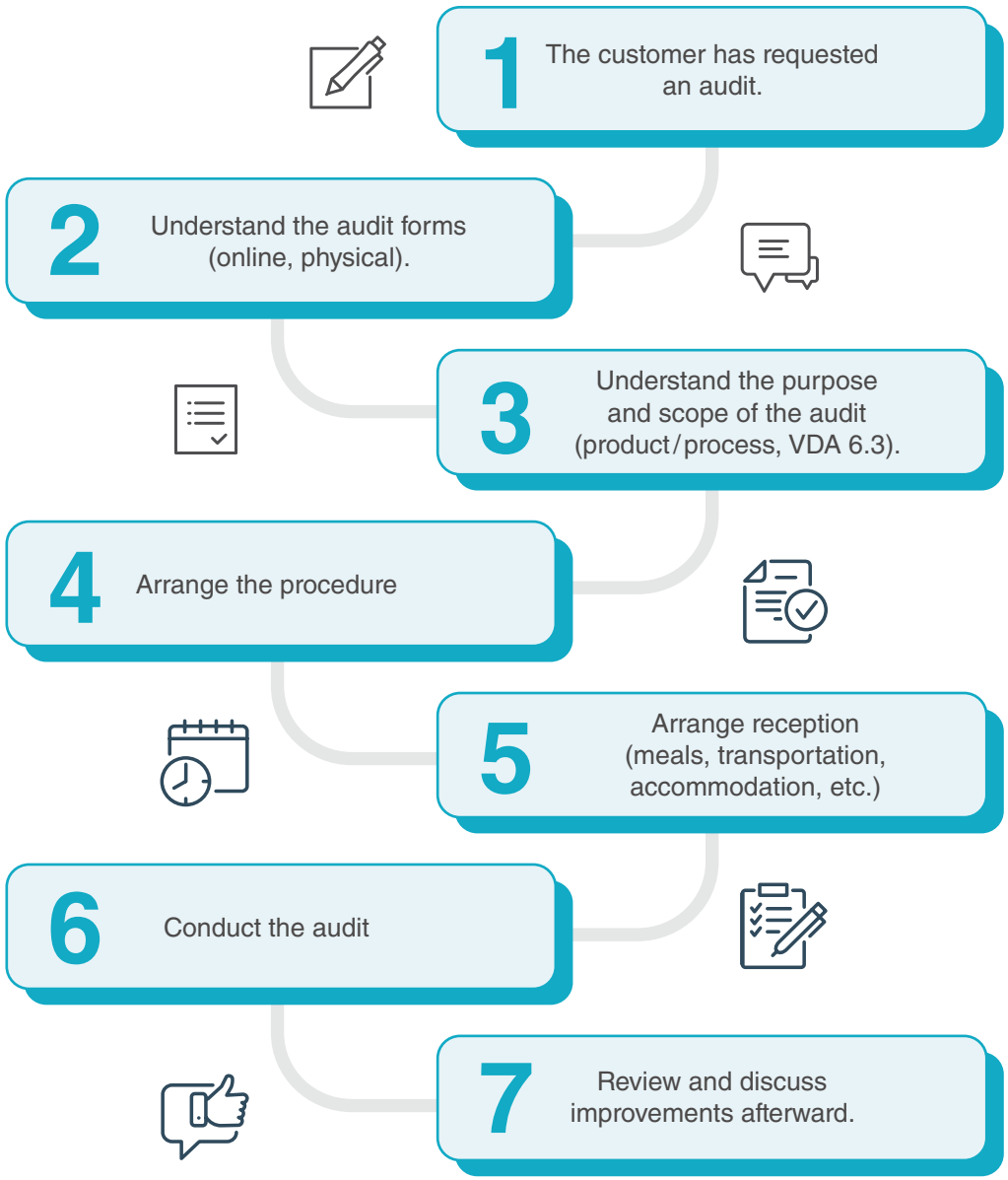
To feedback promptly and comprehensively, the Company seeks to understand customer opinions through various means. In addition to the above satisfaction surveys and customer grievance channels, TSC periodically cooperates with customers to conduct audit operations, allowing customers to have a better understanding of our Company's products and operational processes, and enhancing trust in TSC. In 2022, a total of 3 VDA 6.3 process audits were conducted with 3 customers, all of which received positive feedback from the customers.

With complex challenges such as advancements in production technology and increasing customer demands, TSC must ensure the implementation of quality management in the supply chain. When customers request VDA 6.3 process audits, the Company immediately initiates relevant preparations and arranges customer visitation processes to actively respond to customer demands. Ultimately, through quantified scoring results, we strengthen product process quality management to ensure that the quality of the supplied products meets customer requirements and increases our competitiveness.

Note*:

1. When evaluating whether a vendor can become a qualified supplier in its automotive supply chain or assessing items such as its process technology and products, customers will use the VDA 6.3 process audit standard for scoring. The items include product development and process, supplier management, mass production, as well as customer care, satisfaction, and service.
2. Due to the impact of the pandemic, audits include both online and physical audits.

Customer Audit Arrangement Procedure



2.2.2 Customer Privacy Protection

With the increasing reliance on the Internet for most modern information, the risk of information security is rising, and our emphasis on customer privacy protection has also increased accordingly. In order to more rigorously protect customer information, and maintain customer trust and Company reputation, we will continue to review and optimize its privacy management mechanisms.

In view of the globalization of our business and services, TSC is committed to implementing protection mechanisms for personal privacy and personal information to prevent leakage, abuse, and theft, thereby safeguarding the rights and interests of personal privacy. In the event of customer data leakage, we will respond in accordance with the guidelines set out by the information security policy. The Company plans to gradually introduce the ISO 27001 Information Security Management System as a management mechanism starting in 2023, reducing the potential impact and risks of customer data breaches by following international standards.

In addition to international standards, information security-related messages and advocacy will be increased through various channels and meetings in the future to enhance employees' awareness and understanding of information security, explicitly specifying the legal use scenarios, storage measures, responsible departments, and handling procedures for personal data incidents, continuously strengthening customer privacy protection. In 2022, there were no incidents of violating customer privacy or losing customer confidential information, and no complaints were received regarding the violation of customer privacy or loss of customer data.

We expect to have in place a complete privacy infringement handling procedure in 2024